Urinary incontinence in relationship with anxiety and depression in women.

An epidemiological study.

Gunhild Felde

Thesis for the degree of Philosophiae Doctor (PhD)
University of Bergen, Norway
2020

UNIVERSITY OF BERGEN

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Date of defense: 09.10.2020

Year: 2020

Title: Urinary incontinence in relationship with anxiety and depression in women.

Name: Gunhild Felde

Print: Skipnes Kommunikasjon / University of Bergen

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1. Scientific environment

The studies presented in this thesis have been carried out at the Department of Global Public Health and Primary Care, the Faculty of Medicine, at the University of Bergen. My main supervisor, Steinar Hunskår, is professor of general practice at this department. The two first studies were carried out in the period 2008 to 2016, and were funded by Norwegian GPs´ Research Fund (Allmennmedisinsk forskningsfond, the Norwegian Medical Association). In September 2016, I was admitted as a ph.d. fellow, and my work proceeded with funding from The University of Bergen. My research on urinary incontinence (UI) follows after the work of several incontinence researchers at the Department of Global Public Health and Primary Care. They have worked for many years to investigate associations regarding UI in women. A large body of knowledge about methodology used in population-based research on UI has been consolidated here during the years. The questionnaires used in my studies were developed in this environment.

2. Acknowledgements

Many years have passed since I initially knocked on professor Hunskår´s door back in 2006, and asked for a research project to take part in. The field of urinary incontinence seemed to be an interesting research area and a condition well known to me in my general practice with many female patients. I want to express my heartfelt thanks to my supervisor Steinar Hunskår for sharing with me some of his tremendous experience and expertise as a well-known UI researcher. His professional supervision and systematic approach to research problems always make our meetings inspiring and constructive. I am grateful for his acceptance of my need for using many years to complete this thesis. He always found a way to make it possible for me to combine general practice and research. I have also appreciated his experience as a general practitioner.

Professor Anders Engeland has been my co-supervisor in the last part of the project. I am very grateful for all his experienced help with NorPD and the medication data, for statistical and methodological help, and for giving swift and precise feedback on my questions and the manuscripts.

I want to thank professor Ingvar Bjelland and ph.d. Marit Ebbesen for invaluable help with the statistics, to Ingvar for supervision on the use of HADS, and to Marit for help with the UI-variables.

In addition, I thank my colleagues at Department of Global Public Health and Primary Care for their inspiring work to evolve the field of general practice and for involving me in educating new generations of doctors. I also want to thank for their warm generosity, and also their including attitude and wisdom, making the environment encouraging and the lunches interesting.

The Norwegian Research School in General Practice has been an important scene for meeting colleagues and exchange ideas, and I especially want to thank professor Sabine Ruths for inviting me to the school and associated professor Stefan Hjørleifsson for his teaching.

I want to thank my good colleagues at my practice Helse Pluss for their patience with my research career, and my patients for reminding me what really is important to me as a doctor, and for welcoming me back every time I have been in research leave.

To achieve a ph.d. is not possible without support from many people around. My greatest thank to Karstein, my best friend, husband and fantastic father for our children. He has supported and encouraged me to complete the thesis, and also contributed with good scientific advice and invaluable help with tables, charts, and manuscript proofreading.

I want to thank my mother-in-law, Sissel, for all practical support in daily life and for all the good care and love she brings into our home, making the realisation of this thesis more feasible.

I want to thank my parents for their constant support and belief in me from early years.

My greatest gift in life is our beautiful children Dorthea (13), Ellisiv (11) and Henning (8). I thank them for just being themselves, and through that filling my life with joy and wonder.

"Thankfulness is the eye-drops needed to take every day to see clearly."
(Martin Lønnebo, bishop emeritus)

3. Abbrevations

ATC: Anatomical Therapeutic Chemical

BMI: Body Mass Index

CI: Confidence Interval

DDD: Defined Daily Dose

EPINCONT: Epidemiology of Incontinence in the County of Nord-Trøndelag

HADS: Hospital Anxiety and Depression Score

HADS-D: The depression-part of the HADS questionnaire

HADS-A: The anxiety-part of the HADS questionnaire

HUSK: The Hordaland Health Study (1997-1999)

HUNT: The Nord-Trøndelag Health study

HUNT1: The HUNT1 survey (1984-1986)

HUNT2: The HUNT2 survey (1995-1997)

HUNT3: The HUNT3 survey (2006-2008)

ICS: International Continence Society

ICI: International Consultation on Incontinence

NorPD: Norwegian Prescription Database

OR: Odds Ratio

Q1-Q2: Questionnaire 1-2

QoL: Quality of Life

SSRI: Selective Serotonin Reuptake Inhibitor

SNRI: Serotonin and Noradrenaline Reuptake Inhibitor

UI: Urinary Incontinence

4. List of publications

The thesis is based on the following articles:

Paper I

Felde G, Bjelland I, Hunskaar S. Anxiety and depression associated with incontinence in middle-aged women: a large Norwegian cross-sectional study. International Urogynecology Journal 2012; 23:299-306.

Paper II

Felde G, Ebbesen MH, Hunskaar S. Anxiety and depression associated with urinary incontinence. A 10-year follow-up study from the Norwegian HUNT study (EPINCONT). Neurourology and Urodynamics 2017; 36:322-328.

Paper III

Felde G, Engeland A, Hunskaar S. Urinary incontinence associated with anxiety and depression: the impact of psychotropic drugs. Cross-sectional study from the Norwegian HUNT study. Submitted December 2019.

The articles are referred to as **Paper I**, **Paper II** and **Paper III** in the thesis.

5. Summary

Urinary incontinence (UI) affects a large proportion of women during their lives. Pregnancy and parity, obesity and increasing age are regarded as the most important and best documented risk factors for UI in women. Many co-morbid conditions are associated with increased prevalence of UI, such as diabetes, coronary heart disease, cerebral stroke, asthma/COPD, rheumatoid arthritis and chronic musculoskeletal pain. Studies have also shown an association between symptoms of anxiety and depression and UI. Especially urgency UI and overactive bladder have been investigated in relationship with anxiety and depression. The serotonergic and noradrenergic system has a place in the pathophysiology in both UI, anxiety, and depression, which supports the epidemiological substrate.

The documented effect of treatment with the serotonin- and noradrenaline reuptake inhibitor duloxetine on stress UI, also strengthens the hypothesis of a common underlying biological association between the conditions.

This thesis is an epidemiological study of the associations between anxiety and UI and depression and UI in women. The aims of the thesis were:

- To determine if anxiety and depression is associated with UI in middle-aged women, and to investigate a possible association with type and severity of UI.
- To investigate the association between anxiety/depression and UI in a 10-year follow-up study.
- To determine the association between anxiety/depression and UI in a population with women 20 years+, and to investigate if the associations are influenced by using psychotropic drugs.

Our studies are based on data from The Hordaland Health Study (HUSK) (**Paper I**), the Nord-Trøndelag Health Study (HUNT) (**Paper II** and **Paper III**) and the Norwegian Prescription Database (NorPD) (**Paper III**). The questions about UI were identical in these surveys and consisted of an opening question if the women had

experienced leakage of urine and further questions about type, frequency and amount of leakage. The Norwegian version of the questionnaire Hospital Anxiety and Depression Scale (HADS) was used in both surveys to measure the level of anxiety and depression.

Paper I

Paper I is based on data from HUSK. The study population consisted of 5321 women 40-44 years of age who answered the questionnaire, which contained both the HADS- and UI-questions. The prevalence of UI was 26%. Of these, 53% had stress UI, 9% urgency UI and 30% mixed UI. We found an association both between anxiety and UI, and between depression and UI, strongest for mixed UI, urgency UI and severe UI. Of the whole study-population 20% had anxiety and 8% depression, among women with mixed UI, 32% had anxiety and 17% depression, and in the group with severe UI, 34% had anxiety and 16% depression.

Paper II

Paper II was based on data from both HUNT2 and HUNT3. The study population consisted of 16.263 women who had answered the questionnaires about UI, anxiety and depression in HUNT2 and HUNT3. We wanted to compare the development of anxiety and depression over the 10-year follow-up among those who had UI in HUNT2 compared with those who were continent in HUNT2. We also wanted to compare development of UI among those with anxiety and among those with depression in HUNT2, compared with development of UI among those without anxiety and depression in HUNT2. We found that anxiety and depression in HUNT2 was associated with increased risk of development of UI, strongest for the urgency component of UI. This association was strongest in the groups with the highest HADS-scores. UI in HUNT2 was also associated with increased risk of development of anxiety and depression, strongest for mild anxiety/depression.

Paper III

Paper III was based on data from the HUNT3 and the NorPD. 21803 women who had answered the UI-questions in HUNT3 were linked to NorPD. From the NorPD we got information about all prescriptions dispensed for all individuals in the study.

The prevalence of UI was 29% in the total group, 38% in the group with moderate/severe anxiety and 44% in the group with moderate/severe depression. Mixed UI was the UI type strongest associated with anxiety and depression. The prevalence of UI did not increase significantly in the subgroups with anxiety/depression using an antidepressant or anxiolytic drug compared with non-users in the same subgroups. We found increased prevalence of UI among users of many psychotropics compared with non-users. After adjustments, however, UI was positively associated with the use of antidepressants. We found a weak, negative association with use of anxiolytics.

Our results show that UI is associated with anxiety and depression. Also, anxiety and depression are predictors for development of UI in the longitudinal study. The association is strongest for severe UI and mixed UI. Use of psychotropic drugs does not seem to significantly influence the cross-sectional associations.

6. Norwegian summary

Urinlekkasje (urininkontinens) rammer en stor andel av kvinner i løpet av livet. Svangerskap og fødsler, fedme og stigende alder er ansett som de viktigste og best dokumenterte risikofaktorene for urinlekkasje hos kvinner. Ved en rekke tilstander er det påvist økt forekomst av urinlekkasje, slik som ved diabetes, hjerte- og karsykdommer, hjerneslag, astma/KOLS, leddgikt og fibromyalgi. Studier har også påvist en sammenheng mellom depresjons- og angstsymptomer og urinlekkasje. Særlig har hastverkslekkasje (urgency urinlekkasje) og overaktiv blære vært undersøkt i relasjon til angst og depresjon. Det serotonerge og noradrenerge systemet spiller en rolle i patofysiologien ved både urinlekkasje, angst og depresjon, og dette støtter de epidemiologiske funnene. Dokumentert effekt av behandling med serotonin- og noradrenalin-reopptakshemmeren duloksetin mot anstrengelseslekkasje (stressinkontinens), styrker også hypotesen om en felles underliggende biologisk sammenheng mellom tilstandene.

Denne avhandlingen er en epidemiologisk studie av sammenhenger mellom angst og urinlekkasje, og mellom depresjon og urinlekkasje, hos kvinner. Målene med avhandlingen var å undersøke:

- om angst og depresjon er assosiert med urinlekkasje hos middelaldrende kvinner, og undersøke en eventuell sammenheng med ulike typer og alvorlighetsgrader av urinlekkasje.
- assosiasjonen mellom angst/depresjon og urinlekkasje i en longitudinell studie med ti års oppfølgingstid.
- om angst og depresjon er assosiert med urinlekkasje i et materiale med kvinner over 20 år, og om disse sammenhengene påvirkes av psykofarmakologisk medikamentbruk.

Datamaterialet er hentet fra Helseundersøkelsen i Hordaland (HUSK) (**artikkel I**), Helseundersøkelsen i Nord-Trøndelag (HUNT) (**artikkel II** og **III**) og Reseptregisteret (NorPD) (**artikkel III**). Kvinnene ble spurt om de hadde opplevd å lekke urin, samt tilleggsspørsmål om lekkasje-type, hvor ofte de opplevde lekkasje,

og mengde av lekkasjen. Norsk versjon av spørreskjemaet Hospital anxiety and depression scale (HADS) ble brukt i begge helseundersøkelsene for å kartlegge nivå av angst og depresjon.

Artikkel I

Datamaterialet i **artikkel I** var hentet fra HUSK. Studiepopulasjonen bestod av 5321 kvinner mellom 40 og 44 år. De besvarte spørsmål om angst, depresjon og urinlekkasje. Forekomsten av urinlekkasje i studiepopulasjonen var 26%, av disse hadde 53% anstrengelseslekkasje, 9% hastverkslekkasje og 30% blandingslekkasje. Vi fant at både angst og depresjon var assosiert med urinlekkasje, sterkest ved blandingslekkasje og hastverkslekkasje, og ved alvorlig urinlekkasje. I hele studiepopulasjonen hadde 20% angst og 8% depresjon, hos de med blandingslekkasje hadde 32% angst og 17% depresjon, ved alvorlig urinlekkasje hadde 34% angst og 16% depresjon.

Artikkel II

Datamaterialet i **artikkel II** var hentet fra både HUNT2 og HUNT3. Studiepopulasjonen bestod av 16.263 kvinner som hadde besvart spørreskjemaene som handlet om urinlekkasje, angst og depresjon både i HUNT2 og HUNT3. Vi ville sammenligne utvikling av angst og depresjon i tiårsperioden hos de som hadde urinlekkasje i HUNT2 sammenlignet med de som var kontinent i HUNT2. Vi ville også undersøke utvikling av urinlekkasje hos kvinner med angst og depresjon i HUNT2 sammenlignet med de som ikke hadde disse tilstandene i HUNT2. Vi fant at både angst og depresjon i HUNT2 var forbundet med økt risiko for utvikling av urinlekkasje, mest for «hast»-komponenten av urinlekkasje. Sammenhengen var sterkest i gruppene med høyest HADS-skår. I HUNT2 var urinlekkasje også forbundet med økt risiko for utvikling av angst og depresjon, hovedsakelig i mild grad. Også her var sammenhengen sterkest i gruppen med hastverkslekkasje.

Artikkel III

Datamaterialet i **artikkel III** var hentet fra HUNT3 og Reseptregisteret. 21.803 kvinner som besvarte spørsmålene om urinlekkasje i HUNT3 ble koblet til Reseptregisteret. Fra Reseptregisteret fikk vi opplysninger om uttak av alle

reseptbelagte legemidler for personene i studien. Forekomsten av urinlekkasje var 29%, anstrengelseslekkasje var vanligst i de to yngste aldersgruppene (opp til 54 år), blandingslekkasje var vanligst i gruppen over 54 år. Forekomsten av urinlekkasje var 38% i gruppen med moderat/alvorlig angst, og 44% i gruppen med moderat/alvorlig depresjon. Blandingslekkasje var også her sterkest assosiert med angst og depresjon. Forekomsten av urinlekkasje var ikke signifikant økt i gruppene med depresjon/angst som brukte antidepressive eller anxiolytiske medikamenter. I hele studiepopulasjonen fant vi høyere forekomst av urinlekkasje blant brukere av mange av de psykofarmakologiske medikamentene. Etter at det var kontrollert for justeringsvariabler, var urinlekkasje assosiert med bruk av antidepressiva. Vi så en svak tendens til at anxiolytiske medisiner var forbundet med litt lavere forekomst av urinlekkasje.

Våre resultater viser at angst og depresjon er forbundet med økt forekomst av urinlekkasje, samt utvikling av urinlekkasje over tid. Sammenhengen er sterkest for alvorlig urinlekkasje og blandingsinkontinens. Bruk av psykofarmakologiske medikamenter ser ikke ut til å påvirke assosiasjonene funnet i tverrsnittsstudiene.

7. Introduction

UI is a common health problem with a wide range of severities and degrees of symptom burden. Incontinence after early childhood is associated with shame and taboo. Losing control and wetting oneself in adulthood, especially if unpredictable, may seriously affect the physical and psychological well-being and limit social life for the affected individuals. In other cultures, the taboo and social consequences can be even worse. As a shameful, not life-threatening health problem affecting mostly women, it has throughout medical history been a low-status, underdiagnosed health problem.

Epidemiology is the study of the distribution of disease (descriptive epidemiology) and the determinants of disease frequency (analytic epidemiology). Epidemiologic knowledge is necessary to prevent illness and disease, both on an individual level and for the society by giving advice and suggestions to improve public health.

Epidemiologic research has created knowledge about risk factors and associated factors for UI[1]. Old age, pregnancy, childbirth and high BMI are regarded as the most established risk factors for UI[2]. Several comorbidities are found to be associated with UI, such as diabetes, urinary tract infection, cognitive impairment, ischemic heart disease and physical impairment. Several studies have also showed an increased occurrence of anxiety and depression among women with UI, as well as increased occurrence of UI among women with anxiety and depression[3]. Generally, most studies in this field are cross-sectional, and can therefore not contribute to evidence of causation. We know that UI has psychological effects and impact on emotional well-being[4]. Intuitively, loss of control, unpredictable leakage and social isolation because of fear of leaking urine in inappropriate situations, could lead to depressive symptoms and anxiety. There are also possible biological common pathways between the conditions that could explain an association. The use of certain antidepressant drugs for stress UI have contributed to interest of biological mechanisms behind the observed coexistence. However, even if some antidepressant drugs have been effective in treating stress UI, other studies have showed a positive cross-sectional

association between using antidepressants and UI. If, however, there is an association between depression and UI, and between anxiety and UI, a logical hypothesis would also be that treating those conditions with antidepressants should improve the UI. The present work intends to deepen the epidemiological knowledge about the associations between anxiety and UI, and depression and UI, in women.

In this introductory chapter, I will first present the current consensus definitions of UI, then give a presentation of the normal function and innervation of the bladder followed by an explanation of the pathophysiology in different UI types. Furthermore, I will describe several aspects of UI as a health problem, individually and societal, and give an overview of established and potential risk factors for UI with emphasis on anxiety and depression. Finally in this chapter, I will, based on the literature, present possible psychological and biological mechanisms for the coexistence of anxiety and UI, and depression and UI.

7.1 Definitions of urinary incontinence

The existence of different definitions of UI is a challenge when interpreting epidemiological studies of the distribution of UI[5]. UI can be diagnosed subjectively (by self-reported symptoms) or objectively (by clinical signs and investigations). The International Continence Society (ICS), is an international society for the study of lower urinary tract dysfunction. The first report on the standardisation of terminology of lower urinary tract symptoms was presented in 1979. UI was then defined as "involuntary loss of urine that is objectively demonstrated and a social and hygienic problem". This definition was rather restrictive, and the objective demonstration of UI was not feasible in large population-based epidemiological studies. The implementation of social and hygienic aspects in questionnaires, and the interpretation of information about such problems was a challenge. It was also demonstrated that the prevalence of UI varied widely in the same population depending on which definition used[6].

ICS is a co-organiser of several conferences called International Consultation on Incontinence (ICI), and in 1998, the ICI Epidemiology committee, chaired by professor Steinar Hunskår, recommended that neither objective demonstration nor social or hygienic problems should be included in the definition of UI[7].

From 2002, ICS established a symptom-based definition of UI as the "complaint of any involuntary loss of urine"[8]. This is in accordance with the WHO ICIDH-2 (International Classification of Impairment, Disability and Health) and the ICD10 (International Classification of Diseases) [9]. The definition is based on symptoms only, and lacks spesifications of frequency, amount of leakage or impact on quality of life. All ranges of symptoms are included. In the 2002 ICS report on standardisation of terminology, there is a sharp distinction between "symptoms" as the subjective indicator of UI , "signs" as the physician´s observations to characterise and quantify the symptoms, the "urodynamic observation/investigation", and at last UI as a "condition" as the presence of urodynamic observations associated with signs and symptoms. The distinction between symptom, sign, investigation and condition reflects different research areas and clinical settings.

This thesis applies the current terminology for female UI, defined by ICS and the International Urogynecological Association (IUGA) in 2010 through a joint report on the terminology for female pelvic floor dysfunction[10]. Table 1 shows the symptom-based terminology of UI and UI types as defined in this report.

Even if the current definition is only symptom-based, ICS recommends that all epidemiological research on UI, in addition to screening questions for any involuntary loss of urine, should also include measures of subgroups like type, frequency, social impact, quality of life, and whether the woman has seeked help because of the UI.

The most common types of UI are stress, urgency and mixed UI. There are no validated questionnaires for the less common types, and therefore also a lack of studies bringing knowledge about prevalence and risks[2]. They are in many studies, and also in this thesis, grouped as "other incontinence".

Table 1. Definitions of UI symptoms according ICS/IUGA[10]

Type of UI	Symptoms
Urinary incontinence	Complaint of any involuntary loss of urine
Stress urinary incontinence	Complaint of involuntary loss of urine on effort or physical exertion (e.g., sporting activities), or on sneezing or coughing
Urgency urinary incontinence	Complaint of involuntary loss of urine associated with urgency
Mixed urinary incontinence	Complaint of involuntary loss of urine associated with urgency, and also with effort or physical exertion or on sneezing or coughing
Postural urinary incontinence	Complaint of involuntary loss of urine associated with change of body position, for example, rising from a seated or lying position
Nocturnal enuresis	Complaint of involuntary loss of urine which occurs during sleep
Continuous urinary incontinence	Complaint of constant leakage of urine
Insensible urinary incontinence	Complaint of urinary incontinence where the woman has been unaware of how it occurred
Coital urinary incontinence	Complaint of involuntary loss of urine with coitus

Table 2. Definitions of bladder storage symptoms according to ICS/IUGA[10]

Type of bladder storage symptom	Symptom
Increased daytime urinary frequency	Complaint that micturition occurs more frequently during waking hours than previously deemed normal by the woman
Nocturia	Complaint of interruption of sleep one or more times because of the need to micturate. Each void is preceded and followed by sleep
Urgency	Complaint of a sudden, compelling desire to pass urine which is difficult to defer
Overactive bladder syndrome (OAB, urgency)	Urinary urgency, usually accompanied by frequency and nocturia, with or without urgency urinary incontinence, in the absence of urinary tract infection or obvious pathology

The ICS/IUGA also defines bladder storage symptoms as displayed in Table 2. Urgency UI is regarded part of a larger symptom complex, called overactive bladder syndrome, which is characterised by being dry (without leakage) or wet (with leakage).

7.2 Normal bladder anatomy, function and innervation

The bladder wall is an involuntary controlled muscle (detrusor muscle) consisting of three muscle layers. The outer muscular layer runs from the bladder neck to the vertex. The middle layer consists of circular muscle fibres. The inner layer is longitudinal directed and continues directly into the internal longitudinal muscle of the urethra, the *internal smooth muscle sphincter* in the bladder neck under involuntary control, keeping the upper urethra and the bladder closed during the storage phase. There is also an *external urethral sphincter (rhabdosphincter)* of striated muscle fibres under voluntary control. In addition to the bladder and urethra, the pelvic floor muscles (levator ani muscles) are important in controlling the urine flow.

The control of these muscles involves the central nervous system (CNS), the afferent sensory and the efferent somatic and autonomous parts of the peripheral nervous system. The innervation of the bladder, urethra and pelvic floor is shown in figure 1.

The different parts of the innervation and its effects on the bladder and urethra are summarised here:

1. The autonomous innervation, consisting of:
    - the sympathetic hypogastric nerve fibres from T11 to L2: contraction of the internal muscle sphincter and increased compliance of the bladder detrusor;
    - the parasympathetic pelvic nerve fibers from S2 to S4: contraction of the detrusor.
2. The somatic efferent pudendal nerve (from S2-S4), which provides a constriction of the sphincter externus.

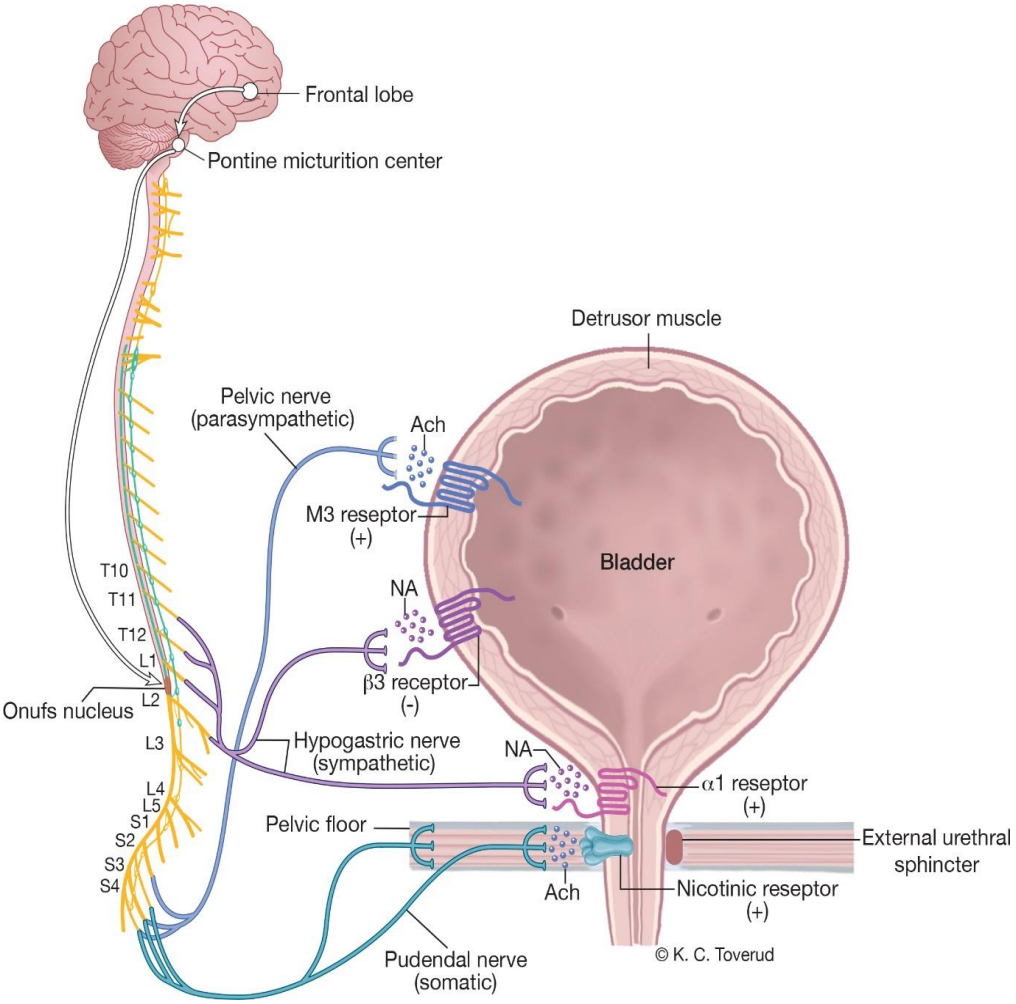

Figure 1. The innervation of the bladder, urethra and pelvic floor. Illustration by Kari C Toverud.

In the *storage phase* an increasing bladder volume (up to 400-600 mL) will activate stretch receptors in the bladder wall leading to afferent signals transmitted to the CNS. These signals result in increased sympathetic activation from the thoraco-lumbar spinal cord through the hypogastric nerve, which releases noradrenaline (NA) peripherally. NA stimulates β3-adrenergic receptors in the detrusor (increased compliance) and the α1A-receptors in the urethral smooth muscles (contraction of the internal sphincter). During filling of the bladder, there is also an activation of the

efferent somatic fibres through the pudendal nerve and release of acethylcholine (Ach) acting via the nicotinic receptors peripherally. This leads to contraction of the striated external sphincter muscle, which activity can be augmented voluntarily. At the same time there is an inhibition of the parasympathetic cells.

At Onuf´s nucleus in the spinal cord, nerves from higher centres in the CNS synapse with the pudendal motor neurons. The neurotransmitter glutamate starts the pudendal activity in Onuf´s nucleus. NA and serotonin (5-HT) are neurotransmitters that modulate the activity at the proximal end of the pudendal nerve and acetylcholine is the transmitter at the distal end of the pudendal nerve. When released, it initiates contraction of the rhabdosphincter.

In the *voiding phase* an increasing afferent activity from the bladder exceeds a certain threshold, and if the higher brain centres find the situation acceptable for voiding, it leads to stimulated output from the pontine micturition centre to the parasympathetic centre in the spinal cord. This leads to inhibition of efferent activity to the striated sphincter (somatic nerves) and the urethra and bladder neck (sympathetic nerves). The parasympathetic nerves release acetylcholine in the nerve ends, and this leads to detrusor contraction.

The role of 5-HT in micturition

5-HT and NA terminals are dense in different parts of the central nervous system. In vivo experiments in animals have showed that activity of 5-HT and NA in the CNS affects the bladder and urethral function[11]. Animal experiments also indicate that central serotonergic activity suppresses parasympathetic activity (inhibiting voiding) and enhance sympathetic and somatic activity (enhance control of urethral outlet). There are several subtypes of receptors on which serotonin interacts. 5-HT$_1$, 5-HT$_2$ and 5-HT$_3$ receptors are present in the lumbosacral spinal cord. 5-HT$_{1A}$ - receptors are localised in areas in the dorsal horn with bladder afferent fibres and in the parasympathetic nucleus and the Onuf´s nucleus. 5-HT$_2$ receptors are localised in the sacral parasympathetic nucleus and Onuf´s nucleus. Stimulation of central 5-HT receptors facilitates the storage of urine[12, 13].

Peripherally, most of the total 5-HT is located in the gastrointestinal tract, but it is also present in neurons in the lower urinary tract, and it interacts with many different subtypes of 5-HT receptors[14 15]. A study in rats indicated that activation of serotonin 5-HT1A receptors are involved in the pathogenesis of UI[16]. A possible consequence of activation of 5-HT4 receptors of the bladder, is increased detrusor activity, leading to UI[15]. The 5-HT4 receptor can be activated when using a selective serotonin reuptake inhibitor (SSRI or SNRI).

7.3 Pathophysiology of urinary incontinence and overactive bladder

7.3.1 Overactive bladder and urgency UI

Urgency UI is regarded as part of a larger symptom complex known as overactive bladder syndrome, as described in the section about definitions of UI types. There is no full agreement about the pathophysiology of urgency and urgency UI. Traditionally, the cause has been considered to be overactivity of the detrusor, which could be either "myogenic" (autonomous contractions of the detrusor muscle) or "neurogenic" (signals from the CNS initiating detrusor contractions). Detrusor overactivity is defined as "a urodynamic observation characterised by involuntary detrusor contractions during the filling phase which may be spontaneous or provoked". Urodynamic investigations have, however, revealed that only about 50% of patients with overactive bladder have detrusor overactivity[17, 18], and at least half of elderly asymptomatic individuals have detrusor overactivity[18]. Over the last years, the scientific view has shifted in direction that the overactive bladder and urgency often is initiated from the urothelium/suburothelium and the urethra through pathological afferent signalling. A review article from 2019 summarises the different hypotheses for the phenotypes of overactive bladder and urgency[17], and they are cited here:

The myogenic hypothesis

Urgency originating from a myogenic dysfunction and supersensitivity. Detrusor overactivity could be a consequence of histological changes leading to abnormal electrical coupling among the smooth muscle cells in the detrusor, causing detrusor

contractions. Also, increased afferent signals caused by urothelial/suburothelial dysfunction could lead to uninhibited detrusor contractions. Detrusor overactivity could also be a consequence of changes in the central nervous control of the micturition reflex.

The urotheliogenic hypothesis

Urgency originating from the bladder urothelium/suburothelium. Urothelial cells respond to local chemical and mechanical stimuli and send chemical signals to bladder afferent nerves. Urothelial cells may have "sensor molecules" that sense mechanical and chemical stimuli and then release adenosine triphosphate, prostaglandins, nerve growth factor and Acetylcholine (Ach) among others, which are excitatory or inhibitory on afferent nerves. The "sensor molecules" could be receptors of bradykinin, Ach (muscarinic and nicotinic receptors) and noradrenaline (alpha and beta)[2]. There is growing evidence that increased activity of afferent nerves plays a role in urgency. The urothelial/suburothelial dysfunction may not lead to detrusor overactivity. Urgency UI may be less frequent and frequency more common in this subgroup[17].

The urethrogenic hypothesis

Urgency originating from the urethra. An urethrovesical reflex can be activated when small amounts of urine come into the proximal urethra in patients with stress UI, inducing detrusor overactivity. Some patients experience urgency when moving from lying or sitting position into standing. Urethral sphincter instability has also been proposed as a mechanism of urgency from the urethra.

The supraspinal hypothesis

Urgency originating from the brain and brainstem. The central neural control over the micturition can fail through decreased capacity to handle afferent signals or reduced supraspinal inhibitory control. The "brain overactive bladder" can be either with or without detrusor overactivity.

Beside these hypotheses trying to explain the pathogenesis, there are several *possible co-factors* in the development of overactive bladder/urgency[2, 17].

- *Metabolic syndrome* is linked to overactive bladder, possibly through mechanical load (overweight) stimulating sensory afferent nerves in the trigone and bladder neck, systemic inflammation, oxidative stress and insulin resistance which results in ischemia and urothelial dysfunction[19].
- *Affective disorders* are in many studies linked to overactive bladder and urgency, with or without incontinence[20]. The limbic area in the brain is involved in emotions and the processing of afferent impulses. The association has been shown to be bidirectional with common underlying mechanisms resulting in coexistence of the disorders. There are several possible common factors: Corticotropin-releasing factor (CRF) and low 5-HT levels in the CNS are associated with both affective disorders and urinary frequency and detrusor overactivity [13]. Central sensitisation with increased response to normal or subnormal afferent impulses is also suggested as a common co-factors for anxiety/depression and overactive bladder[17].
- Recent years, there has been much attention to the *microbiota of the urinary tract.* The balance of the urinary microbiota is believed to change the bladder sensation and possibly the function. There has been a paradigm shift from supposing urinary tract to be sterile, to knowledge about bacteria appearing in the urinary tract not coming through ascending spread.
- Beside the mentioned possible reasons for overactive bladder/urgency, there can be local reasons in the bladder like bladder infection, bladder tumour, bladder stone, and the process of aging, leading to overactive bladder and urgency. Suprapontine lesions like cerebrovascular disease, multiple sclerosis and Parkinson´s disease and spinal cord lesions can also lead to detrusor over activity and incontinence.

"Idiopathic" overactive bladder/urgency seems to have multiple possible causes and should be regarded as multifactorial[17].

7.3.2 Stress urinary incontinence

Two main mechanisms, often overlapping, for stress UI are described:

Hypermobility of the urethra

A hypermobility of the urethra can develop due to failure in the support of the bladder neck and urethra from the pelvic floor. The hammock hypothesis is widely accepted as the explanation of UI associated with such hypermobility[18]. Urethra is normally supported by the endopelvic fascia which contains the fibromuscular tissue of the vagina. This fascia creates a "hammock" where the urethra is being compressed during increased abdominal pressure[21, 22]. This compression together with the urethral sphincter pressure prevents involuntary leakage. This support is decreased by damage of the fascia as a result of obesity, chronic cough, constipation, childbirth or menopause. The urethra then moves downwards without being compressed, and the pressure in the urethra will be lower than in the bladder and lead to leakage of urine. Surgical treatment with tension-free vaginal tape (TVT) aims to correct or reconstruct these dysfunctions and defects. The good results of TVT support the hammock hypothesis.

Weakness of the urinary sphincter

The second mechanism is a weakness of the urinary sphincter. Damage on nerves and muscle cells due to childbirth may cause deficiency of the external and internal sphincter. The sphincters may also be damaged as a result of trauma, urogynecological surgery, neurological diseases, ageing and diseases leading to muscular atrophy[18].

7.4 Urinary incontinence as a health problem

In this section I will give an overview of different aspects of UI as a health problem: some sociological reflections, the epidemiology of UI, how UI affects the women´s lives and treatment of UI with emphasis on pharmacological treatment.

7.4.1 Sociological aspects of UI

The smell of leaked urine is stigmatising, and may contribute to reduced social activity, and eventually, social isolation. Smell is often interpreted as a sign of inadequate hygiene and is therefore a social marker. The tolerance for smell was admittedly higher some decades ago, but from the last part of the nineteenth, and even more in the first part of the twentieth century, there was a growing health-political focus on hygienic measures. Smell was a sign of bad hygiene and infect, both public and private, and moral, guilt and shame were central in this area[23]. Anne Kveim Lie and Hilde Bondevik´s book "Red and White, about blood and milk in past and future" (title translation by Felde) discusses the body fluids linked to the female body as both nature and culture[24]. Body fluids have in many cultures been regarded as dirty and unclean, and the anthropologist Mary Douglas describes body fluids with the words "matter out of place", as unclean and transboundary[25]. Douglas sees the body fluids as the most typical metaphor for social disorder and chaos, something without control. The culture needs limits and control, and the social body becomes in Douglas' understanding determinative for how the physical body is perceived[24].

Sanitary pads were commonly used from around 1960, some decades earlier for the wealthiest, making it easier to control the leakage socially.

7.4.2 Prevalence

Prevalence is the proportion of a particular population experiencing a symptom or having a condition or a disease at a defined time point. It can also be defined as the number of existing cases divided by population at risk.

UI is a common issue among women in all ages. It is a stigmatising condition associated with shame[26], which can contribute to respondent bias and low prevalence estimates in observational studies[27, 28]. The best prevalence estimates are therefore regarded to come from population based studies with representative samples, using validated symptom-based questionnaires, not focusing only on urinary incontinence[29]. Such studies exist mostly from developed countries.

The prevalence rates vary in systematic reviews between 9 and 69%[5, 30, 31]. In four large population-based studies, with high response rate, the prevalence varied between 25 and 47%: In the large Nurses' Health Study II, the prevalence was 43%[32], in the Study of Women's Health Across the Nation, 47%[33], and in the Norwegian EPINCONT1 and EPINCONT2 the prevalence was 25 and 29%, respectively[34, 35].

Reasons for variation in prevalence

Even among population-based surveys using the definition recommended by ICS, the prevalence vary widely. The variations can be explained by many aspects that are general challenges in epidemiologic research, such as issues regarding sampling and non-response, selection criteria, definitions and measurement issues[5, 36].

Women with UI may not answer UI queries, or they may underestimate or deny their UI because of shame or thinking the condition is within normal. They may also respond in greater numbers because an eagerness to tell about the subject bothering them. Differences in collection of data may also affect the prevalence. Data may be collected through postal questionnaires, telephone interviews, personal interviews or questionnaires received at e.g. a screening station, as in our studies.

Whether the studies include the total adult female population or only the elderly women, or if the study group comprise clinical samples, is important for representativity, and will influence the result.

The use of different definitions and measurements are believed to be a major contributor to varying prevalence estimates as described under the section about the UI definition. A study of 507 women in general practice in Norway, compared prevalence estimates when using different definitions. 47% reported UI as any involuntary leakage, 31% reported UI when defined as leakage $\geq$2 times per month, while 19% had UI by the old definition of ICS where involuntary urine loss had to be accompanied by a social or hygienic problem[6]. One problem with the current definition is the nature of the condition. UI often starts slowly, and may have a transient occurrence, especially during the first years[37].

In a study comparing characteristics and UI definitions in five French surveys on UI, the studies focusing on UI and using UI-specific symptom-based questionnaires gave higher UI prevalence compared to general health surveys including, but not focusing on, UI, and with a perception-based definition of UI. The first type of studies with the highest prevalence, reported mostly mild UI, while the second type with the lowest prevalence reported more severe UI[29].

The challenges with different UI definitions are closely related to the questionnaire as an epidemiological tool. The quality of different questionnaires used in epidemiological studies of UI, have been evaluated by ICS[38]. Questionnaires are graded as highly recommended if data is published indicating that the questionnaire is valid (if the questions cover all important aspects of the condition, if the questions are relevant to the condition and have high sensitivity and specificity) and reliable (the questionnaire´s ability to measure in a reproducible way).

Type

The prevalence of the different types of UI differs by age. For the population as a whole, stress UI is the most common type before mixed and urgency UI, as demonstrated in a literature review from 2003: the median prevalence of UI was 27.6% with type proportions of 50% stress UI, 32% mixed UI and 14% urgency UI[39]. This corresponded to the EPINCONT1 study, where 50% of the UI-group had stress UI, 36% mixed UI and 11% urgency UI[34]. A large population-based study from China showed an overall UI prevalence of 31.9%, the type distribution was 59%, 28% and 9% for stress, mixed and urgency UI, respectively[40].

Many studies have shown a peak in the prevalence of stress UI in the fifth decade of life, while urgency and mixed UI continue to increase during lifetime[18], as shown in figure 2.

Despite stress and urgency UI being regarded as different conditions with different pathophysiology, studies have demonstrated a transition between the subtypes. In a study of more than 10.000 women, changes in UI status was described over a 2-year period: of the women with baseline urgency UI, 4-9% transitioned to stress UI, 16-

20% to mixed UI, the rest remained with urgency UI. Of the women with baseline stress UI, 4% transitioned to urgency UI, 16-23% to mixed UI and the rest remained with stress UI. Of the women with baseline mixed UI, 10-11% transitioned to urgency UI, 11-15% to stress UI, and the rest remained with mixed UI[41]. A recent large cohort study over eight years among women with UI demonstrated that most women with stress and urgency UI continued to experience similar subtype symptoms after eight years, while obese women and those with more severe symptoms were more likely to remain with or progress to mixed UI. According to the nature of the different types of UI, the authors suggest possible pathways of the onset of mixed UI: either developing from no UI or developing from severe stress and urgency UI[37].

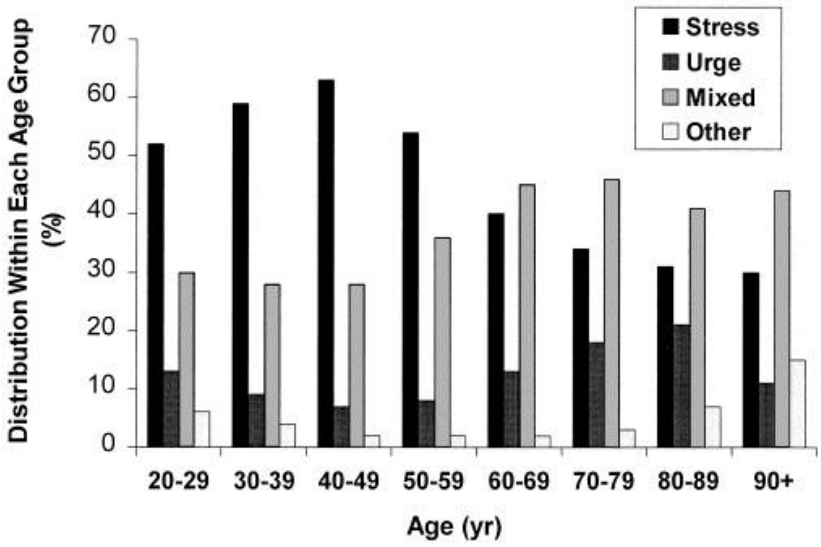

Fig 2. The prevalence of stress UI peaks in the fifth decade and then declines. The prevalence of mixed and urgency UI continues to increase with age. (Reprinted with permission from Urology[5]).

Severity

The severity of UI can be characterised by describing (1) the frequency of UI with severe UI defined by weekly or more frequent urine loss, (2) by describing the amount of urine loss with e.g. slight UI as leakage of drops a few times a month, or (3) by combining a measure of both frequency and amount of urine loss[5], as in

Sandvik Severity Index, which is used in this thesis. This index is calculated by multiplying the frequency (four levels) by the amount of leakage (three levels), giving an index value, which is grouped into slight, moderate, severe and very severe UI.

Generally, severe UI is more common in urgency and mixed UI compared with stress UI, and the prevalence of severe UI increases by age. In the large EPINCONT1 study (total UI prevalence 25%), 43 % of the incontinent women had mild UI and 26% severe UI, but only 10% stated that their UI gave them much bother or was a large problem[34].

Studies specifically measuring severe UI (urinary leakage several times per week), have less variations in prevalence, with prevalence estimates of 6-10% in Europe and the United States[42]. In the longitudinal Nurses´ Health Study, women with urgency UI or mixed UI were more likely to report severe UI symptoms over follow-up compared to women with stress UI at onset, and women with severe UI at onset were more likely to convert to mixed UI during follow-up[37].

Age

The age trends in UI prevalence are described in many review studies[1, 5, 18, 30]. Here, I will present age trends as shown in the EPINCONT1 study[34]. The prevalence among women under 30 years was 12%, and 40% among women over 90 years. There was a peak around mid-age with a prevalence of 30% among women 50-54 years. The prevalence of severe UI increased with age. Under 45 years, 12% of the incontinent women had severe UI, while 44% of the incontinent women in the age group 60+ had severe UI.

The EPINCONT1 study showed that the frequency of stress UI was highest from 25 to 49 years, with a relative decrease with increasing age. Urgency UI was most frequent among the youngest and oldest. Mixed UI increased with age except a relatively high fraction in the age group 20-24 years. Severe UI was most common in urgency UI (38%) and least common in stress UI (17%). The same study also found that nearly 7% had moderate or severe incontinence, experienced as bothersome[34].

Ethnicity

Studies of the association between UI and ethnicity have been conflicting. Several studies have shown a higher prevalence of UI among white women, but some studies also show similar prevalence independent of ethnicity[18, 27, 36]. A recent review concludes that stress UI is shown to be more prevalent among white women, whereas urgency UI is more prevalent among black women[1].

7.4.3 Incidence and remission

Incidence is the proportion of a particular population developing a symptom, condition or a disease during a defined time period. It is also defined as number of new cases divided by population at risk x time interval. Incidence is usually reported for 1-, 2-, or 5-year intervals.

The annual incidence rates of UI vary in one review between 0.9% and 19%[43]. In another review, the incidence was 5-20% and the remission rates 3-12%[37]. In a metaanalysis, age-specific incidence rates were less than 2/1000 person-years before age 40, increased to 5/1000 person-years at age 50, decreased to 3/1000 person-years at 60-65 and then increased again[44].

Many women with UI have variations in their symptom occurrence, and several studies indicate that a large proportion of women with UI have active and inactive symptom phases[1, 45]. In addition, a considerable fraction demonstrate transition between UI types over time[37], with a general trend of progression into mixed UI[1, 41].

A Norwegian cohort study followed 2230 middle-aged women for 10 years with five checkpoints. Of the continent women at baseline, almost half reported to have UI, at least once, during the 10 years. Among the individuals with new-onset UI, 49.8% had stress UI, 18.3% had urgency and 20.3% had mixed UI. 89.3% started with slight UI, none started with severe UI. One-third with new-onset UI developed persistent UI, and in this study of women 40-44 at baseline, there was low tendency for shifting type or severity[46]. The reasons for the large variations in incidence and remission rates are the same as for prevalence studies. In addition, differences in follow-up time may contribute to different estimates. Most of the studies define remission as absence

of symptoms following a period of active symptoms, and do not take into account that many women have transient remissions, followed by periods with re-occurrence of symptoms[37]. One large population-based study with 6-monthly questionnaires over a period of 4 years, suggests that a more accurate prediction of the long-term status of UI could be obtained only after 18 month´s observation[37].

7.4.4 Impact of urinary incontinence on individuals

A. Psychological effects and consequences

Many aspects influencing a woman´s psychological well-being may be affected of having UI. This includes social life and activities, sexual and other interpersonal relationships[47]. A recent review investigated the literature on comorbid psychological symptoms in patients with lower urinary tract disorders. They found an overwhelming evidence for co-existence in all age groups between psychological comorbidities and lower urinary tract disorders generally[3].

In a qualitative and quantitative study of 314 women with UI, emotional well-being was the most affected factor in the Incontinence Impact Questionnaire and open-ended questions. Half to one-third of the patients felt nervous, embarrassed or frustrated because of their UI[4]. In another qualitative study with in-depth interviews of 151 women, stigma was associated with UI, but also with frequency and urgency without UI. In this study, the stigma of urinary symptoms depended on whether or not the incontinence was perceptible. The women feared having an unclean body or compromised social identity. There was also a discrepancy between ethnic groups in the study; Hispanic people in particular desired to keep their incontinence symptoms a secret[26]. In one qualitative study of people 65 years and more, the participants commonly described feelings of embarrassment, humiliation and disgust associated with their urinary incontinence[48].

It is reported that women with urgency UI have more psychological symptoms than those with stress UI[49, 50]. This could have to do with urgency UI being more unpredictable. The co-existence of UI and anxiety and depression will be discussed below.

B. Physical consequences

Compared to other chronic disorders, UI is one of the most bothersome conditions affecting physical functioning[47]. UI is associated with morbidity and increased risk of hospitalisation and admission to nursing homes[51].

Physical complications to UI can be rashes and soreness as a result of the skin being constantly wet. A wet and warm environment also lead to fungal infections and pressure sores[52]. In a follow-up study of 6000 women with mean age 79 years, weekly or more frequent urgency UI was associated with an increased risk of falls and non-spine, non-traumatic fracture. Stress UI was not associated with falls or fractures[53].

Impact on quality of life (QOL), social life and activities

UI has been shown to cause a decline in social function and QOL[47, 49, 54]. Most studies find that mixed UI has a higher impact on QOL compared to stress and urgency UI[55-57] One study showed that UI had a larger impact on health related QOL on women 60 years and more than other chronic conditions[58]. In the large PURE study of 9487 women from 15 European countries investigating the patient characteristics associated with QOL and bothersomeness of UI in women seeking treatment, UI severity was the most important predictor of QoL decrement and bother, regardless of type. Women with mixed UI recorded the lowest QOL score. Increasing age was positively associated with QOL, assumed to indicate that "with increasing age, coping strategies in UI have become part of everyday life, and other conditions may affect the women in addition to, or more than UI"[54]. UI together with depression, seems have an additive effect which affects both physical and mental health, perhaps by increasing a person´s negative perception of their illness[59, 60]. Two studies have shown that concomitant depression increases the condition-specific QOL decrement in UI[57, 61].

7.4.5 Treatment of UI

We distinguish between conservative treatment approaches in contrast to surgical and pharmacological treatment. It is generally recommended that conservative approaches at a primary care level should be the initial management for women with all types of

UI[2]. I will give a short overview of the non-pharmacological treatment options, and then focus on the pharmacological treatment of UI, which is an important subject in this thesis.

Non-pharmacological treatment

Non-pharmacological treatment includes lifestyle modification, pelvic floor muscle training, scheduled voiding regimens, weighted vaginal cones, electrical stimulation, magnetic stimulation and posterior tibial nerve stimulation[2].

Weight loss is recommended to overweight women with UI[62]. It is still uncertain how *physical activity* interacts with UI. A recent review found some evidence for increased rates of stress UI among physically active women[63]. Non RCT evidence suggests that moderate exercise decreases the incidence of UI[2, 64]. Current or earlier *smoking* with a high number of daily cigarettes is in cross-sectional studies positively correlated with UI[65], but there are no RCT evidence for decrease in UI by smoking cessation.

Pelvic floor muscle training, bladder training, electric and magnetic stimulation and surgery are all shown to be able to resolve UI[66]. Pelvic floor muscle training is a cornerstone in the treatment of UI, first for stress UI, but in recent years also for urgency UI, as pelvic floor muscle contraction also can be used to occlude the urethra to prevent leakage during detrusor contraction[2]. Timed voiding and bladder training are effective treatments for overactive bladder and urgency UI[67]. A systematic review found a median cure rate of 82.3% for surgical treatment of stress UI[66]. Since the Mid-urethral sling (MUS) procedure was introduced in the 1990s, it has been the main surgical procedure for stress UI.

Pharmacological treatment of overactive bladder and urgency UI

Anticholinergic drugs are the most used drug group as treatment for overactive bladder and urgency UI. Acetylcholine is the primary contractile neurotransmitter in the detrusor muscle. The anticholinergic drugs inhibit the binding of acetylcholine to the muscarinic receptors of the detrusor smooth muscle cells. They diminish intravesical pressure, increase the volume threshold for micturition and reduce

detrusor contractions by inhibiting cholinergic nerve stimulation from parasympathetic nerves[68]. Because the effect of muscarinic receptors is not selective for the bladder wall, anti-cholinergic side-effects are frequent. They include dry mouth, constipation, headache and blurred vision. There are also possible cardiac side effects with increase in heart rate, QT prolongation and induction of ventricular tachycardia (torsades de pointes). Caution is especially recommended in frail old people. A review article from 2017 found that urgency UI was treated mostly with antimuscarinic medications and the median cure rate was 49%[66]. In one study from HUNT, 38% of new anticholinergic drug users were still taking the drug after one year[69]. In a systematic review of pharmacological treatment effects in elderly with UI, there was a small, but significant effect of anticholinergics on urgency UI. Only oxybutynin was studied in the frail elderly population, and this drug had no effect on UI or quality of life in this subgroup. The authors concluded that pharmacological treatment with drugs for urgency UI in the frail elderly is not evidence based[70].

Table 3 shows the different anticholinergic drugs available in Norwegian pharmacies. Mirabegron was not introduced on the Norwegian market until 2012, and was not in sale when our HUNT3-data were collected.

Table 3. Anticholinergic drugs available in Norwegian pharmacies.

Generic name	Product name
Tolterodine	Detrusitol ®
Oxybutynin	Kentera ®
Solifenacin	Vesicare ®
Darifenacin	Emselex ®
Fesoterodine	Toviaz ®
Mirabegron	Betmiga ®

Pharmacological treatment of stress UI: Duloxetine

To treat stress UI, one can aim for an increase in bladder capacity, or an increase in bladder outlet resistance. Duloxetine hydrochloride is a dual serotonin and

noradrenaline reuptake inhibitor (SNRI) used as an antidepressant drug and is sold in Norway under the brand name Cymbalta®. It has a well-established use in major depression and generalised anxiety disorders and is also approved for chronic diabetic neuropathic pain.

Duloxetine increases bladder capacity and the activity in the striated urethral sphincter, probably through increased levels of 5-HT and NA in the pudendal presynaptic neuron in Onuf´s nucleus, leading to stimulation of the pudendal motor nerve[71, 72]. Increased serotonergic activity reduces the parasympathetic and enhance the sympathetic nerve activity, supporting the storage of urine. Studies of duloxetine in cats showed that the effect of duloxetine on the bladder was mediated centrally through both motor efferent signals and afferent sensory signals. The 5-HT2 receptor was involved in this process.

From 2004, duloxetine was approved in many western countries for stress UI after RCTs showed efficacy. In a double-blind, randomised, placebo-controlled study of stress UI, the decrease in UI episode frequency was 41% for placebo, 54% for duloxetine 20 mg daily ($p=0.06$), 59% for duloxetine 40 mg daily ($p= 0.002$ and 64% for duloxetine 80 mg daily ($p<0.001$). One half of those at the 80 mg daily dose had >64% reduction in incontinence episode frequency ($p<0.001$ versus placebo). In this study discontinuation rates because of adverse effects were 5% for placebo and 9, 12 and 15% for duloxetine 20, 40 and 80 mg per day, respectively ($p= 0.04$) No adverse effects were considered to be severe[73]. One study found that duloxetine was poorly tolerated and that two thirds of the patients had discontinued the therapy because of adverse effects or lack of efficacy after one month treatment[74]. In most western countries the license failed because of adverse events including nausea and suicidal thoughts[18]. The drug was withdrawn from the Norwegian market in 2007.

7.5 Risk factors for UI

Table 4 summarises the effect of potential risk factors on UI. Most epidemiological studies on UI are cross-sectional, giving no evidence of causation. ICI 6th edition emphasises the importance of focusing on the risk of incident UI[2].

Increasing age is a risk factor for UI, especially urgency and mixed UI[32, 34]. For stress UI, age is a risk factor only until the fifth decade, probably due to vaginal birth, which is a strong risk factor for stress UI only in the two first decades after child birth[75, 76].

Table 4. Risk factors for UI subtypes (with permission from Int Urogynecol J[1], expanded)

Risk factor	UI subtype		
	Stress UI	Urgency UI	Mixed UI
<50 years of age	++	+	+
≥50 years of age	No impact	++	++
Parity	++	No impact	+
Obesity	++	++	++
Black (white=ref)	--	++	-
Hispanic (white=ref)	-	-	--
Surgery for stress UI	--	+	-
Hysterectomy	++	-	-
Hormone replacement therapy	++	+	+
Family history	+	No impact	+
Smoking	++	+	++
Diabetes	+	++	++
Dementia	+	+	+
Asthma/COPD	+	+	+
Heart failure	+	+	+
Ischemic heart disease	+	+	+

Changes in hormones and tissues related to menopause have been regarded as an explanation for the influence of age on UI. The prevalence according to age, type and severity is discussed in chapter 7.4.2.

Pregnancy and *childbirth* are established risk factors for stress UI, probably due to injury of the pelvic floor musculature, connective tissue, and nerves[77]. Parous are more likely to have UI than nulliparous, but the difference seems to disappear after midlife, in one study after 65 years of age[76]. In a meta-analysis, vaginal delivery was connected with an almost two-fold increased risk of stress UI compared with caesarean[78]. In a recent study, where pregnancy increased the prevalence of UI from 20% to 30%, vaginal delivery additionally increased the prevalence of UI to 43%. The protective effect of caesarean delivery was a 30% reduction of UI and a 35-52% reduction of more severe grades of UI. The differences between vaginal and caesarean delivery was unaffected by age, but the study group included women only up to 65 years[75]. Compared to other vaginal deliveries, forceps delivery is associated with increased long-term risk of stress UI[79].

High BMI is associated with all subtypes and severities of UI[80]. High BMI is also associated with progression to more severe UI[64].

Family history of UI is shown to be a risk factor for stress and mixed UI. Daughters of mothers with any UI had in EPINCONT1 an OR of 1.4 (1.3-1.6) of having UI, if also the grandmother had UI, the OR was 2.9 (1.1-7.7)[81].

Hysterectomy is associated with development of UI, especially stress UI. In a review of 12 papers, the summary OR for UI among women over 60 years with hysterectomy was increased by 60[82, 83].

Cigarette smoking, both former and current smoking, is associated with UI. One study showed an association only for smoking ≥ 20 cigarettes daily, strongest for severe and mixed UI. Smoking is associated with chronic cough, which can contribute to stress UI[65, 77].

Hormone replacement therapy with oestrogen substitution was earlier assumed to be beneficial for UI in postmenopausal women[84]. Several recent studies have shown, however, that oestrogen, alone or in combination with progestin, can predispose to UI[85].

Comorbidities are in cross-sectional studies associated with UI. A review investigating comorbidities and personal burden of urgency UI, showed that urgency UI was associated with falls in elderly persons, depression, urinary tract infections, diabetes and deaths[51].

- *Diabetes* is shown to be associated with UI in several studies. In EPINCONT1, the prevalence of UI increased from 26% (no diabetes) to 39% (having diabetes), and the diabetic women had more mixed and urgency UI and more severe UI. None of the diabetes related variables as blood-glucose or type of diabetes was associated with UI[86, 87]. In one cross-sectional study of women 50-90 years, UI was associated with insulin-requiring diabetes mellitus, but not non-insulin-requiring diabetes mellitus[88].
- *Acute urinary tract infection* is a cause of transient UI. UI can also lead to urinary tract infection[89].
- *Dementia* is in several cross-sectional studies shown to be strongly associated with UI. In addition, longitudinal studies have shown an association between cognitive impairment/dementia and incidence of UI[90, 91]. Treatment for reversible dementia has also been shown to improve UI[92], and dementia is now regarded as a cause of UI[2].
- *Ischaemic heart disease is* associated with risk factors for UI, especially BMI and age. High mortality rate and exclusion of those who die can cause bias (Neymans bias), and contribute to failure to identify an association between ischaemic heart disease and UI[2]. In the Nurses´ Health Study, coronary heart disease was associated with both incident weekly UI and incident severe UI. In EPINCONT1 *angina pectoris* was associated with any UI and severe UI[86].

- *Stroke* is shown to be associated with UI. According to a review article, 28-79% of stroke-survivors experienced UI, with detrusor overactivity being the most common type of incontinence by urodynamic studies[93].
- *Asthma and chronic obstructive pulmonary disease* seem to be associated with UI[94, 95]. The mechanism is probably chronic cough and accompanying increase of intraabdominal pressure. Association has also been showed between UI and *functional impairments generally, mobility limitations, a history of falls, arthritis and use of walking aid*[96-98].

Socio-economic status (SES) is correlated negatively with many of the mentioned factors, including BMI, diabetes, depression, smoking and physical activity. Higher SES is on the other hand associated with increased care-seeking for UI, and could therefore lead to more reporting of symptoms, but it is uncertain evidence for an association between SES and UI prevalence. In the National Health and Nutrition Examination Survey (NHANES), urgency UI was found to be associated with low socioeconomic status measured by poverty income ratio (PIR), which reflects the family income[99].

High impact exercise is associated with stress UI. On the other hand, women with UI, especially severe, often experience a barrier for being active in sports[100]. Cross-sectional studies suggest that low impact sports can be protective and high impact sports harmful for UI[65, 101]. In a prospective study from 2018 among women with UI, more physical activity was associated with lower odds of progression to severe UI[64].

7.5.1 Depression and anxiety associated with UI

As early as in 1964 a relationship between common affective disorders and UI was described[102]. In 1987, Macaulay et al assessed the mental state of patients attending an urodynamic clinic. They found more anxiety- and depression symptoms among women with UI, especially was anxiety associated with detrusor instability and sensory urgency. The same study also demonstrated effect on urgency symptoms of psychotherapy treatment[103]. In 2011, ICS organised a think-tank on psychological factors and LUTS. It was concluded that not only overactive bladder and the urgency

spectrum, but also other LUTS, may be associated with affective conditions, and that a possible causation or maintenance of LUTS through psychological causes needed further research[20]. Most studies on the field are about the association between depression and UI.

Depression and UI

Several cross-sectional and longitudinal epidemiologic studies have shown an association between depression and urinary incontinence[61, 91, 98, 104, 105]. A majority of the studies are cross-sectional. According to type, studies show an association to all three main types of UI, but strongest for urgency and mixed UI[57, 106-108].

In two longitudinal studies, depression at baseline predicted onset of UI, but UI at baseline did not predict onset of depression[104, 109]. Another study showed that depression symptoms at baseline were associated with persistence, but not incidence, of UI[110]. UI four months after giving birth was in one study associated with depression 12 months postpartum[111].

Some studies focus on quality of life and functional status among patients with co-occurrence of UI and depression. Generally, incontinent women with co-morbid depression state their UI as significantly more severe, have more quality of life impairment and greater decrements in functional status compared to the incontinent women without depression[61, 112]. The most important references on the association between UI and depression are listed in Table 5.

Table 5. The most important previous studies on the association between depression and UI

Author, year	Study design	Age	N	UI definition and prevalence	UI type or severity	Definition of depression	Main results
Melville 2002 [57]	Cross-sectional, women with UI	18-90	218	Any UI and UI-diagnose 55%	Type	PRIME-MD PHQ	Versus stress UI, urgency and mixed UI assoc. with major depr. OR 9.2 and 13.5, resp. Depr. impacts UI reporting, UI specific QoL and functional status.
Nygaard 2003 [98]	Cross-sectional, population based	50-69	5701	Any UI last 12 months 16%	Severity	CIDI-SF	Mild/moderate and severe UI associated with depr. with ORs 1.41 and 1.82, resp.
Melville 2005 [61]	Cross-sectional, population-based	30-90	3536	Any UI, at least monthly 42%	Type Severity (SSI)	PRIME-MD PHQ	Major depr. associated with UI (moderate: OR 2.7, severe: OR 3.8). UI and severe depr. associated with more reduced QoL compared to only UI.
Coyne 2012 [113]	Cross-sectional online survey, "EpiLUTS"	≥40	15860	Any UI 68%	Type, frequency, bother	HADS	Prevalence of anxiety and depr. highest with mixed UI and with stress UI combined with other UI.
Townsend 2014 [107]	Cross-sectional	58-83	934 black 71.161 white	Any UI 68%	Type Severity (SSI)	CESD-10	Depr. associated with UI, highest OR for mixed (1.43) and severe (1.8), no difference between black and white.
Concepcion 2018 [105]	Cross-sectional, "45 and Up Study"	≥45	143.096	Any UI 44%	None	Self-reported diagnosis and/or recent treatments	History of anxiety and depr. associated with UI, OR 1.19
Dellu 2016 [114]	Cross-sectional	35-72	1200	Any UI 20,4%	Type Severity	Beck Depression Inventory	Depr. was associated with UI, OR 1.96. Not any estimates for association with type/severity.
Vigod 2006 [115]	Cross-sectional, computer-assisted interviewing	≥18	69.003	Any UI last 6 months, diagnosed by a health professional, 3.2 %	None	CIDI-SF	Association between UI and depr. with OR 5.73, and between any chronic condition and depr. with OR 2.62
Bradley 2012 [106]	Cross-sectional, computer-assisted telephone interview	20-52	968	Any UI 39%	Type	CIDI-SF	Urgency/mixed UI was associated with posttraumatic stress disorder, but not depr. Stress UI not associated with PTSD or depr.

Sung 2009 [116]	Cross-sectional. UI and overweight, "PRIDE"	≥30	338	≥10 UI-episodes in 7 days	Frequency	Beck Depression Inventory	Depressive symptoms associated with higher number of UI-episodes.
Zorn 1999 [117]	Case-control, both genders	33-65	115	Diagnosed UI at an incontinence clinic	Type	Beck Depression Inventory	Urgency and mixed UI associated with depr. (OR 3.3 and 3.1 respectively).
Thom 1997 [91]	Longitudinal, cohort study, medical records, both genders	≥65	5986	Diagnosed UI in the medical record. 6% at baseline		Depression according to medical records	Previously diagnosed depr. associated with onset of UI (RR 1.6 in women, 2.0 in men).
Perry 2006 [108]	Longitudinal postal survey	≥40	12.568	Leakage several times a month or more, 15% urgency UI	Type	HADS	Urgency UI predicts incident anxiety (OR 1.52) and depr. (OR 1.56). Anxiety, but not depr., predicts incident urgency UI (OR 1.36)
Melville 2009 [104]	Longitudinal cohort study, pop-based, 6-year follow-up	51-61	5820	≥1 day with UI last month, 13%	None	CESD	Major depr. predicted onset of UI (OR 1.46). UI did not predict onset of depr.
Maserejian 2014 [110]	Longitudinal, pop.-based, cohort, 5-year follow-up	30-79	2534	Any UI. Monthly 20% and weekly 11% at baseline		Not specified	Depr. symptoms at baseline associated with persistence of UI (OR 2.39), but not incidence of UI.
Legendre 2014 [109]	Longitudinal cohort study, 18 years	47-52 years at baseline	3828	Any UI, 25%		CESD	Depr. at baseline associated with incidence of UI (HR 1.30).
Mishra 2015 [118]	Cohort study, longitudinal with several waves	22-39	6461	Any UI last 12 months, 6.8% at baseline, 6.5% at follow-up	None	CESD-10	Women with depressive symptoms at one survey had 37% higher likelihood of reporting UI symptoms in the following survey.
Fritel 2016 [111]	Cohort study		1413	14% de novo UI at 4 months postpartum	Severity	Edinburgh postpartum Depression Scale	UI four months postpartum associated with higher risk of depr. twelve months postpartum.

Anxiety and UI

As for depression, anxiety seems to be strongest associated with urgency and mixed UI[57, 113]. In one longitudinal study, urgency UI predicted incidence of anxiety and depression, and anxiety predicted incidence of urgency UI[108]. In a more recent longitudinal study, UI at baseline, only with condition-specific functional loss, predicted onset of anxiety disorder. Anxiety at baseline also predicted onset of UI, but only if accompanied with condition-specific functional loss[119]. The most important references on the association between UI and anxiety are listed in Table 5.

7.5.2 Drugs associated with UI

Several drug classes have been found to be associated with UI. The most important are antidepressants, antipsychotics, benzodiazepines, non-benzodiazepine anticonvulsants, beta receptor agonists, alpha blockers, estrogens, antihistamines, beta blockers, diuretics, calcium channel blockers, angiotensin converting enzyme (ACE) inhibitors and angiotensin II receptor blockers[120-126]. The psychotropic drugs are related to this thesis and will therefore be in focus here.

Drugs can lead to incontinence by increasing intravesical pressure and/or lowering bladder outlet resistance. Both mechanisms disturbe the pressure balance between the bladder and the urethra and lead to UI. Drugs can also cause UI by disturbance of the central nervous control of voiding or through an overproduction of urine.

Psychotropic drugs

Several studies have shown an association between UI and psychotropic drugs, especially antidepressants[120, 121, 124, 125]. The psychotropic drugs with some evidence for association with UI are summarised here:

Antidepressants

Antidepressants influence UI mostly through the adrenergic, noradrenergic and serotonergic systems. Several serotonergic and noradrenergic pathways are involved in the control of micturition, and both centrally and peripherally serotonin and

Table 6. The most important previous studies on the association between anxiety and UI

Author, year	Study design	Age	N	UI definition and prevalence	UI type or severity	Definition of anxiety	Main results
Melville 2002 [57]	Cross-sectional, women with UI	18-90	218	Any UI and UI-diagnosis 55%	Type	PRIME-MD PHQ	Depression or panic disorder more prevalent in mixed and urgency UI compared with those with stress UI.
Coyne 2012 [113]	Cross-sectional internet-survey	≥40	15860	Any UI, 68%	Type	HADS	Prevalence of anxiety and depression highest with mixed UI and stress UI combined with other UI.
Concepcion 2018 [105]	Cross-sectional	≥45	143.096	Any UI 44%	None	Self-report on diagnosis and/or recent treatments	History of anxiety and depression associated with greater odds of reporting UI, OR 1.19
Perry 2006 [108]	Longitudinal postal survey , 1-year follow-up	≥40	12.568	Leakage several times a month or more. 15% urgency UI at baseline.	Type Frequency	HADS	Urgency UI predicted incident anxiety (OR 1.52) and depression (OR 1.56). Anxiety, but not depression, predicts incident urgency UI (OR 1.36)
Bogner 2011 [119]	Longitudinal, pop.-based. 10-year follow-up.	≥30	1071	Any UI last year 16.8%(among women without anxiety at baseline)	None	Diagnostic Interview Schedule (DIS)	Only UI with condition-specific functional loss predicted onset of newly-incident anxiety disorder (OR 2.55). Agoraphobia and panic disorder predicted onset of newly-incident UI with condition-specific functional loss.
Lai 2017 [127]	Observational, case-control	>18 years	51 cases, 30 controls	Patients diagnosed with overactive bladder (OAB)	Frequency Amount	HADS-A	Significantly more anxiety in OAB vs. controls: HADS-A ≥8 (48% vs. 13%) and HADS-A ≥11 (24% vs. 3.3%). Comorbid anxiety in OAB ass. with greater bother and impact on QoL compared with OAB without anxiety.

noradrenaline are important neurotransmitters regarding micturition control. S*erotonergic antidepressants* may induce UI by affecting these pathways**.** SSRIs and SNRIs have been assumed to act on 5-HT4 receptors in the bladder detrusor, causing overactivity of the detrusor and potentially overactive bladder with or without urgency UI[15]. 5-HT2A receptors in the bladder wall may also be involved, especially in the control of urethral function[128, 129]. In a study in rats, the activation of 5-HT1A receptors was involved in the pathogenesis of UI[16]. In a retrospective follow-up study investigating the incidence of UI (defined by initiation of spasmolytic drugs or absorbent products) among users of SSRIs, the adjusted relative risk (RR) for UI due to SSRI use was 1.61 (1.42-1.82), higher among the oldest persons. Among the SSRIs, sertraline was strongest associated, with RR 2.76 (1.47-5.21)[124]. In a prospective trial with 113 women taking antidepressants and 92 healthy controls, the prevalence of overactive bladder was significantly higher in antidepressant users (64%) than in the control group (33%) (p=0.003). In this study, users of fluoxetine had higher prevalence of overactive bladder than those using sertraline[125]. However, some studies have found no association between antidepressants and UI[122, 123]. The tricyclic antidepressants also inhibit reuptake of serotonin and noradrenaline, but have also an anticholinergic effect, and can therefore theoretically also stimulate storage of urine. The different antidepressant classes according to mechanism of action are shown in Table 6.

Antipsychotics

Antipsychotics act in the dopaminergic, adrenergic and noradrenergic systems. They are both dopamine receptor antagonists and alpha blockers, and could therefore possibly lead to UI. Second generation (atypical) antipsychotics are also serotonin 5-HT2A receptor antagonists, and could influence the bladder function through that system[130]. One study showed that atypical antipsychotics were associated with increased prevalence of LUTS[123], but other studies have showed no association[122, 131] However, many antipsychotics also have anticholinergic effects and could therefore hypothetically protect against UI[120].

Table 6. Antidepressants according to neurobiological mechanism

Antidepressant group, mechanism	Generic names
Selective inhibitors of reuptake of serotonin in the synapse (SSRI)	citalopram, escitalopram, fluoxetine, fluvoxamine, paroxetine, sertraline
Selective inhibitors of re-uptake of serotonin and noradrenaline in the synapse (SNRI)	duloxetine, venlafaxine
Serotonin re-uptake inhibitor with receptor modulation in the synapse	vortioxetine (from 2015)
Selective inhibitor of re-uptake of noradrenaline in the synapse	reboxetine
Inhibitors of re-uptake of dopamine and noradrenaline in the synapse (NDRI)	bupropion
Non-selective inhibitors of re-uptake of monoamines (Tricyclic antidepressants, TCA)	amitriptylin, doxepin, klomipramin, nortriptylin, trimipramin
Blockers of natural decomposition of monoamines	fenelzin, tranylcypromin (irreversible blockers), moklobemid (reversible blocker)
Receptor antagonists (blocking of pre-synaptic α2-receptors)	mianserin, mirtazapin

Benzodiazepines

Benzodiazepines may cause UI through their effect on GABAA-receptors in the CNS and relaxation of striated muscle[120]. In a study of 4583 nursing home residents, users of benzodiazepines had a statistically significant increased risk (OR 1.44) of having UI[132].

Non-benzodiazepine anticonvulsants

Non-benzodiazepine anticonvulsants were in one study associated with UI [122]. Other studies and case reports have also found and described an association between some anticonvulsants and UI[133-135]. The drugs in this group have diverse mechanisms of action, and it is unclear whether these drugs have a common mechanism for their possible association with UI.

7.6 Anxiety and depression.

In this section I will shortly describe the symptomatology, epidemiology and some neurobiological mechanisms of anxiety and depression. The next section will then focus on possible mechanisms for the associations between UI and anxiety and depression.

7.6.1 Anxiety

Anxiety disorders are a group of conditions characterised by inner turmoil, tension and anxiety accompanied by physiological symptoms in situations where there is no real danger. Common for the different types of anxiety disorders is symptoms of autonomous activation such as palpitations, symptoms from chest and stomach (heavy breath, chest pain and nausea), changes in state of mind, dizziness and sensory symptoms. Unspecific symptoms like memory problems, concentration problems, generalised muscle pain, fatigue and loss of energy are also common symptoms. Panic disorder, generalised anxiety disorder, post-traumatic stress disorder and phobias are among the most common anxiety types. 12-month prevalence was 18% for any anxiety disorder and lifetime prevalence 29% in a review from the United States[136].

7.6.2 Depression

Mood disorders are among the most common reasons for functional loss in the population. Depression is, by WHO, ranked as the third most important cause of burden of disease[137]. There are two main groups of mood disorders: single or repeated depressions and bipolar disorders. Most epidemiological studies focus on moderate and severe depressions, often called major depression. The one-year prevalence of major depression is in most western studies approximately 6%. Lifetime prevalence is estimated to 15-18%[138]. Depression is associated with increased mortality and diverse somatic morbidity[139]. A recent review conclude with a high rate of comorbidity in depression and a wide range of somatic comorbidities, and these conditions are often worse when depression is present[140].

There is no single mechanism which can explain all episodes of depression. Both psychosocial and biological stressors may contribute to the pathophysiology in depression[138]. Two causal hypotheses will be mentioned here:

- The monoamine hypothesis: The level of monoamine neurotransmitters (serotonin, dopamine, noradrenaline) are reduced in depression.
- Hypothalamic-pituitary-adrenal (HPA) axis changes: Increased levels of plasma cortisol are found in severe depressions due to changes in the HPA axis with stress-related cortisol release.

7.6.3 Neurobiological aspects in anxiety and depression

I will shortly present the most common neurotransmitters and their receptors, associated with anxiety and depression:

Serotonin (5-HT)

Animal studies and preclinical studies on humans have shown that the serotonergic system plays a central role in anxiety and depression. Serotonin (5-HT) is synthesised from tryptophan in serotonergic nerve cells in the brain stem. 5-HT is also found in the hypothalamus, in the limbic system and frontal cortex. 5-HT has general modulating effect in the brain. It affects sleep, appetite, aggression, sexual function, pain and emotions like anxiety, depression and irritability. 5-HT is removed from the

Table 7. Effects of blockade and stimulation of serotonin receptors (Based on ref.[141])

Receptor	Effect of stimulation	Effect of blockade
5-HT1A	Reduced depression, anxiety and obsessive thoughts	Increased depression, anxiety, obsessive thoughts, irritability
5-HT2A	Behavioural activation. Insomnia, anxiety and agitation. Sexual dysfunction.	Reduced behavioural activation, better sleep, reduced sexual dysfunction
5-HT2C	Irritability, reduced appetite	Reduced irritability, better appetite
5-HT3	Feeling of seasickness, nausea and headache	Attenuates the feeling of seasickness, nausea and headache

synapse by a 5-HT transporter. SSRIs inhibit this transport and increase the level of 5-HT in the synapse. There are many different 5-HT receptors, and the effects of stimulation and blockade of some of them are summarised in Table 7. Especially 5-HT1A plays a role in anxiety and depression modulation. Stimulation of 5-HT1A leads to reduced depression, anxiety and obsessive thoughts. Inhibition of 5-HT1A has the opposite effect.

Noradrenaline (NA) and adrenaline

These belong to the catecholamines. Dopamine is broken down to NA and adrenaline. Acute stress leads to release of NA in the limbic system. NA-dependent stimulation of α1-receptors leads to increased release of glutamate and thus increased excitatory activity. There are two main types of adrenergic receptors: α (alfa)- and β (beta)-receptors. These are abundant both in the central nervous system, and in peripheral tissues, like in the heart and the urinary bladder[141].

Dopamine

Dopamine is produced in the thalamus and midbrain and nerves with dopamine innervates the pituitary gland, the basal ganglia, and large parts of the cortex, especially prefrontal cortex. Dopamine is connected to emotions, cognitive functions and reward. Dopamine plays an important role in Parkinson´s disease and schizophrenia. In certain types of depression, synaptic dopamine levels can be reduced, especially in depressions with motoric retardation and somatic symptoms. The antidepressant bupropion acts partly through inhibition of reuptake of dopamine in the pre-synapse. The main effect of anti-psychotic medication is blockade of the post-synaptic dopamine receptors[141].

Glutamate

Glutamate has an excitatory effect. Several studies have demonstrated associations between pathology in the glutamate system and mental disease[141]. The drugs memantin and lamotrigine reduce the release of glutamate (lamotrigine also affects postsynaptic 5-HT1A-receptors).

GABA (γ-aminobutyric acid)

GABA has an inhibitory effect. Benzodiazepines and barbiturates as well as alcohol, work through binding to GABA-receptors. Some other anticonvulsives also affect GABA-receptors. Changes in the GABA system are found in anxiety, depression and psychoses[141].

7.7 Possible mechanisms for the associations between UI and depression and anxiety

Biological explanations

Biological theories for the association between depression and anxiety and UI are linked to the serotonergic and noradrenergic systems. Dysregulation of 5-HT and NA in the brain is strongly associated with depression and anxiety. Serotonergic activity inhibits voiding, by inhibiting the parasympathetic input to the bladder and enhancing the efferent control of the urethral outlet. Low levels of 5-HT and NA in the CNS could therefore lead to UI.

It is also known that 5-HT and NA modulate pain sensitivity through their presence in the descending pain pathways. Descending serotonergic and noradrenergic pathways suppress the peripheral afferent input, such as musculoskeletal and abdominal pain, in a way that makes a healthy person more able to pay attention to what happens outside the body. Dysfunction of the descending inhibitory pathways allows stronger ascending signals to reach the brain where they are interpreted as pain. This can explain the symptoms of physical pain associated with depression[14]. Figure 3 demonstrates the role of 5-HT and NA in UI, depression and pain, as shown in the paper of Thor et al[14].

Psychological explanations

UI has been shown to have high impact on quality of life, especially severe UI and urgency and mixed UI[4, 47, 142]. UI can impair social life and outdoor activities, such factors are potential risk factors for depression. Being afraid of losing control over micturition and wetting oneself could also possibly lead to anxiety and avoidance

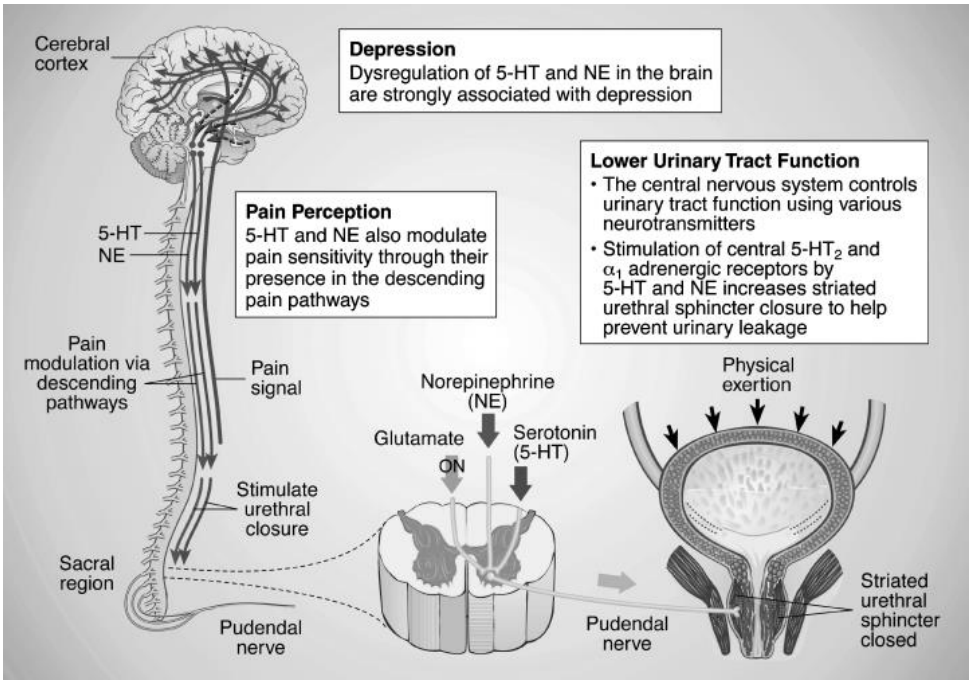

Figure 3. The role of serotonin (5-HT) and noradrenaline (NA, here norepinephrine,NE) in UI, depression and pain. In UI: 5-HT and NE facilitates glutamate´s exitatory effect on the pudendal nerve activity in Onuf´s nucleus, leading to contraction of the external urethral sphincter. In depression: Low levels of 5-HT and NE in the brain are associated with depression. In pain: Low levels of 5-HT and NE leads to failure of the normal descending inhibitory function of 5-HT and NE on the ascending pain signals e.g. from the musculoskeletal system. (Reprinted with permission from The International Journal of Clinical Practice[14]).

behaviour. Perry et al presented a model for understanding how psychological factors may cause, maintain or exacerbate symptoms of urgency UI, and also, how such factors may impede therapeutic interventions that require motivated patients. The authors highlight the importance of paying attention to women´s perceptions, beliefs, assumptions and expectations the about the ability to control micturition. Motivation and confidence in learning new skills and cope with failures is also important[108]. This psychological model is presented in Figure 4.

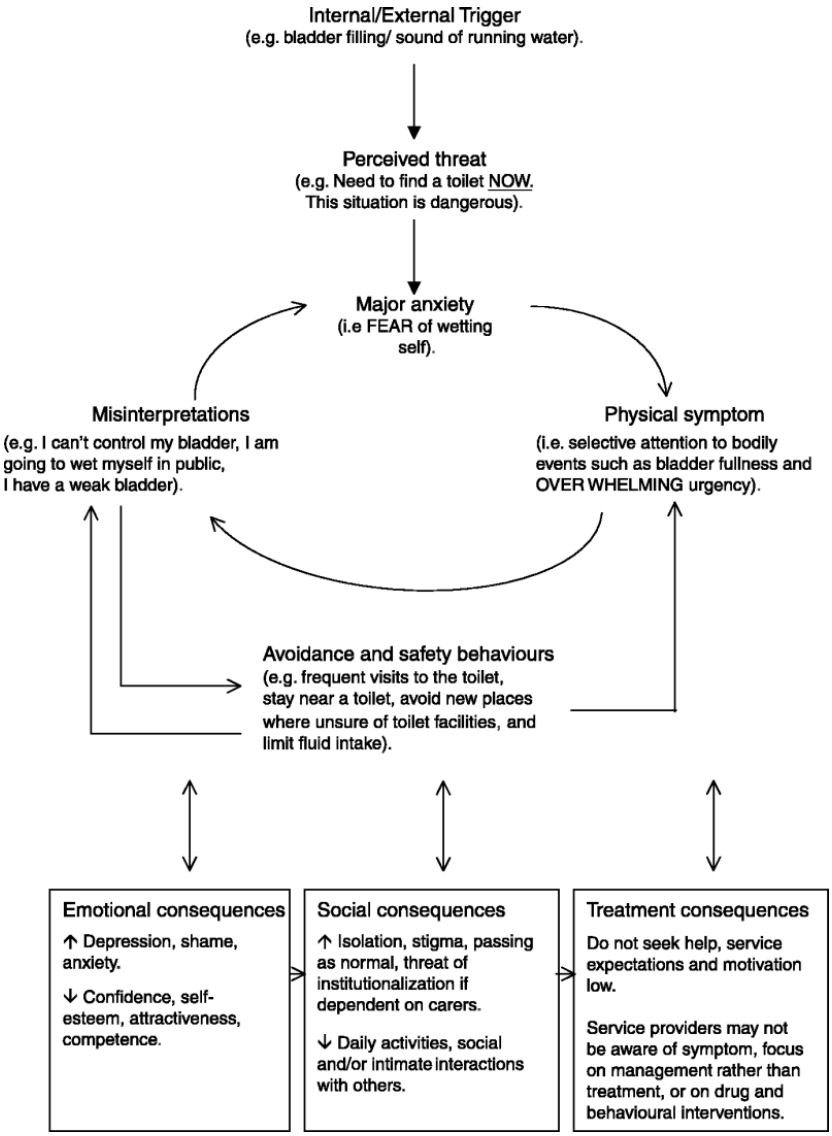

Figure 4. Bladder filling perceived as a threat which leads to anxiety and selective attention to bladder fullness and an overwhelming urgency (upper part of the figure). This leads to the misinterpretation of a weak bladder and risk of wetting. This perception can lead to an avoidance behaviour and increased anxiety. The lower part of the diagram integrates in the model the emotional consequences of the anxiety- and avoidance circle, with depression, shame and decreased confidence, social consequences with isolation and decreased daily activities, and negative treatment consequences. (Reprinted with permission from British Journal of Health Psychology[108]).

8. Aims of the study

The main objective of the thesis was to investigate the relationship between female UI and anxiety and depression in three general populations. In the last paper we also aimed to investigate the relationship in light of the use of psychotropic drugs. The studies performed had the following specific aims:

Paper I. To determine the association between anxiety and UI, and depression and UI, among middle-aged women in a large population-based cross-sectional study, and to investigate the association for type and severity of UI.

Paper II. To predict the odds of developing anxiety and depression among women with UI at baseline compared to those without UI at baseline, and to predict the odds of developing UI among women with anxiety and depression at baseline compared to women without these conditions at baseline. In addition, we aimed to further investigate these connections in different age groups, and between different levels of anxiety- and depression scores, and for stress- and urgency components of UI.

Paper III: To investigate the possible impact of psychotropic drugs on the associations between anxiety and depression and UI.

9. Material and methods

In this section, I will present the databases used in this thesis; The Hordaland Health Study (HUSK) used in **Paper I**, The Nord-Trøndelag Health Survey 2 and 3 (HUNT2 and HUNT3) used in **Paper II** and **Paper III** and The Norwegian Prescription Database (NorPD) used in **Paper III**. I will further present the UI variables and classifications, as well as the anxiety- and depression variables and classifications used in the studies. Finally, the statistical methods used in the papers and the ethical approvals will be described.

9.1 The Hordaland Health Study (HUSK)

HUSK was a population-based survey conducted in Hordaland county, now part of Vestland county, in western Norway from 1997-1999. It is part of COhort of NORway (CONOR), a national research collaboration including Tromsøundersøkelsen, Helseundersøkelsen i Nord-Trøndelag (HUNT) and Helseundersøkelsen i bydelsregioner i Oslo (HUBRO). HUSK was a collaboration between the National Health Screening Service (now part of National Institute of Public Health), the University of Bergen and the Municipal Health Services in Hordaland. The main focus of HUSK was on chronic diseases, including cardiovascular disease, cancer, osteoporosis, anxiety and depression, urinary incontinence and drug use.

Study group in Paper I

All persons born between 1953 and 1957 who lived in the county of Hordaland were invited by mail to participate in HUSK, altogether 29.400 (14.349 women). A total of 8.584 men (57%) and 9.976 women (70%) met at a screening station (office or bus) for blood tests and some examinations, and here they received Questionnaire 1, which they filled in at home and returned by mail. 8.843 women (89%) answered and returned Questionnaire 1. 7.039 women received Questionnaire 2, including questions about urinary incontinence, anxiety and depression. 5.321 women (76%) answered, and this represented the study group in **Paper I**.

The questions about UI, anxiety and depression in HUSK are identical with the questions in HUNT (with exception of 25% of the questionnaires in HUNT2 which only had three instead of four frequency-levels on UI), and will be described under the description of the EPINCONT-study. The HUSK questionnaire is also shown in appendix.

9.2 The Nord-Trøndelag Health Survey (HUNT)

The Health Study in Nord-Trøndelag is the largest population-based collection of health data in Norway. Three surveys were carried out, HUNT1 in 1984-1986, HUNT2 in 1995-1997 and HUNT3 in 2006-2008. In addition, three waves of a Young-HUNT Study were carried out, including participants aged 13-19 years. HUSK and HUNT are both part of the national research collaboration CONOR. The HUNT studies covered a broad spectre of medical topics including health problems from most organ systems and mental health, in addition to lifestyle factors and quality of life. The HUNT2 and HUNT3 surveys are partly designed as follow-ups of the previous study, but the HUNT studies have also expanded.

In all three HUNT surveys, all persons aged 20 years and older in the former county of Nord-Trøndelag (Nord-Trøndelag was from 01/01/2020 part of the county Trøndelag) were invited to participate. The participation rate declined from HUNT1 to HUNT3. In all three surveys, more women than men participated, and the middle-aged and elderly (50-79 years) had the highest participation rate. The invitation included Questionnaire 1 (Q1), which the participants were asked to bring to a screening station together with the written consent. At the screening station they underwent clinical examinations and blood samples were drawn. At the screening station the woman received Questionnaire 2 (Q2). In HUNT2, the questions about anxiety and depression were in Q1, and the questions about UI were in Q2. In HUNT3 the questions about anxiety, depression and about UI were in Q2.

The HUNT database is continuously being adjusted to increase data quality. This results in small changes over time in numbers of invited and attended persons in the

surveys. When we received the data file for the third paper in 2017, we got a different total number of invited women and women who had answered Q1 and Q2. One reason for changes is also retraction of written consent from some participants. The participant numbers in HUNT3 used in the flowchart, are the numbers from the file we received in 2017.

Study group in Paper II

The study group for **Paper II** consisted of women who answered the questionnaires about anxiety, depression and UI in both HUNT2 and HUNT3. 47.177 women were invited to participate in HUNT2 and 47.415 women were invited in HUNT3 according to information from HUNT at the time we received the data file for **Paper II**. 34.662 (73.5%) answered Q1 and 30.268 women answered Q2 in HUNT2. 27.761 women answered Q1 and 23.142 answered Q2 in HUNT3. The study group consists of the 16.263 women who had answered both Q1 and Q2 in HUNT2 and Q2 in HUNT3.

Study group in Paper III

The study group in **Paper III** consisted of women who had answered the questions about anxiety, depression and UI in HUNT3. According to information from HUNT at the time we received the data file for **Paper III**, 47.293 women were invited in HUNT3, a total of 27.758 (59%) women answered Q1 and 27.691 women received Q2. These were our source population. 23.141 women answered Q2 and 21.803 (79%) of these answered the UI part of the questionnaire, and these were our study population (EPINCONT2).

Both a study of the cohort-profile and a study of non-responders in HUNT3 have been published[143, 144].

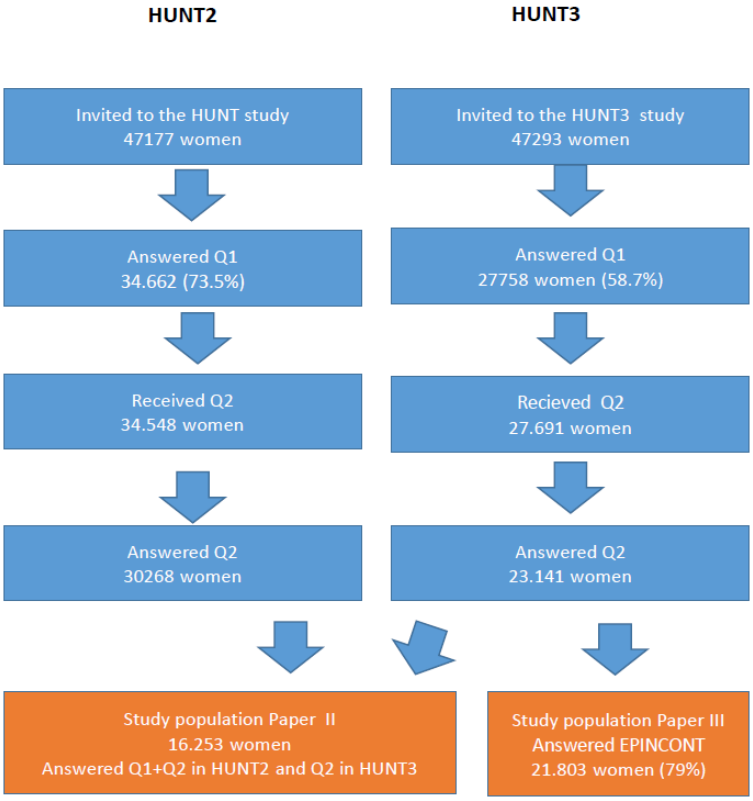

Fig 5. Participation in HUNT2 and HUNT3, and study groups in **Paper II** and **Paper III**.

9.2.2 The EPINCONT study

EPidemiology of INCOntinence in the county of Nord-Trøndelag (EPINCONT) is the name of the sub study about UI in the HUNT studies. EPINCONT1 is the study based on the UI questionnaire in HUNT2, and EPINCONT2 is the study based on UI questions in HUNT3. The questionnaire was designed by Steinar Hunskår and Hogne Sandvik in the Research group for urinary incontinence at the Department of Global Public Health and Primary Care at the University of Bergen.

9.2.3 Classification of UI variables

The questions about UI in HUSK are similar to the UI questions in EPINCONT. In EPINCONT1, 25% of the questionnaires had three instead of four categories on

frequency of leakage, due to a mistake at the HUNT data centre. This did not influence the studies in this thesis, because severity of UI was not part of the analyses in **Paper II**, where the HUNT2 database was used.

UI was defined as any leakage of urine[10]. The UI questions started with an entry question about experiencing involuntary loss of urine or not. If the answer was yes, the woman was asked more specific questions: how often do you leak (four levels), how much leakage amount (three levels), do you leak when coughing, sneezing, laughing, lifting heavy items (yes/no).

Those who, despite answering "no" or failing to answer on the entry question, answered confirmatively on the questions about frequency, volume, and type of leakage, were also regarded as answering "yes" on the entry question. Those not answering the entry question about leaking urine or not, and answered two or less of the following three questions, where classified as missing.

If the woman leaked urine when coughing, laughing, sneezing, or making an effort, a stress component was defined. If she answered "yes" on the question about urgency to void, an urgency component was defined. If answering "yes" on both these questions, the leakage was defined as mixed UI. Those who answered "no" on both the urgency and stress UI question, despite answering "yes" on the entry question about loss of urine, were grouped as other/unclassified.

To categorise the severity of the UI, a four-level severity index (Sandvik Severity Index) developed by Sandvik et al. was used[145, 146]. The reported frequency (four levels) was multiplied with the amount of leakage (three levels), resulting in an index with 12 levels, which was further categorised into slight (1-2), moderate (3-6), severe (8-9) and very severe (12). Slight incontinence denotes leakage of drops a few times a month, moderate incontinence daily leakage of drops and severe incontinence larger amount at least once a week. Sandvik Severity Index has been validated against a 48-hour "pad-weighing" test[146]. Slight incontinence means a mean leakage of 6 g/24 h, moderate incontinence means a mean leakage of 23 g/24 h, and severe incontinence means a mean leakage of 52 g/24h and very severe incontinence means a leakage of

122 g/24 h. The Sandvik Severity Index is therefore a semi-objective and quantitative measure of the leakage. In both **Paper I** and **Paper III**, the categories severe and very severe were merged, to achieve statistically stronger groups.

9.2.4 Classification of anxiety and depression

The Hospital Anxiety and Depression Scale (HADS) was used to define anxiety and depression both in HUSK and HUNT. HADS was first developed in English in 1983 by Zigmond and Snaith[147]. It was from the beginning designed to investigate anxiety and depression among patients with somatic disease. Somatic symptoms of anxiety and depression were therefore excluded to avoid somatic disease to be confused with anxiety and depression symptoms. HADS is a self-administered questionnaire consisting of 14 items, seven questions for anxiety (HADS-A) and seven for depression (HADS-D). Each item has four possible answers, scored on a Likert scale from 0 to 3. The item scores are added giving subscales from 0-21. 0 is minimum and 21 is maximum symptom level. Substitution of missing values was performed for persons who responded to five or six of the HADS-A and HADS-D questions by assuming similar responses on the questions not answered as in those answered. This was done by multiplying the obtained score by 7/5 if five of the seven questions were answered and by 7/6 if six questions were answered. If one to five questions were answered, the person was excluded and coded as missing.

HADS-A contains questions reflecting restlessness and worry and one question about panic attacks. The HADS-D focuses mainly on the aspect of reduced pleasure response in depression, but also psychomotor retardation as well as impaired mood. Five of seven questions about depression symptoms focus on lack of positive feelings. The depression scale covers only two of the three main criteria for depression, according to ICD-10 (decreased mood, lack of interest and joy), while somatic symptoms like lack of energy and disturbance of sleep and appetite are not covered.

The developers of the scale recommended three cut-off values: mild (8-10), moderate 11-14) or severe (15-21) anxiety or depression score. Clinically significant anxiety and depression is in this thesis defined as a HADS-A or a HADS-D score of 8 or more, respectively. We defined mild anxiety and depression as 8- <11 on the HADS-A and HADS-D, respectively, and moderate/severe anxiety and depression as ≥11 on

HADS-A and HADS-D, respectively. HADS has been validated in several studies[148, 149]. In 2016 the Knowledge Centre at the Norwegian Institute of Public Health undertook a review and assessment of all psychiatric measures used in Norway, among them, the Norwegian HADS. The properties of the scale were considered by norm data, reliability and validity. Their conclusion was that the Norwegian version of HADS was a relatively well validated screening instrument for symptoms of psychological distress[150].

9.3 The Norwegian prescription data base (NorPD)

The NorPD is a national health register maintained by the Norwegian Institute of Public Health. It contains information about all prescriptions dispensed at Norwegian pharmacies from 2004. Each time a drug is dispensed, the generic name, Anatomical Therapeutic Chemical (ATC) code, strength, number of packages and defined daily dose (DDD) are registered. Every record contains the user´s unique identity number, which makes it possible to identify chronologically all prescriptions to each individual. NorPD lacks individual-level information on medication dispensed to institutionalised individuals.

9.3.1 Classification of drug use

We defined drug use as one or more dispensed prescription during the last six months. In the dose-response analyses we used four different levels of DDD: no use, low DDD, medium DDD and high DDD. The cut-off values were set separately for each drug, due to different user profiles. The following drug groups were used in the analyses: Opioid analgesics (ATC-code: N02A), other analgesics (N02B), antiepileptic drugs (N03), lamotrigine (N03A X09), antiparkinson drugs (N04), antipsychotics (N05A), anxiolytics (N05B), hypnotics and sedatives (N05c), antidepressants (N06A) and selective serotonin reuptake inhibitors (SSRIs) (N06AB).

9.3.2 Confounding variables and risk factors adjusted for

In logistic regression analyses, *age* was used as a continuous variable (**Paper I** and **Paper II**) or categorised into 5-year groups (**Paper III**). In descriptive analyses in **Paper II** and **Paper III**, and in the logistic regression analyses in **Paper II,** we defined three age groups: 19-39 years, 40-54 years and over 55 years.

BMI was obtained by using the measures of height and weight from the screening stations. The following categories were used in the logistic regression analyses: underweight (<18.5), normal (18.5-24.9), overweight (25.0-29.9), obesity (≥30). Data were adjusted for BMI in all three papers.

Parity was regarded as a confounder and was adjusted for in the logistic regression analyses in all three papers.

In **Paper I**, **Paper II** and **Paper III**, we adjusted for the following co-morbidities, known to be associated with both depression and UI, and thus possible confounders: *diabetes, asthma, myocardial infarction and cerebral stroke.* In **Paper III** we also adjusted for *chronic musculoskeletal pain (fibromyalgia) and rheumatoid arthritis*.

In **Paper III** we also adjusted for *use of oestrogen replacement medication* and *use of urologic medication for overactive bladder and urgency UI.*

9.4 Study design and statistics

Paper I and **Paper III** are cross-sectional, population-based studies. **Paper II** is a longitudinal population-based study with a 10-year follow-up time.

Descriptive statistics were used to characterise the overall study populations in the studies.

Chi-square tests were performed to test differences between proportions in **Paper I** and **Paper III**: percentage of women with anxiety and depression with and without UI (**Paper I**), percentage of UI among women with and without anxiety and depression (**Paper III**), percentage of UI among women with and without psychotropic drug use and by different daily doses of the drug (**Paper III**) and

prevalence of UI among women with depression/anxiety with and without use of antidepressants and anxiolytics (**Paper III**).

Confounding and effect modifying variables were evaluated by logistic regression analyses and by stratification (**Paper III**). Multiple logistic regression analyses were used in all papers to adjust for confounders.

Odds ratios were reported with 95% confidence intervals. $P< 0.05$ was chosen as level of statistical significance. SPSS software was used for statistical analyses in all studies, version 15.0 in **Paper I**, version 22.0 in **Paper II** and 25.0 in **Paper III**.

9.5 Ethical approvals

Ethical approvals for the studies were obtained from Regional and National ethics review boards and from the Norwegian Data Inspectorate. For **Paper III**, Norwegian centre for research data (NSD) granted for exemption from the duty of confidentiality.

10. Main Results

The thesis consists of three papers. **Paper I** was a cross-sectional study of the association between anxiety and UI, and depression and UI, among 5321 women aged 40-44 years in the HUSK study (1997-1999). **Paper II** was a longitudinal study among women 20 years and older in HUNT2 (1995-1997) and HUNT3 (2006-2008) of associations between anxiety and depression at baseline and the incidence of UI, and also associations between UI at baseline and the incidence of anxiety and depression. **Paper III** was a cross-sectional study from HUNT3 of the association between anxiety and UI as well as between depression and UI, and also, the impact of psychotropic drugs on this association.

10.1 Paper I

The study group in Paper I was women in HUSK who had answered the questionnaire including questions about UI and HADS. The prevalence of any UI was 26%. The proportion of stress, urgency and mixed UI was 53%, 9% and 30%, respectively, the remainder had unclassified UI. 58% was classified with slight UI, 36% with moderate and 5% with severe UI. More than two thirds had experienced UI less than once a week, and 68% had a duration of their UI less than 5 years.

20% had anxiety (HADS-A ≥8) and 6% had moderate/severe anxiety (HADS-A ≥11). 8% had depression (HADS-D ≥8) and 2% had moderate/severe depression (HADS-D ≥11). 1496 women had either HADS-A ≥8 (n=1048) or HADS-D ≥8 (n= 448). Of these, 329 women had both HADS-A ≥8 and HADS-D ≥8. 73% of the women classified as depressed, had also anxiety, while 31% of the women with anxiety had also depression, according to our definitions.

Having UI increased the prevalence of anxiety from 18% to 26% ($p< 0.001$) compared to being continent. Having UI increased the prevalence of depression from 7% to 12% compared to being continent. Mixed and severe UI had the highest percentages of anxiety and depression.

In logistic regression, UI was associated with anxiety with OR 1.59 (1.36-1.86) and with depression with OR 1.64 (1.32-2.04). All severities and types were associated with anxiety, with highest ORs for severe UI with OR 2.30 (1.36-3.88), and for mixed UI with OR 2.05 (1.62-2.59). All severities were associated with depression, with highest OR for severe UI with OR 2.14 (1.08-4.22). Among types of UI, only mixed UI was significantly associated with depression with OR 2.24 (1.65-3.03).

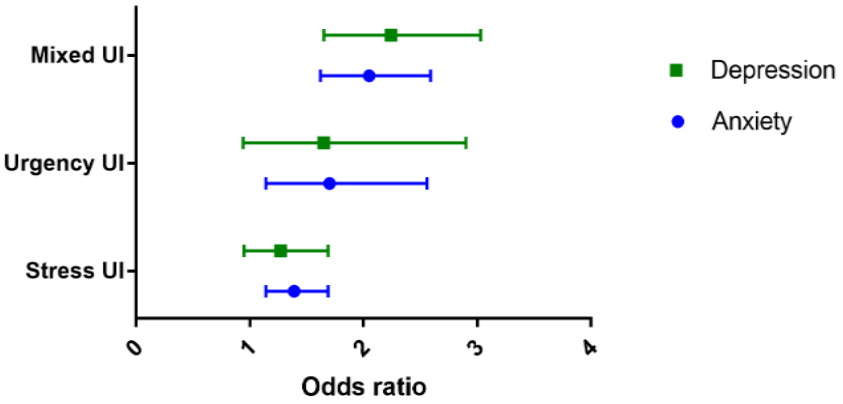

Figure 6. The association between UI, by type, and anxiety and depression (**Paper I**).

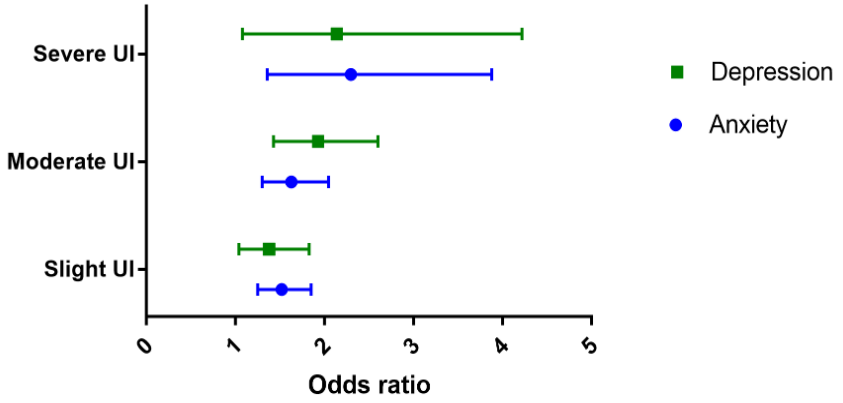

Figure 7. The association between UI, by severity, and anxiety and depression (**Paper I**).

In conclusion, **Paper I** shows an association between anxiety and UI as well as between depression and UI. For both anxiety and depression, the association is strongest with mixed UI and severe UI.

10.2 Paper II

The study group in **Paper II** consisted of those women who had answered the questionnaires concerning anxiety, depression and UI in both HUNT2 and HUNT3. At baseline the prevalence of UI was 24%, 28% among the middle-aged, 17% in the youngest age group and 24% in the oldest group. 21% reported a stress component, and 10% an urgency component. The stress component was most common among the middle aged, and least common among the youngest, while the prevalence of urgency component was highest among the oldest. The 10-year incidence of UI was 19%, highest for the stress UI component and in the youngest age group.

At baseline 11% had a mild anxiety score (HADS-A 8-10) and 6% had moderate/severe anxiety score (HADS-A ≥11). The prevalence of anxiety was almost equal between the age groups. The 10-year incidence of mild anxiety was 8%, almost the same in all three age groups. 10-year incidence of moderate/severe anxiety was 3%, lowest in the oldest group.

At baseline 7% had mild depression score, and 2% had moderate/severe depression score. The prevalence of depression increased by age. The 10-year incidence of mild depression was 5%, increasing by age, and the 10-year incidence of moderate/severe depression was 1%, the same in the three age groups.

Depression and UI

In logistic regression analyses we found an association between depression at baseline and incidence of UI. For the whole study group the OR was 1.38 (1.13-1.69) for the association between having mild depression at baseline and developing any UI during the 10 year of follow-up. The OR was 2.09 (1.55-2.84) for the association between having moderate/severe depression at baseline and developing any UI during the follow-up. The highest OR was found for the association between

moderate/severe depression and incidence of the urgency UI component in the oldest age group. The associations were present for the stress as well as the urgency component, and for both mild and moderate/severe depression, as shown in Figure 8, but they did not reach statistical significance in all age groups.

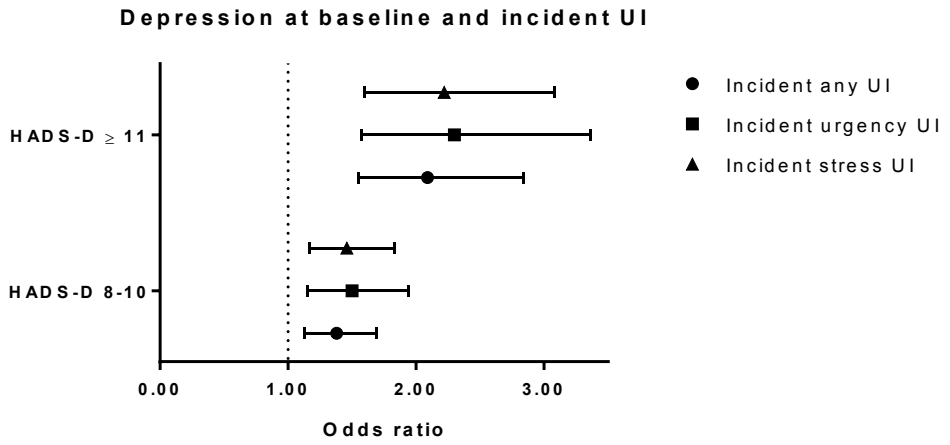

Figure 8. The association between depression (by severity) at baseline an incident UI (by type) (**Paper II**).

In the opposite direction, between UI at baseline and incidence of depression, we also found an association, but only significant regarding mild depression, here in all age groups. This is visualised in Figure 9. We found highest ORs for the urgency component of UI at baseline and developing mild depression in the youngest age group with OR 1.84 (1.11-3.03).

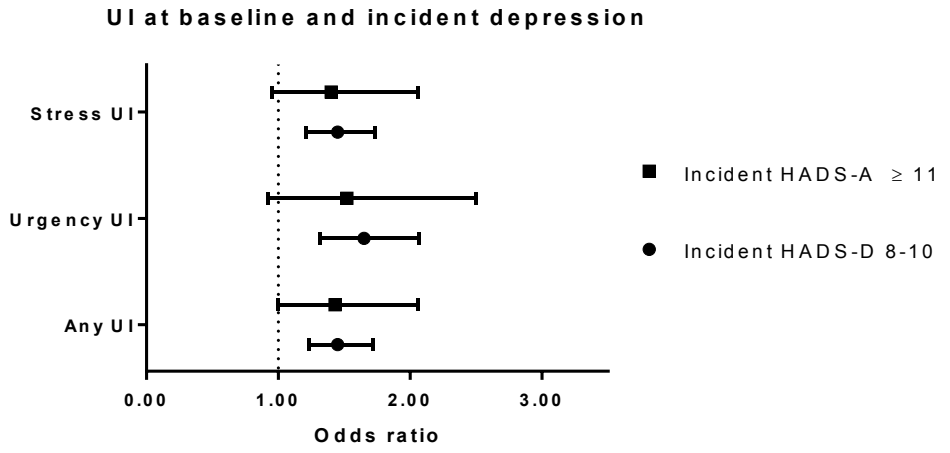

Figure 9. The association between UI (by type) at baseline and incident depression (by severity) (**Paper II**).

Anxiety and UI

For the whole study group, we found an association between anxiety at baseline and incidence of UI, with increasing ORs with increasing HADS-score, as shown in Figure 10. Compared with having normal anxiety score at baseline, the OR for incident UI was 1.45 (1.25-1.68) for mild anxiety and 1.65 (1.34-2.03) for moderate/severe anxiety at baseline. In the oldest age group, the associations were not significant. The highest OR was for the association between moderate/severe anxiety and incidence of urgency UI in the middle-aged group with OR 2.24 (1.49-3.37).

In the opposite direction, between UI at baseline and incidence of anxiety, we found an association, but only statistically significant regarding mild anxiety. This association was significant for both stress and urgency component with highest OR for urgency component, OR 1.42 (1.14-1.77).

For incidence of moderate/severe anxiety, the associations were not significant in the total group, but we found a strongly significant OR for urgency component at baseline and incidence of moderate/severe anxiety in the oldest age group, OR 2.55 (1.32-4.94).

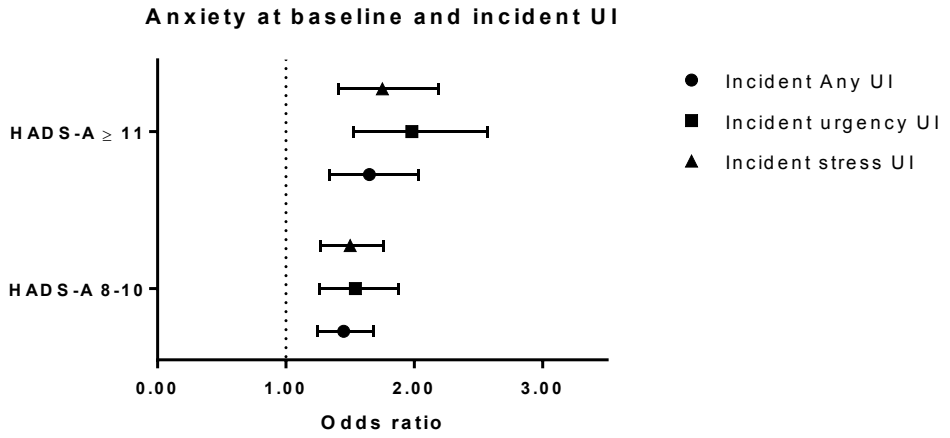

Figure 10. The association between anxiety (by severity) at baseline and incident UI (by type) (**Paper II**).

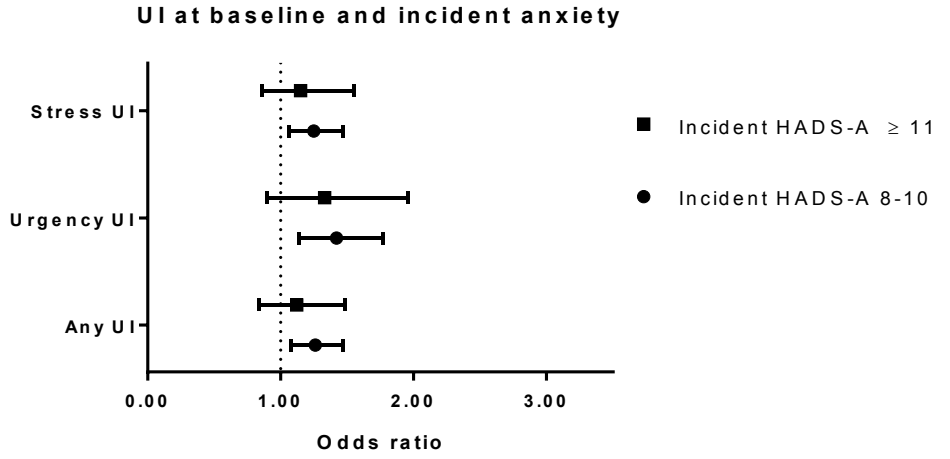

Figure 11. The association between UI (by type) at baseline and incident anxiety (by severity) (**Paper II**).

In conclusion, **Paper II** indicates that both depression and anxiety are predictors for the onset of UI. The study also shows a present, but weaker, association between UI and incident anxiety and depression.

10.3 Paper III

The study group consisted of the 21.803 women who answered the UI questions on the questionnaire Q2 in HUNT3. This is the EPINCONT2 study group. The prevalence of any UI was 29%, 23% in the youngest group, and 32% among the oldest. In the total study group, 43% of the incontinent women had stress UI, 14% had urgency UI and 40% had mixed UI. 41% was classified as slight, 44% moderate and 12% had severe or very severe UI. 11% had mild anxiety, and of these 16% used an antidepressant drug. 6% had moderate/severe anxiety, and of these 30% used an antidepressant drug. 7% had mild depression, and of these 21% used an antidepressant drug. 2% had moderate/severe depression, and of these 35% used an antidepressant drug. In the total study group, 8% used an opioid analgesic, 5% used an anxiolytic drug, 10% used a hypnotic/sedative drug and 9% used an antidepressant drug. For all medication groups, the use increased by age.

Having anxiety increased the prevalence of UI from 28% (normal HADS score) to 35% (HADS-A 8-10) and 38% (HADS-A ≥11) ($p<0.001$). The UI prevalence increased to 41% in women with HADS- A ≥8 and concomitant use of antidepressants. Having depression increased the prevalence of UI from 28% (normal HADS score) to 39% (HADS-D 8-10) and 44% (HADS-D ≥11) ($p<0.001$). Concomitant use of antidepressants in women with HADS- D ≥8 did not increase the prevalence of UI additionally.

Multiple logistic regression was performed using anxiety and depression as dependent variables. Adjusted for confounders and risk factors for UI except psychotropic drugs, any UI was associated with anxiety with OR 1.48 (1.36-1.60), and with depression with OR 1.58 (1.42-1.76). For both anxiety and depression, we found increasing ORs by increasing severity of UI and according to type, the strongest association was found for mixed UI.

In descriptive analyses, using antidepressant drugs increased the prevalence of UI from 28% (no use) to 34% (low DDD), 39% (medium DDD) and 40% (high DDD). For opioid analgesics, other analgesics, antiparkinson drugs and hypnotics/sedatives

there was also an increase in the prevalence of UI with increasing DDD, but for antiepileptics, antipsychotics and anxiolytics there was no dose-dependent trend.

After adjusting for psychotropic drugs, the OR for UI in persons with anxiety did not change compared to only adjusting for the other confounders and risk factors. However, medium and high volume (high DDD) of antidepressants and high volume of antiparkinson drugs were associated with UI. Consumption of high volume of anxiolytics and medium volume of hypnotics/sedatives were negatively associated with UI.

In the logistic regression analyses with adjustments for psychotropic drugs, depression was associated with UI, OR 1.55 (1.39-1.73), compared to OR 1.58 (1.42-1.76) when only adjusting for the other confounders and risk factors. Also, in these analyses, medium and high volume of antidepressants were associated with UI. High volumes of anxiolytics and medium volumes of hypnotics/sedatives were negatively associated.
We analysed the possible impact of antidepressants and anxiolytics in stratified groups as well, one group with persons with depression and one group with persons with anxiety. In multiple logistic regression models, using antidepressants was not associated with UI, neither in the anxiety group nor in the depression group.

In **Paper III**, UI was associated with anxiety, depression and use of antidepressants. Among women with depression, the prevalence of UI was similar among users of antidepressants and non-users. Among patients with anxiety, use of anxiolytic drugs was associated with a lower prevalence of urinary incontinence.

11. Discussion

In this chapter I will discuss the design and methods used in the thesis: Are they suitable to approach our aims? What are the limitations of the studies, and in what respect can they have affected the results? Can the studies contribute to the knowledge about causality regarding anxiety and depression versus UI? Secondly, I will discuss the results of the three papers in light of existing literature in the field.

11.1 Main findings

The main issue of the studies has been to investigate the relationship between UI and anxiety and UI and depression from an epidemiological perspective. The findings in this thesis can be summarised as follows:

- A positive cross-sectional association between UI and anxiety as well as between UI and depression. The association was strongest for urgency and the mixed UI and for a severe degree of UI and anxiety/depression.
- A positive association between depression and incident UI, and between anxiety and incident UI. A positive, but weaker, association between UI and incident anxiety, and also between UI and incident depression.
- A positive cross-sectional association between use of antidepressants and UI. The associations between anxiety and UI and depression and UI were present irrespective of antidepressant use.

11.2 Methodological considerations

11.2.1 Design

The designs in **Paper I** and **Paper III** are cross-sectional, and therefore descriptive in their approach to the research question. Cross-sectional studies can provide knowledge about associations between exposures (risk factors) and outcomes (disease or condition), but cannot give direct measures of the risk of the disease/condition. The results from cross-sectional studies often forms the basis for development of

hypotheses. The possibility of a causal relationship regarding associations found in cross-sectional studies must be handled with great awareness.

An advantage of the population-based designs is the possibility to obtain information about many topics, from many participants at a low cost. The current topic of interest will be one of many, reducing the risk for over-reporting. For conditions associated with shame and taboo, like UI, it could also reduce under-reporting because it is easier to report such symptoms when it appears among other questions in a large questionnaire[29]. On the other hand, too many topics will result in a time-consuming questionnaire and thus a risk of lower response rate.

After detecting cross-sectional associations between anxiety and UI, and depression and UI, the next research question was whether UI leads to anxiety and depression, or whether anxiety and depression leads to UI. **Paper II** has a longitudinal prospective design giving better basis for reasoning about the directions of the associations. A 10-year follow-up is a long observation-time and could represent a limitation of **Paper II**. Especially anxiety and depression are fluctuating conditions. A depression can typically have a duration of six to twelve months, and may also be a recurrent condition[138]. UI may also be a transient condition, especially in the first years, and a proportion of women with UI move between UI types over time[37].

It is a goal in epidemiological research to present valid and precise estimates, whether it be of the frequency of a disease, or the effect of an exposure on the occurrence of a disease or a health problem. There are two main types of error in epidemiology, random and systematic error. Random error is linked to precision, and systematic error to validity[151]

11.2.2 Precision

An estimate is precise if there is little random error. Confidence intervals give information about the precision and also the strength of the association. Random error refers to unsystematic error, which can be measurement error and biological variation. By using validated measurement tools, the sampling error will be reduced. The UI questionnaire with a scale for severity and type, and the validated scale for

anxiety and depression scores in HADS, will increase the precision. Generally, random error can be reduced by increasing the sample size[152]. The studies in this thesis had large number of participants, especially **Paper II** and **Paper III**, giving relatively narrow confidence intervals. However, when analysing stratified groups, the number of participants in some groups became low, and the confidence intervals wider, indicating lower precision. The precision can also be reduced if the groups are unbalanced, with few participants in one exposure class. In **Paper III**, some of the drugs were used by very few participants, and when making groups by different volume of drug use, it was difficult to make equal sized groups to compare. In all three studies, the groups with moderate/severe anxiety and depression, and severe/very severe UI were relatively small.

Small groups and precision are linked to the statistical power of the calculations.

11.2.3 Validity

Validity is linked to systematic error and is divided into internal and external validity. Regarding internal validity, an inference of the study is drawn about the source population. External validity (generalisability), concerns an inference drawn about the external, general population. The systematic error will not be influenced by changing the study size. The main types of systematic errors, which will be discussed related to the studies in this thesis, are selection bias, information bias and confounding.

Internal validity

Selection bias

Selection bias appear if the relation between exposure and disease/condition is different between those who participate in the study and those who were supposed to participate. The observed associations between an exposure and the disease/condition can then be caused by a mixture of factors which affect response rate, and factors which affect the disease/condition. Generally, selection bias is reduced by increasing study attendance. Selection bias can appear by several reasons, especially two of these may concern our studies and will be discussed here:

- If the study has a low response rate, or if the participating individuals are not representative for the population (*self-selection*).
- If persons participating at baseline are not participating at follow-up (*loss to follow-up*).

Self-selection

Both in HUSK and HUNT, all women in a defined area were invited. HUSK and HUNT2 have relatively high participation rates of 70% and 74%, respectively. In HUNT the response rate dropped to 59% in HUNT3. This is part of a general trend where participation rates in population-based studies have declined during the last decades. Despite high participation rate in HUNT2, some age groups had quite low attendance, especially in the youngest and oldest groups. This could lead to uncertainty about UI among the oldest, because the prevalence increases by age, and because UI is associated with high morbidity and chronic disease[51, 91, 97]. Low attendance among the youngest could also lead to uncertainty. Young individuals not moving from the county have higher risk for UI because of higher parity.

A study of non-responders in HUNT3 compared questionnaire data from HUNT3 with data from other sources: a short questionnaire to nonparticipants, anonymous data on specific diagnoses, and prescribed medication extracted from general practices and Statistics Norway and the Norwegian Prescription Database[143]. The study showed lower participation among people who were young, unmarried and in lower socioeconomic groups. The risk of chronic disease like cardiovascular disease and diabetes, as well as morbidity, was higher among the nonparticipants. UI, musculoskeletal pain and headache were more common among participants in the study, compared to nonparticipants. The prevalence among non-responders was based on diagnoses in GP records. However, we know that there could be a threshold to mention UI to the doctor[153], and questions in a population-based survey are much more sensitive to catch UI symptoms. The prevalence is thus expected to be higher in surveys. The prevalence of anxiety was higher, and the prevalence of depression was lower among participants compared to the prevalence of these conditions based on GP records. These prevalence estimates cannot be directly compared, but indicate

that depression is a more restricting factor for participation than anxiety[143]. Because the persons with severe depression may be underrepresented in the study, the estimated association between depression and UI may be biased. The main reasons for not participating in HUNT3 among the individuals younger than 70 years, was shortage of time or having moved out of the county. For individuals older than 70 years, immobility due to disease or being under medical care were the main reasons. Women who were institutionalised were also excluded from the study file (60 women). Especially among the oldest, this non-response may have contributed to a lower prevalence of UI, as we know that UI is associated with many somatic diseases such as diabetes, stroke and general functional impairment[93, 96, 97], which may have been reasons for not participating.

Drug use is higher among older people, and a lower participation rate among the oldest may also lead to uncertain estimates of drug use. If the healthiest young were moving out of the county for studying or working, a higher prevalence of UI in the study could be a consequence. HUNT3 had higher prevalence of UI among women <50 years, and also a lower participation rate, which in combination could indicate an overestimation of UI. If the healthiest young people move out of the county, the young people left in the county may use more drugs.

Missing values may lead to selection bias. If a person has participated in the study, but have not answered the HADS questions or the questions about UI, the reason may be a high level of depression or anxiety leading to reluctance to answer questions about mental health. Regarding UI, some women may decline to answer because of shame related to their condition. In **Paper I** and **Paper III**, all women not defined as either continent or incontinent were excluded from the study group. However, there were missing values on type and severity. In **Paper I** missing values comprised approximately 8% in the analyses on type and 6% in the analyses on severity. In **Paper III** missing values were 0.6% in the analyses on type and 3.4% in the analyses on severity. In the logistic regression analyses in **Paper I**, missing cases due to missing values on one or more variables were approximately 8%. In **Paper III**, missing values in the logistic regression analyses were 6.5%.

Loss to follow-up

This may be related to social conditions, health status, changing county of residence and death. In our material there are differences in UI variables among participants answering Q2 in both HUNT2 and HUNT3 and those answering Q2 only in HUNT2. This is shown in Table 8. The prevalence of UI was higher among those answering the UI questions at both occasions compared with those answering only HUNT2. Among women with UI, proportions with stress and urgency UI were highest in the group who answered both times, and mixed UI was most prevalent among those answering only HUNT2. Severe UI was most prevalent among those answering only HUNT2.

Table 8. Prevalences of any UI, UI type and UI severity among participants who answered Q2 in both HUNT2 and HUNT3, and among those participants only answering Q2 in HUNT2.

UI variables	Joined both HUNT2 and HUNT3		Joined only HUNT2	
	N=16265		N= 2095	
	N	%	N	%
UI	3857	23.7	441	21.1
Type of UI				
Stress	2093	54.7	216	49.0
Urgency	355	9.3	35	8.0
Mixed	1241	32.5	157	35.6
Severity				
Slight	1290	48.3	137	45.4
Moderate	1140	42.6	128	42.4
Severe	209	7.8	35	11.6
Very severe	34	1.3	2	0.7

Information bias

Information bias occurs when the information collected from the study participants is erroneous. If the variable is measured on a categorical scale and the error leads to a participant being placed in an incorrect category, it is called misclassification.

Misclassification can be either

- differential misclassification or
- non-differential misclassification

Differential misclassification, recall bias

With differential misclassification, the misclassification differs according to the value of other study variables, either that disease /condition classification of the participants relies on the exposure status, or vice versa[154]. This type of misclassification may bias the estimate in both directions, and may lead to both type 1 error and type 2 error. There will be differences in bias between the groups which are compared. Recall bias is a common type of differential misclassification. This happens if the exposure information is misclassified differentially for those with or without the disease/condition. In **Paper II**, persons without anxiety or depression at baseline may be underdiagnosed for UI more than persons with anxiety or depression. Persons with anxiety may be inclined to search health services and tell about their UI symptoms, and people with depression experience their condition-specific functional loss because of UI greater than persons without depression and could therefore report a more severe UI. Even if anxiety and depression did not lead to UI, depressed and anxious participants would appear to have a greater incidence of UI than those without anxiety and depression because of the greater likelihood that a case of UI would be diagnosed if the person had anxiety or depression, or remain undiagnosed in a person without anxiety or depression[155]. Reversely, there might be a tendency for women with UI to be more aware of anxiety symptoms related to especially unpredictable urgency symptoms. Recall bias could theoretically be avoided by conducting clinical examinations for UI as part of the study.

Non-differential misclassification

With non-differential misclassification, the misclassification is unrelated to other study variables. The classification of the disease/condition does not rely on the exposure status, and vice versa. The misclassification is at the same level in the groups which are compared. Non-differential misclassification can modify the exposure, outcome or confounders. Non-differential misclassification of the condition

takes place in every epidemiologic study to some extent. Non-differential misclassification impairs the possibility to reveal associations and can result in type 2 errors.

- Possible non-differential misclassification of anxiety and depression.

Non-differential misclassification of a dichotomous exposure will normally bias the effect towards the null value. Non-differential misclassification between two categories of the exposure will make the effect estimates for the two categories converge towards one another[154].

A systematic review and assessment of Norwegian research using HADS was carried out by the Norwegian Knowledge Centre for Health Services in 2016. The central question is if HADS assess what we intend it to assess. HADS is generally one of the most used and well validated tools for measuring psychological distress[148]. One criticism against use of HADS has been that the scale measures general psychological distress, and not so well differentiates between anxiety and depression. One explanation could be that somatic symptoms (one of three main criteria for depression) are not included. The HADS was originally designed to measure anxiety and depression among patients with somatic illness, and the somatic symptoms were excluded from the questionnaire to avoid misinterpretation of the symptoms. This can also explain why studies with HADS miss to show gender differences concerning depression.

Non-differential misclassification can also occur between two exposure categories, and the effect estimates for those two categories can then converge towards each other[154]. Anxiety and depression are often co-existing conditions, and a weak differentiation between anxiety and depression has been described as a weakness of HADS. This may be an explanation for converging estimates between anxiety and depression, especially seen in some of the analyses, e.g. in Table 3 in **Paper III**. The high co-existence between HADS-A and HADS-D are shown in Table 9.

Of 1871 individuals with high HADS-D score, 1141 individuals (61%) have coexisting high HADS-A score. Among individuals with high HADS-A score, 31% have coexisting high HADS-D score.

Table 9. Coexistence of high HADS-A and HADS-D score in **Paper III** (Cross tabulation) Missing = 314 individuals.

	HADS-A<8	HADS-A ≥8	Total number
HADS-D<8	17059	2559	19618
HADS-D ≥8	730	**1 141**	1871
Total number	17789	3700	21489

- Possible non-differential misclassification of UI

Our three studies are based on self-reported UI. The definition chosen is in accordance with the current recommendation from the ICS[10]. All women who reported any involuntary leakage of urine were considered to have UI. The sensitivity and specificity of the questionnaire have not been validated. The aim of the questions was to detect all the women who regarded themselves as leaking urine. A problem is that women have different thresholds for which frequency and amount of leakage is enough to define themselves as incontinent. Including questions about frequency and amount of leakage, is assumed to reduce this bias compared to only asking if the woman leaks urine. It is not likely that a woman will report UI if she has no leakage of urine. On the other hand, it is possible that our continent group contains women defining themselves as continent, but who would have been classified as incontinent of a physician. This can be due to an attitude that leakage is a normal condition. A problem connected to the questionnaire, is whether it should be an aim to detect all women with any leakage, also when the woman does not have any bother of the UI, or whether the aim should be to detect the women with bother of their UI. The last alternative could possibly bias the estimates towards lower levels.

25% of the participants in HUNT2 received, by a mistake, a wrong version of the questions about UI. The entry question "Do you have involuntary leakage of urine" was substituted by "Do you have involuntary leakage of urine at least twice per month?" The frequency question had three instead of four categories and the amount question had two instead of three categories. This error in the questionnaire could contribute to an underestimation of UI in HUNT2. An estimate of this was performed by ph.d. Marit Ebbesen. The prevalence loss was made assuming that the frequency distribution of the 25.0% women who got the default questionnaire on UI would have been equal to the 75% of the women who got the correct questionnaire. If this was the case, approximately 395 women was missed due to the error. This would have changed the prevalence of UI in HUNT2 to 26.1%, still lower than in HUNT3.

- Possible non-differential misclassification of drug use.

Drug use was defined as dispensed prescription over the last six months. We assume that dispensed prescription means that the person actually has taken the drug. The patient may choose not to use the drug, or the drug use can be discontinued without using the total amount of prescribed drug. This will give an overestimation of the real drug use. If the patient has purchased a prescribed drug several times, it seems more likely that she takes the drug. We therefore analysed for categories of medication users with one and two or more dispensed prescriptions, respectively, and for different DDD. In the final analyses we defined use of medication as ≥1 dispensed prescription to include all drug use, and also included individuals who had a short time using the drug. The estimates were quite similar for both definitions of drug use.

Confounding

Confounding can be defined as confusion of effects. The effects of the exposure are mixed with the effect of another variable. In contrast to selection and information bias, confounding can be handled during analyses if information about the variable is available. While bias creates an illusion of an association which is not true, confounding describes a true, but potentially misleading association when interpreting the results.

A confounder must, according to the following criteria by Rothmann[154], be

1. a risk factor or protective factor for the outcome
2. associated with the exposure in the source population
3. unaffected of the exposure or the outcome, especially not an intermediate step in the causal pathway from exposure to disease.

A variable does not need to be a detected risk factor or protective factor for the outcome in the present study group to be a confounder. Knowledge about risk factors and causal factors independent of own data, must be used to consider potential confounders. In the relationships between anxiety and UI, and depression and UI, the following factors were considered to be confounders:

- *Age*. Increasing age is a known risk factor for UI. Anxiety and depression have also different occurrence according to age. We adjusted for age in all three papers.
- *BMI*. BMI is a risk factor for UI and is also associated with anxiety and depression. Increasing BMI could theoretically be a possible consequence of both depression, anxiety and UI trough inactivity, and it should therefore be discussed if BMI is a confounder or an intermediate step. We have chosen to adjust for BMI as a confounder because of the strong evidence of BMI as a risk factor for UI. We adjusted for BMI in all three papers.
- *Chronic somatic disease*. Especially cardiac disease, diabetes, lung disease and stroke are associated with both depression, anxiety and UI, and were considered as confounders and adjusted for in all three papers. Theoretically, it cannot be ruled out that depression could lead to somatic illness, but we consider the opposite direction more important here, and therefore the third criterion to be a confounder was fulfilled. We adjusted for myocardial infarction, cerebral stroke, asthma and diabetes in **Paper II** and **Paper III**.
- *Low socioeconomic status.* In some studies, high socioeconomic status is associated with higher prevalence of UI, but the studies are not conclusive. In **Paper I**, education level as a measure of socioeconomic status was regarded as

a possible confounder and was adjusted for. In **Paper II** and **Paper III**, we did not have access to data on socioeconomic status, and this is a possible weakness of the studies.

- *Smoking*. Smoking is associated with anxiety and depression, and over a certain level also with UI. It is not likely that smoking is an intermediate step, and we regarded it to be a possible confounder. We adjusted for smoking in **Paper I**.
- *Nocturia*. This is associated with UI, and in one study nocturia, but not UI, was associated with depression. We adjusted for nocturia in **Paper I**.
- *Parity.* This is a strong risk factor for stress UI and is negatively associated with anxiety and depression. Even if anxiety, depression and UI theoretically could impact the parity variable, we have considered this impact to be less important, and have chosen to adjust for parity as a possible confounder in all three papers.
- *Chronic musculoskeletal pain*. Different conditions of musculoskeletal pain, like fibromyalgia, is shown to be associated with UI, especially urgency UI. Depression and anxiety are often accompanied by somatic pain. Because pain is a possible consequence of depression and anxiety, and theoretically a possible intermediate factor, it should be considered if the third criteria for confounding is fulfilled. However, in **Paper III** we have regarded musculoskeletal pain as a confounder and adjusted for it in the analyses.

Directed Acyclic Graphs (DAGs) is a useful tool to search for confounders[156]. Figure 12 below gives an overview of the possible causal pathway from anxiety and depression to UI, and the confounders.

In the analyses, confounding can be handled by stratification or multivariate linear statistical models as multiple linear regression and logistic regression. Stratification gives results which are easy to interpret and convey, but with less exact estimates than with for example multiple logistic regression analyses. In all three papers logistic regression was used to adjust for confounders.

In paper III, stratification was used in addition to multiple regression analyses to show the prevalence of UI among persons with anxiety and depression using and not using antidepressants and anxiolytics.

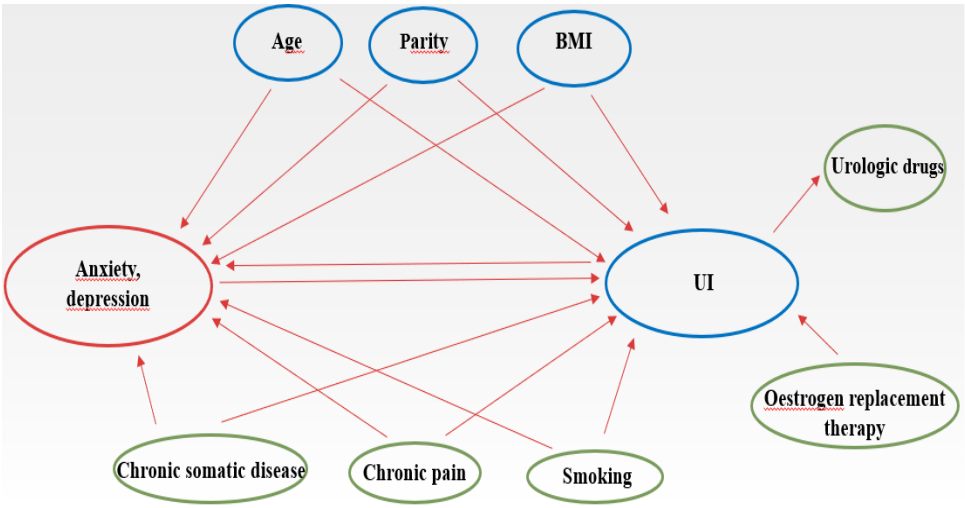

Figure 12. Possible causal pathways in both directions between anxiety and UI and between depression and UI and possible confounders and associated factors. The factors with blue colour are the most established risk factors for UI. The factors with green colour are associated factors and comorbidities.

Effect modification/Interaction

Effect modification can occur when the size of an association between an exposure and an outcome varies by the level of a third factor[157]. In **Paper III**, psychotropic drugs can represent an effect modificator for the associations between anxiety and UI and between depression and UI. Especially antidepressants act in the same neurobiological system as the pathogenesis of anxiety and depression, and an interaction between the drug variables and the disease variables is possible. Effect modification can be identified by stratification or by multivariate statistical models. If the effect of an exposure on the outcome is equal in the different groups in the stratified analyses, the effect is called homogeneous. If the effects are different, they

are called heterogeneous. Interaction between two exposures can be either synergistic (the joint effect is higher than the sum of the effects of each exposure), or antagonistic (the joint effect is lower than the sum of the two effects). According to the treatment effect on anxiety and depression, it could be plausible that an antidepressant could modificate the association between anxiety/depression and UI negatively, not just strengthen it. Figure 13 below shows the possible influence of a psychotropic drug as an effect modificator on the association between anxiety/depression and UI, but also the possible direct line from the drug to UI.

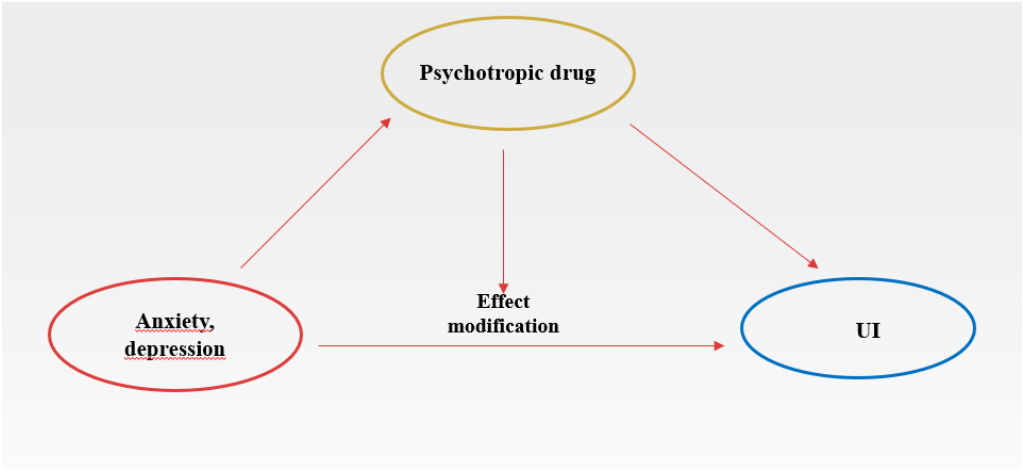

Figure 13. The possible effect modification of psychotropic drugs (especially antidepressants) on the association between anxiety/depression and UI.

In **Paper III** we used both multivariate logistic regression and stratification to investigate for effect modification. There were no statistically significant differences in prevalence of UI among the participants with anxiety or depression using antidepressants compared to non-users.

Mediation

A mediator or an intermediate factor, is a variable representing a step in the chain on the pathway between the exposure and outcome[157], as shown in figure 13 below. The

intermediate factor may partially, or completely, account for the association between the exposure and the outcome. In the relations between anxiety and UI, and also between depression and UI, psychotropic drugs could be the intermediate step, which completely or partly could explain the association with UI. If a mediator is adjusted for, the estimated effect of the exposure will be only the direct effect, not mediated through (in this case) the drug.

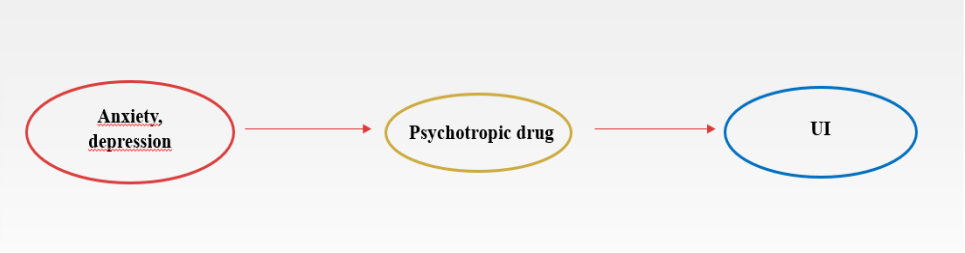

Figure 14. Psychotropic drugs as a possible mediator in a pathway from anxiety/depression and UI.

External validity/Generalisability

The external validity is good if the results of the study is valid for, or can be generalised for, a larger population outside the study population and independent of the time when the study has been performed. The external validity depends on the internal validity of the study. In addition, the results of other population-based studies may be different from ours if there are differences in age distribution, parity, obesity, socioeconomic conditions and other factors that influence UI and mental health. In HUSK, the age group is restricted to middle-aged women, and given the high response rate the results will be representative for women 40-44 years of age. However, representative study populations are not required to draw scientific inference, and results from a study with high internal validity can often be generalisable even if the study population is not representative. The associations between anxiety and UI, as well as depression and UI, are believed to have a biological basis, and if that is true, the results should be valid also for other populations. The former county of Nord-Trøndelag had no large cities and thus a

lower fraction of urban inhabitants. This could influence the prevalence of UI, though most likely to a small degree.

Another factor which should be taken into consideration, is the time since the HUSK and HUNT studies were performed, and the possibility that the prevalence of the central variables and confounders may change over time have changed. A report from the Norwegian Institute for Public Health from 2018 found the prevalence of mental disorders to be stable, except increasing prevalence of depressive symptoms among young women. The openness about mental problems has increased over the last decades, and could contribute to less shame associated with them, and possibly a higher self-reported prevalence if the study had been repeated now. However, shame is most likely not a big obstacle to answer in a population-based survey with many topics.

Among the confounders and risk factors for UI, BMI has been increasing since the studies were performed, and could therefore result in a higher prevalence of UI. Increasing BMI is also a possible factor contributing to the higher prevalence of UI found in HUNT3 compared with HUNT2. The treatment of UI has not changed to a considerable extent, and that will most likely not influence the prevalence and associations.

In 2008 (HUNT3), 79 individuals (men and women) per 1000 inhabitants in Norway used an antidepressant drug. In 2018, 83 per 1000 used an antidepressant, according to data from NorPD (Reseptregisteret.no). This represents no significant increase ($p=0.73$ by chi-square). The majority of antidepressants purchased in Norway are still SSRIs. During the twelve years since the collection of Paper III data, there has not been launched any new SSRI in Norway. Regarding antipsychotics, some new drugs have been marketed. Outside hospital this includes sertindole, luasidone, asenapine and paliperidone. Our research results may not apply to these drugs.

11.3 Discussion of the results

The prevalence of depression and anxiety among women with UI vary in different studies, and the main reasons are most likely various designs with disparate inclusion criteria as well as differences in definitions used for UI, anxiety and depression.

In the studies we compare our main results with, the prevalence of UI vary from 3.2% (UI had to be diagnosed by a health professional)[115] to 68% (questionnaire-based, by mail, UI defined as any leakage last 12 months)[113]. Among the population-based studies defining UI as any incontinence, most of the studies found prevalence of UI between 20 and 60%. The prevalence of UI in the papers in this thesis were 26.2% (**Paper I**, HUSK), 23.7% (**Paper II**, baseline HUNT2) and 29% (**Paper III**, HUNT3). The UI prevalence in HUSK is almost in line with the EPINCONT1 (prevalence 25%)[34]. The baseline prevalence in **Paper II** (23.7%) differ from the UI prevalence in EPINCONT1 (25%), even if both studies are based on HUNT2-data. However, the selection is different, since our baseline population only includes the HUNT2-women who have also participated, and answered Q2, in HUNT3. This represents a selection bias (loss to follow-up), as already discussed. The prevalence in **Paper III** was higher than in HUNT2, as demonstrated in an earlier study from HUNT3[35]. The reasons for this are not fully understood, but one reason may be a generally increasing BMI, which is a risk factor for UI.

The prevalence of anxiety were 20%, 16% (baseline data) and 17% and the prevalence of depression were 8%, 9% and 9% in **Paper I**, **Paper II** and **Paper III**, respectively. These numbers are comparable with prevalence estimates from other large epidemiological studies[136, 138]. In the study of non-responders in HUNT3, the participants had higher prevalence of anxiety and lower prevalence of depression compared with the non-participants[143].

11.3.1 Anxiety and UI

*Cross-sectional associations (**Paper I** and **Paper III**)*

In **Paper I**, we found that among women 40-44 years, anxiety was positively associated with UI, with strongest association for severe UI, OR 2.30 (1.36-3.88) and

mixed, OR 2.05 (1.62-2.59) and urgency UI, OR 1.70 (1.14-2.56). However, an association was significant also for stress UI, OR 1.39 (1.14-1.69) and for less severe UI. In **Paper III**, this association was confirmed in a new sample with women 20 years and older. The association was also here strongest for severe UI and mixed and urgency UI, and we observed an increasing strength of the association by increasing level of anxiety symptoms. Two other cross-sectional, population-based studies have found a similar association. In a large internet survey the prevalence of anxiety among women with stress or mixed UI combined with other UI was 50% and 49%, respectively[113]. In another cross-sectional study, self-reported history of anxiety and depression was associated with UI with OR 1.19[105]. In one cross-sectional study of women with UI, patients with mixed and urgency UI were much more likely to have panic disorder compared to those with stress UI[57]. There is a general lack of cross-sectional studies with data on both type and severity of UI, and severity of anxiety, and our studies expand the cross-sectional evidence by better data on severity of all three conditions and type of UI[57, 105, 113].

*Longitudinal associations (**Paper II**)*

In **Paper II** we found a positive longitudinal association between anxiety at baseline and 10-year incidence of UI. The association was present in all age groups, but was not statistically significant in the oldest group. The highest OR was seen for urgency component and for the highest symptom level of anxiety in the age group 40-54 years, OR 2.24 (1.49-3.37). For the opposite direction, between having UI at baseline and 10-year incidence of anxiety, we only found a significant association among the oldest women with urgency component. For the whole study group, we found statistically significant associations between both urgency and stress UI at baseline and developing mild anxiety-symptoms.

A longitudinal study with 1 year of follow-up, using HADS, also showed that anxiety predicts incident urgency UI, with OR 1.36.[108]. The same study also found an association between urgency UI and incident anxiety, with OR 1.56. In another longitudinal study, with 10-years follow-up, only UI with condition-specific functional loss, was associated with incident anxiety, with OR 2.55. In the same

study, agoraphobia and panic disorder (but not the whole group of any anxiety disorder) at baseline predicted incident UI with condition-specific functional loss[119].

11.3.2 Depression and UI

*Cross-sectional association (**Paper I** and **Paper III**)*

In both **Paper I** and **Paper III**, we found that depression was positively associated with UI. As for anxiety, the association was strongest for severe UI (OR 2.14 in **Paper I** and 2.04 in **Paper III)** and for mixed UI (OR 2.24 in **Paper I** and 1.85 in **Paper III**). The association was not statistically significant for urgency and stress types of UI in the multiple regression analyses in **Paper I,** but statistically significant for all types in **Paper III**. Several other cross-sectional studies have investigated this association during the last years. The definitions and variables available differ, but some of the studies use definitions quite similar to our studies, and have data on type and/or severity of UI [57, 61, 98, 105, 107, 113-115]. In one cross-sectional study major depression was associated with moderate and severe UI with ORs 2.7 and 3.8, respectively[61]. In the same study women with depression in addition to UI had reduced QoL compared to women with only UI. In another cross-sectional study, mild/moderate and severe UI was associated with depression with ORs 1.41 and 1.82, respectively. One study among only women with UI found that urgency and mixed UI was associated with major depression with ORs 9.2 and 13.5, respectively, compared with stress UI. The same study also showed that depression impacts UI symptom reporting, incontinence-specific QoL, and functional status[57]. Most of the studies with information about type and severity, find the strongest association with mixed UI, urgency UI and severe UI[61, 98, 107, 113, 117]. As for anxiety, our studies expand the cross-sectional based knowledge by investigating for severities of both conditions and also type of UI.

*Longitudinal association (**Paper II**)*

In **Paper II** we found a positive longitudinal association between depression at baseline and 10-year incidence of UI. For the whole study group, the association was significant for both stress- and urgency components, and for mild and moderate/severe depression. The association did not reach statistical significance in

all age groups, most likely due to low number of participants in subgroups. The highest ORs were found for moderate/severe depression and for urgency component of UI. In the age group 55+ the OR was 3.1 for this association. For the whole study group, there were minimal differences between the ORs for urgency (1.5 and 2.3 for mild and moderate/severe depression, respectively) and for stress UI (1.5 and 2.2 for mild and moderate/severe depression, respectively). The opposite direction, from UI at baseline to incident depression, there were weaker associations, and only statistically significant for incident mild depression.

Our findings correspond with another longitudinal study, which showed an association between major depression at baseline and a 6-year incidence of UI[104], where major depression predicted the onset of UI with OR 1.46. In that study UI did not predict the onset of depression. Another study showed the same, but was limited by a long follow-up time of 18 years[109]. In a third 5-year follow-up study, depression at baseline was associated with the persistence of UI, but not incidence of UI[158]. Two other longitudinal studies also demonstrated a direction of the association from depression at baseline to UI at follow-up[91, 118]. One longitudinal study found that urgency UI predicted the onset of depression, but depression did not predict the onset of UI[108]. In a cohort study with several waves, women with depressive symptoms at one wave had 37% higher likelihood of reporting UI symptoms in the following survey[118].

Coexistence of anxiety and depression

A combination of anxiety and depression symptoms are very common among patients with depression and anxiety[159]. In **Paper I,** 73% of the women with HADS-D ≥8 and 31% of the women with HADS-A ≥8, had both HADS-A and HADS-D ≥8. In **Paper III**, 61% of respondents with HADS-D ≥8 also had HADS-A ≥8, and 31% of those with HADS≥8 also had co-existing HADS-D ≥8. This represents a characteristic of the conditions, but also reflects a problem with limited discrimination between anxiety and depression, known from validation studies of the HADS scale[150]. In **Paper III**, the strong correlation between anxiety and depression may be a major

reason for almost similar ORs for the associations between the drugs and UI in the analyses of anxiety and depression as independent factors.

11.3.3 The impact of psychotropic drugs

Several studies have shown an association between psychotropic drugs, especially antidepressants, and UI[120, 123-125, 160]. One study found a relative risk (RR) of 1.9 for UI and concomitant SSRI use[124]. Another study found a much higher prevalence of UI among antidepressant users (64%) than in the control group (33%)[125]. There has been some evidence for an association between benzodiazepines and UI[132] and between antiepileptics and UI[122]. Parkinson´s disease can cause bladder dysfunction and UI[161]. There is a lack of studies on the effect of antiparkinson drugs on UI.

The association between the use of psychotropics and UI has previously been investigated using data from HUNT3[129]. Mauseth et al found associations between use of SSRIs and UI and also between use of lamotrigine and UI, with ORs 1.52 and 2.73, respectively, for two or more prescriptions during the last six months. They also found an association between one dispensed antipsychotic during the last six months and UI, with OR 1.91, but not statistically significant for two or more dispensed prescriptions. In addition, they did not find any significant associations between benzodiazepines or zopiclone/zolpidem and UI. To adjust for a possible confounding by indication, Mauseth et al adjusted for high HADS-D scores. That did not change the OR in their results considerably, leading to a conclusion that there is an independent association between the drug and UI.

Like Mauseth et al, we found an independent association between antidepressants and UI. We expanded our analyses by grouping the drug users by DDD. We then found increasing ORs by increasing DDDs of antidepressants. Since our main focus was the associations between anxiety/depression and UI, we investigated the impact of drugs on these associations by making subgroups of women with depression or anxiety. An association between UI and antidepressant use was not present in these subgroups when the women with depression or anxiety using antidepressants were compared with women with these conditions not using antidepressants. The use of

antidepressants did not influence on the associations between anxiety and UI or between depression and UI. SSRIs make up the majority of the antidepressant drugs purchased in Norway. We examined antidepressants as a group and also SSRIs alone, and the results were almost similar. In the final analyses we used the whole group of antidepressants (N06A).

Mauseth et al found an association between using lamotrigine and UI. Because of a low sample size in this subgroup, it was not possible to perform analyses regarding different DDDs. Another study found an association between non-benzodiazepine anticonvulsants and UI[122]. We did not find any associations between any DDD-group of antiepileptics and UI. Since the antiepileptic group of drugs are heterogeneous when it comes to mechanisms and actions at the molecular level, a much larger number of users would have been necessary to investigate each subgrup´s potential association with UI.

Mauseth et al found an association between one prescription of antipsychotics last six months and UI, but this finding was not confirmed when analysed for two prescriptions. One other study found an association between atypical (second generation) antipsychotics and lower urinary tract symptoms (LUTS) [122]. Since antipsychotics are both dopamine antagonists and alpha blockers, they may have a biological mechanism inducing UI[120]. Second-generation antipsychotics are also serotonin 5-HT2A receptor antagonists[130]. Antipsychotics could also hypothetically protect against UI through their anticholinergic effects[120]. Our study did not find any association between use of antipsychotics and UI, and we did not find any association with UI for any of the DDD-groups of antipsychotics.

In addition to the association between antidepressants and UI, we also found an association with high DDD of antiparkinson drugs, but only statistically significant when adjusting for anxiety, not when adjusting for depression. There is a lack of studies investigating this association.

Benzodiazepines and hypnotics with benzodiazepine-like mechanism and effect may theoretically cause relaxation of the urethral muscle and thus induce stress UI[120].

High DDD of anxiolytic medication is in our study negatively associated with UI, both when adjusting for depression and anxiety. In the subgroups of women with anxiety and women with depression, UI was negatively associated with use of anxiolytics in the group of women with anxiety, but not among women with depression.

In our study we classified the drug groups due to the ATC-groups. Three drug groups contain benzodiazepines: the anxiolytic group (N05BA), the hypnotic/sedative group (N05CD) and the antiepileptic group (N03AE01). According to statistics from Norwegian Institute of Public Health (NIPH) for 2018, the benzodiazepines (N05BA) made up 90% of the anxiolytic drug group (N05B), and the benzodiazepines in N05B made up for 80% of the total benzodiazepines purchased in 2018[162]. This could represent a limitation and may have resulted in a reduced strength of the associations found for this group.

Changes in drug use since HUNT3

In 2008, 79 individuals (men and women) per 1000 inhabitants in Norway used an antidepressant drug. In 2018, 83 per 1000 used an antidepressant, according to data from NorPD[163]. This represents only a small increase. The majority of antidepressants purchased in Norway is still SSRIs, in HUNT3 60%. According to NIPH, SSRIs made up 63% of the antidepressants purchased in 2018. The tricyclic antidepressants made up 3%. During the twelve years from the data in **Paper III** was collected, there has not been launched any new SSRI in Norway. Vortioxetine (Brintelix ®), a serotonin reuptake inhibitor with receptor modulating effects, was launched in 2015. In the group of antipsychotics, some new drugs have been marketed. Outside hospital this include sertindole, luasidone, asenapine and paliperidone. The results may not be valid for these drugs. According to NIPH, the purchase of hypnotics/sedatives has been reduced with almost one third the last 10 years.

The paradox of antidepressants and UI, both therapy and risk factor

The influence of antidepressants on UI could theoretically follow several pathways and directions, summarised here:

1. As a *risk factor for UI* through the serotonergic and noradrenergic system, perhaps acting on 5-HT4 receptors in the bladder detrusor, causing detrusor overactivity and potentially urgency UI[124, 160].

2. As a *treatment for stress UI*. The serotonin- and noradrenaline reuptake inhibitor, the antidepressant duloxetine, has a documented effect as a treatment for stress UI, probably by increasing bladder capacity and increasing the activity in the striated urethral sphincter through increased levels of serotonin and noradrenaline in the pudendal presynaptic motor neuron[71, 72].

3. As a *treatment for depression and anxiety*, antidepressants could theoretically reduce a negative influence of depression and anxiety on UI.

4. Using antidepressants may theoretically be regarded as an *indicator of major depression*. Thus, an association between antidepressants and UI may be a confounding by indication.

The associations between anxiety and UI, and also between depression and UI, were in our studies not influenced by use of antidepressants or any other psychotropic drug, and the associations cannot be explained by effect modification or mediation. However, the antidepressant drugs act on the pathophysiological pathways for anxiety and depression and induce UI through the same neurohormonal signals as anxiety and depression.

11.3.4 The models of aetiology

Both psychological and biological mechanisms are possible explanations for the associations between anxiety and UI, as well as depression and UI[3]. Living with a condition associated with shame, loss of control, unpredictability and decreased quality of life, may lead to psychological stress, anxiety and depression symptoms, as explained earlier by the model of Perry et al[108]. The longitudinal studies, however, included **Paper II** in this thesis, give stronger epidemiologic support for depression and anxiety leading to UI than UI leading to depression and anxiety. The shared biological pathways, as outlined in the introduction of the thesis, gives support to a

causal thinking about the relationship between the conditions. The common neurobiological system with the serotonergic/noradrenergic transmitter systems, where the antidepressant drugs also interact, and a dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis, which is stress related, connects the conditions in a biological frame.

12. Future perspectives for clinical practice and research

Some consequences for clinical practice and perspectives for future research may be suggested based on this thesis:

- We found high prevalence of both anxiety and depression among women with UI. Other research has shown that condition-specific functional loss and decrease in quality of life are more pronounced in individuals with depression or anxiety in addition to UI, compared with individuals with UI alone. Despite the great influence on daily activity, many women never consult a doctor because of UI problems, and do not get available advice and treatment for the condition. And if they do, studies have shown that having a depression influences negatively the effect of treatment and is associated with persistence of UI. It is consequently of importance for clinicians to be aware of the co-existence found in our studies to be able to offer to this group of patients necessary treatment.
- The strongest associations are found between the urgency component of UI and anxiety/depression. The pathology of urgency and the OAB-complex is not fully understood. Only 50% of individuals with urgency have detrusor overactivity. More research and a better understanding of the pathology of the urgency complex could be important also for understanding the associations with anxiety and depression.
- Even if the strongest associations in our studies are seen for mixed and urgency UI, there is also a considerable association between stress UI and anxiety/depression, in some age groups almost at the same level as mixed/urgency UI. Many previous studies focus only on urgency/OAB and anxiety/depression, but future research should expand the focus to include stress UI as well.
- Use of antidepressants is an associated factor of UI and at the same time treatment for UI. There is a gap in the understanding of this dual role of antidepressants.

- We found an increased incidence of UI among women with depression and anxiety. Whether treating the depression and anxiety successfully could lead to decreasing incidence of UI, needs to be addressed.
- A better discrimination between anxiety and depression and subgroups of these conditions could also have clinical implications.

13. Conclusions

The main objective of the thesis was to investigate the relationship between female UI and anxiety and depression in three general populations, both cross-sectionally and longitudinally. We also aimed to investigate the relationship in light of the use of psychotropic drugs. The studies have strengthened both the cross-sectional and longitudinal based evidence for an association between anxiety and UI and depression and UI, not influenced by psychotropic drug use.

For both anxiety and depression, the associations were strongest for mixed, urgency and severe UI, but present also for stress UI and mild/moderate UI. While the focus in the literature often has been on urgency and overactive bladder, we also found a significant association between anxiety/depression and stress UI, even though the strongest associations also in our studies were seen with mixed and urgency UI. This could indicate that the reasons for the observed associations are multifactorial, since urgency and stress UI have different pathophysiological explanations. There are possible biological links to anxiety/depression in the pathophysiology of all three types of UI, and the increasing strength of the association by increasing severity of the conditions also supports the hypothesis of biological links between the conditions. The common biological pathways connecting the three conditions could be further explored, both in clinical and epidemiological designs.

The longitudinal study showed that both anxiety and depression are predictors for development of UI. We also found significant, but weaker, associations between UI and incident anxiety and depression. In the group with anxiety and depression at baseline, the strongest associations with UI were seen for moderate and severe depression/anxiety. Based on the longitudinal data, clinicians should especially be aware of the risk of developing UI among women with severe depression.

We found a high prevalence of UI among users of several psychotropic drugs, but after adjustments, only antidepressants were statistically significant associated with UI. However, the associations between anxiety and UI and between depression and UI were in our studies not influenced by use of psychotropic drugs. The fact that the

three conditions, and antidepressant drugs, share neurobiological pathways, can explain that both anxiety/depression and antidepressants independently are associated with UI.

The load of evidence for the associations found in this thesis, and the knowledge about the implications for patients functioning, indicates a greater awareness in clinical practice. Even if the use of antidepressant drugs did not influence the associations between anxiety/depression and UI, we found an association between use of antidepressants and UI with a dose-dependent trend, also relevant for clinical practice.

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15. Papers and questionnaires

Paper II

Anxiety and depression associated with urinary incontinence. A 10-year follow-up study from the Norwegian HUNT study (EPINCONT).

Felde G, Ebbesen MH, Hunskaar S.

Neurourology and Urodynamics 2017; 36(2):322-328.

Errata Paper II

Neurourology and Urodynamics. 2020; 39:871–872

https://doi.org/10.1002/nau.24262

Neurourology and Urodynamics 36:322–328 (2017)

Anxiety and Depression Associated With Urinary Incontinence. A 10-year Follow-Up Study From the Norwegian HUNT study (EPINCONT)

Gunhild Felde,[1]* Marit Helen Ebbesen,[1] and Steinar Hunskaar[1,2]
[1]*Department of Global Public Health and Primary Care, University of Bergen, Bergen, Norway*
[2]*National Centre for Emergency Primary Health Care, Uni Research Health, Bergen, Norway*

Aims: Firstly, to investigate the association between depression, anxiety and urinary incontinence (UI) in a 10-year longitudinal study of women. Secondly, to investigate the association between possible differences in the stress- and urgency components of UI and different severities of depression and anxiety by age groups. **Methods:** In a longitudinal, population-based survey study, the EPINCONT part of the HUNT study in Norway, we analyzed questionnaire data on UI, depression and anxiety from 16,263 women from 20 years of age. A multivariate logistic regression model was used to predict the odds of developing anxiety and depression among the women with and without UI at baseline and the odds of developing UI among the women with and without anxiety or depression at baseline. **Results:** For women with any UI at baseline we found an association with the incidence of depression and anxiety symptoms, OR 1.45 (1.23–1.72) and 1.26 (1.8–1.47) for mild depression and anxiety respectively. For women with depression or anxiety symptoms at baseline we found an association with the incidence of any UI with OR 2.09 (1.55–2.83) and 1.65 (1.34–2.03) for moderate/severe symptom-score for depression and anxiety, respectively, for the whole sample. **Conclusions:** In this study, both depression and anxiety are shown to be risk factors for developing UI with a dose-dependent trend. UI is associated with increased incidence of depression and anxiety. *Neurourol. Urodynam. 36:322–328, 2017.*

Key words: anxiety; depression; epidemiology; EPINCONT; HADS; HUNT; urinary incontinence

INTRODUCTION

Several epidemiologic cross-sectional studies have linked depression to urinary incontinence (UI) in women. The association has been shown to be strongest for urgency and mixed incontinence and for severe incontinence.[1–7] An association between anxiety and UI has also been found.[5,8,9] Anxiety, depression and UI are all common health problems, and a possible link between them is of great interest. Studies have given conflicting answers on the question of whether it is anxiety and depression that give a higher risk of incidence of UI or UI that gives a higher risk of developing anxiety and depression.[8,10–12] In addition to the epidemiological substrate, there are also biological and neurological explanation models for both directions of the associations. Serotonergic pathways and the sympathetic nerve system are involved in both UI, anxiety, and depression.[10,13–15]

Longitudinal studies are necessary to better understand the underlying causes and sequences of the observed associations in the cross-sectional studies. With data from the large Norwegian EPINCONT study, based on the Nord-Trøndelag Health Survey 2 and 3 (HUNT2 and HUNT3), the main objective of the present study was to investigate the associations between depression, anxiety and UI in women in a prospective 10-year follow-up study.

MATERIALS AND METHODS

The Nord-Trøndelag health study (HUNT) was a large population-based survey, which all persons aged 20 years and older in the county of Nord-Trøndelag were invited to participate in. HUNT3 (2006–08) included the same questions as HUNT2 (1995–97) on the topics of UI, anxiety and depression. 47,177 women were invited to participate in HUNT2, and 47,415 in HUNT3. The invitation included questionnaire one (Q1), which the participants were asked to bring to a screening station where several clinical examinations were done and blood samples were drawn. The women who met inclusion criteria at the screening station received questionnaire two (Q2). In HUNT2, the questions about anxiety and depression were in Q1 and the questions about UI were in Q2. In HUNT3 the questions in both of these areas were in Q2. 34,653 (73.5%) answered Q1 in HUNT2. 80.8% of those who answered Q1 answered the incontinence part of the study in Q2 in HUNT2. 27,761 (58.7%) of those invited answered Q1and 21,804 answered Q2 in HUNT3. 16,253 women answered Q1 and Q2 in HUNT2 and Q2 in HUNT3, and our study was a longitudinal survey of the women in this subgroup. Figure 1 is a vizualization of the study-population of the women who were invited to the HUNT-study until they were included in the study-group. For the analyses we used three age groups: 19–39 years, 40–54 years and 55 years and older.

Dr. Mickey Karram led the peer-review process as the Associate Editor responsible for the paper.
Potential conflicts of interest: Nothing to disclose.
Grant sponsor: Norwegian Medical Association Fund for Research in General Practice
*Correspondence to: Gunhild Felde, Department of Global Public Health and Primary Care, University of Bergen, PB 7804, 5020 Bergen, Hordaland, Norway.
E-mail:: gunhild.felde@uib.no
Received 2 July 2015; Accepted 9 October 2015
Published online 20 November 2015 in Wiley Online Library (wileyonlinelibrary.com).
DOI 10.1002/nau.22921

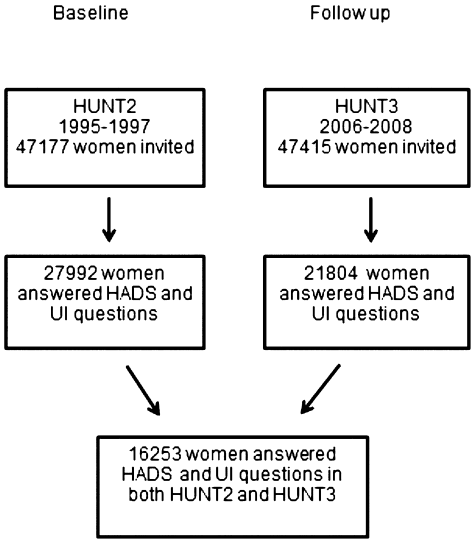

Fig. 1. Visualization of the study-population of women who were invited to the HUNT-study until they were included in the study-group.

Urinary Incontinence Variables (EPINCONT Study)

The incontinence part of the questionnaire is known as the EPINCONT study (Epidemiology of Urinary Incontinence in Nord-Trøndelag).[16] For analyses UI was defined as any leakage of urine.[17] If the answer to the entry question of whether she had experienced leakage was yes, the woman was asked to answer more specific questions about the leakage of urine; how often (four levels), how much (three levels) and in which situations she experienced the leakage. A stress UI component was defined when the woman experienced loss of urine when coughing, laughing, sneezing, or making an effort. An urgency UI component was defined when she experienced urgency to void. The incontinence was classified as stress incontinence if she answered "yes" on the stress component question and urgency incontinence if she answered "yes" on the urgency component question. Mixed UI was defined if she answered "yes" on both these questions. Only stress and urgency UI components were used in the analyses.

Anxiety and Depression Variables

Anxiety and depression was measured by the Hospital Anxiety and Depression Scale (HADS).[18,19] This is a self-administered questionnaire consisting of 14 items, seven for anxiety (HADS-A) and seven for depression (HADS-D). Each item has four possible answers and is scored on a Likert scale from 0 to 3. The item scores are added, giving subscales from 0 (minimum symptom level) to 21 (maximum symptom level).

The developers of the scale have recommended three cut-off scores: mild (8–10), moderate (11–14), or severe (15–21) anxiety or depression.[18,20] Here the moderate and severe groups (scores >.11) are combined into a common " moderate/severe" group. Data on the validity of HADS have been published.[20–22]

Statistical Analyses

All statistical analyses were performed using SPSS version 22.0. Statistical significance was accepted at a 5% level. Logistic regression analyses were performed to investigate the associations between anxiety and depression and UI. Associations are shown as odds ratios (ORs) with 95% confidence intervals (CIs). In the regression model we adjusted for age, body mass index, parity, myocardial infarction, cerebral stroke, asthma, and diabetes. Age was used as a continuous variable, the other adjustment variables were used as categorical variables.

To see if anxiety and depression could predict the onset of UI during follow-up we first excluded women who had UI at baseline. Then we made two groups of cases; those with HADS-score 8–10 and those with HADS-score ≥ 11 at baseline. Women with HADS < 8 were controls. Conversely, to see if UI could predict the onset of anxiety and depression during follow-up, we first excluded those women who had anxiety or depression at baseline. Women with UI at baseline were now the cases and the women without UI at baseline were the controls.

Ethics

Approvals for the HUNT study were obtained from the Regional and National ethics review board and from the Norwegian Data Inspectorate.

RESULTS

Sixteen thousand two hundred and fifty-three women answered the UI-questions and the questions concerning anxiety and depression in both HUNT2 and HUNT3 and could thus be included in the follow-up study.

Table I shows the characteristics of the included women at baseline regarding UI, anxiety, depression, and the adjustment variables used, in total and by the three age groups. Mean age was 47 years, and mean number of children was 2.1. Prevalence of UI was 23.7%, highest among the middle-aged, and lowest among the youngest. One in five reported a stress UI component, again highest among the middle-aged, and least in the youngest group. One in ten reported an urgency UI component, this was highest among the eldest.

About one in ten had mild and about one in twenty had moderate/severe levels of anxiety, with small differences between age groups. Depression, however, showed increasing prevalence by increasing age. The incidence of UI during the 10-year follow-up period was 18.7%, highest for the stress UI component and for the youngest age group. The 10-year incidence was 7.6% and 2.5% for mild and moderate/severe levels of anxiety, respectively, and 5.2% and 1.2% for mild and moderate/severe levels of depression, respectively (Table I). The incidences of anxiety and depression showed less variance by age groups than for UI.

UI and Depression

Table II presents adjusted analyses from logistic regression for the associations (ORs) between depression and the incidence of any UI, a urgency UI component and a stress UI component. We found a highly significant association between developing UI and high depression score at baseline. The associations are present in all three age groups and for both urgency UI and stress UI components, but the associations did not always reach statistical significance.

TABLE I. Characteristics of the Included Women at Baseline, Shown in Total and by Three Age Groups

Age at inclusion (years)	19–39 N = 5,147		40–54 N = 6,330		55 + N = 4,780		All N = 16,263	
Number of women (N)	**N**	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Urinary incontinence (UI)								
Any UI	889	17.3	1753	27.7	1213	25.4	3856	23.7
Stress UI component	744	14.5	1567	24.8	1022	21.4	3334	20.5
Urgency UI component	334	6.5	645	10.2	617	12.9	1596	9.8
Mixed UI	252	4.9	533	8.5	533	11.2	1321	8.1
Other/unclassified	153	3.0	229	3.6	280	5.9	662	4.1
Anxiety								
HADS-A 8–11	546	10.6	749	11.8	524	11.0	1821	11.2
HADS-A ≥ 11	265	5.1	388	6.1	252	5.3	905	5.6
Depression								
HADS-D 8–11	202	3.9	434	6.9	421	8.8	1057	6.5
HADS-D ≥ 11	72	1.4	167	2.6	144	3.0	383	2.4
Parity								
None	1037	20.1	301	4.8	321	6.7	1661	10.2
1	880	17.1	499	7.9	312	6.5	1691	10.4
2	1900	36.9	2626	41.5	1169	24.5	5695	35.0
≥ 3	1303	25.3	2880	45.5	2929	61.3	7114	44.0
Body mass index								
< 18.5	79	1.5	28	0.4	18	0.4	125	0.8
18.5–24.9	2978	57.9	2925	46.2	1434	30.0	7337	45.1
25.0–29.9	1523	29.6	2426	38.3	2208	46.2	6157	37.9
> 29.9	544	10.6	948	15.0	1106	23.1	2598	16.0
Incidence of UI								
Any UI	895	22.2	665	15.9	492	17.9	2054	18.7
Stress UI component	753	19.4	528	13.0	358	13.7	1641	15.5
Urgency UI component	369	10.5	333	8.6	294	11.5	997	10.1
Incidence of anxiety								
HADS-A 8–10	330	7.9	363	7.3	272	7.6	965	7.6
HADS-A ≥ 11	119	3.0	125	2.7	57	1.7	301	2.5
Incidence of depression								
HADS-D 8–10	191	4.0	248	4.5	309	7.8	749	5.2
HADS-D ≥ 11	51	1.1	57	1.1	49	1.3	158	1.2
Asthma	403	7.8	453	7.2	374	7.8	1232	7.6
Myocardial infarction	2	0	11	0.2	76	1.6	89	0.5
Cerebral stroke	9	0.2	25	0.4	77	1.6	111	0.7
Diabetes	22	0.4	65	1.0	130	2.7	217	1.3

Results are given as N and percentages.

TABLE II. Adjusted Analyses From Logistic Regression for the Associations Between Depression and the Incidence of Any UI, a Urgency UI Component and a Stress UI Component

Age at inclusion (years)	19–39 N = 5,147		40–54 N = 6,330		55 + N = 4,780		All N = 16,263	
Number of women (N)	**OR**	**95%CI**	**OR**	**95%CI**	**OR**	**95%CI**	**OR**	**95%CI**
Incident any UI (N = 2,054)								
HADS-D < 8 (N = 14,613)	Ref.		Ref.		Ref.		Ref.	
HADS-D 8–10 (N = 1,057	1.62	1.11–2.36	1.30	0.92–1.83	1.33	0.93–1.89	1.38	1.13–1.69
HADS-D ≥ 11(N = 383)	1.84	0.99–3.40	2.07	1.28–3.34	2.54	1.51–4.27	2.09	1.55–2.84
Incident urgency UI component (N = 997)								
HADS-D < 8 (N = 14,613)	Ref.		Ref.		Ref.		Ref.	
HADS-D 8–10 (N = 1,057	1.60	0.95–2.69	1.27	0.80–2.02	1.66	1.11–2.50	1.50	1.15–1.94
HADS-D ≥ 11 (N = 383)	1.99	0.86–4.57	1.98	1.05–3.73	3.10	1.71–5.60	2.30	1.57–3.36
Incident stress UI component (N = 1,641)								
HADS-D < 8 (N = 4,613)	Ref.		Ref.		Ref.		Ref.	
HADS-D 8–10 (N = 1,057)	1.64	1.11–2.44	1.27	0.86–1.86	1.60	1.10–2.33	1.46	1.17–1.83
HADS-D ≥ 11 (N = 383)	1.83	0.95–3.52	2.56	1.57–4.18	2.21	1.21–4.03	2.22	1.60–3.08

Results are given as odds ratios (OR) with 95% confidence intervals (CI). The analyses are adjusted for age, body mass index, parity, myocardial infarction, cerebral stroke, asthma, and diabetes.

TABLE III. Adjusted Analyses From Logistic Regression for the Associations Between Any UI, Urgency and Stress UI Components and the Incidence of Mild and Moderate/Severe Depression

Age at inclusion (years)	19–39 N = 5,147		40–54 N = 6,330		55 + N = 4,780		All N = 16,263	
Number of women (N)	OR	95%CI	OR	95%CI	OR	95%CI	OR	95%CI
Incident HADS-D 8–10 (N = 749)								
Continence (N = 11,683)	Ref.		Ref.		Ref.		Ref.	
Any UI (N = 3,856)	1.66	1.17–2.35	1.46	1.11–1.92	1.44	1.10–1.89	1.45	1.23–1.72
Urgency UI component (N = 1,596)	1.84	1.11–3.03	1.63	1.11–2.40	1.69	1.20–2.36	1.65	1.32–2.07
Stress UI component (N = 3,334)	1.66	1.15–2.41	1.45	1.09–1.94	1.45	1.08–1.93	1.45	1.21–1.73
Incident HADS-D ≥ 11 (N = 158)								
Continence (N = 11,683)	Ref.		Ref.					
Any UI (N = 3,856)	1.37	0.69–2.73	1.70	1.98–2.95	1.15	0.58–2.29	1.43	1.00-2.06
Urgency UI component (N = 1,596)	2.21	0.92–5.33	0.85	0.30–2.41	1.85	0.85–4.03	1.52	0.92–2.50
Stress UI component (N = 3,334)	1.19	0.54–2.60	1.85	1.05–3.26	1.03	0.48–2.22	1.40	0.95–2.06

Results are given as odds ratios (OR) with 95% confidence intervals (CI). The analyses are adjusted for age, body mass index, parity, myocardial infarction, cerebral stroke, asthma and diabetes.

The ORs were higher for HADS-D score 11 and over than for HADS-D scores 8–10 for all age groups and for both types of UI, thus indicating a "dose-dependent" trend. The highest OR (3.07) was found for urgency UI and moderate/severe depression in the oldest age group.

Table III shows adjusted analyses from logistic regression for the associations (ORs) between any UI, a urgency UI component, and a stress UI component, and the incidence of mild and moderate/severe levels of depression. We found that any UI, a urgency UI component, and a stress UI component at baseline, were all statistically significantly associated with the incidence of MILD depression (HADS 8–10) in all age groups with the highest ORs in the youngest age group. We also saw an association with moderate/severe depression score, but these results were mostly not significant. There were generally higher ORs for a urgency UI component than for a stress UI component.

UI and Anxiety

Table IV shows adjusted analyses from logistic regression for the associations (ORs) between anxiety and the incidence of any UI, and urgency UI and stress UI components. As for depression, we found a highly statistically significant association between developing any UI and the two UI components and having a high anxiety score at baseline. However, the associations were not statistically significant in the oldest age group for any UI category. The ORs were higher for HADS-A score 11 and over than for HADS-A scores 8–10 for all age groups and for both types of UI, thus indicating a "dose-dependent" trend. The highest OR (2.25) was found for a urgency UI component and moderate/severe anxiety in the middle age group.

Table V shows adjusted analyses from logistic regression for the associations (ORs) between any UI, a urgency UI component, and a stress UI component, and the incidence of mild and moderate/severe levels of anxiety.

We found statistically significant associations between the incidence of MILD anxiety (HADS-A 81–10) in the total sample for women with any UI and stress and urgency UI components at baseline. For the different age subgroups the ORs for anxiety were generally lower than for depression. The incidence of moderate/severe levels of anxiety was statistically significant only for a urgency UI component in the older age group.

TABLE IV. Adjusted Analyses From Logistic Regression for the Associations Between Anxiety and the Incidence of Any UI, a Urgency UI Component and a Stress UI Component

Age at inclusion (years)	19–39 N = 5,147		40–54 N = 6,330		55 + N = 4,780		All N = 16,263	
Number of women (N)	OR	95%CI	OR	95%CI	OR	95%CI	OR	95%CI
Incident any UI (N = 2,054)								
HADS-A < 8 (N = 13,161)	Ref.		Ref.		Ref.		Ref.	
HADS-A 8–10 (N = 1,821)	1.43	1.12–1.88	1.73	1.13–1.99	1.17	0.84–1.61	1.45	1.25–1.68
HADS-A ≥ 11(N = 905)	1.78	1.28–2.47	1.79	1.28–3.33	1.36	0.86–2.15	1.65	1.34–2.03
Incident urgency UI component (N = 997)								
HADS-A < 8 (N = 13,161)	Ref.		Ref.		Ref.			
HADS-A 8–10 (N = 1,821)	1.53	1.10–2.14	1.81	1.31–2.51	1.30	0.88–1.92	1.54	1.26–1.88
HADS-A ≥ 11 (N = 905)	2.11	1.37–3.23	2.24	1.49–3.37	1.58	0.92–2.72	1.98	1.53–2.57
Incident stress UI component (N = 1,641)								
HADS-A < 8 (N = 13,161)	Ref.		Ref.		Ref.		Ref.	
HADS-A 8–10 (N = 1,821)	1.43	1.12–1.81	1.73	1.32–2.27	1.21	0.84–1.75	1.50	1.27–1.76
HADS-A ≥ 11 (N = 905)	1.78	1.28–2.49	1.96	1.38–2.79	1.47	0.89–2.44	1.75	1.41–2.19

Results are given as odds ratios (OR) with 95% confidence intervals (CI). The analyses are adjusted for age, body mass index, parity, myocardial infarction, cerebral stroke, asthma and diabetes.

TABLE V. Adjusted Analyses From Logistic Regression for the Associations Between Any UI, Urgency and Stress UI Components and the Incidence of Mild and Moderate/Severe Anxiety

Age at inclusion (years)	19–39 N = 5147		40–54 N = 6,330		55 + N = 4,780		All N = 16,263	
Number of women (N)	**OR**	**95%CI**	**OR**	**95%CI**	**OR**	**95%CI**	**OR**	**95%CI**
Incident HADS-A 8–10 (N = 965)								
Continence (N = 11,683)	Ref.		Ref.				Ref.	
Any UI (N = 3,856)	1.24	0.92–1.67	1.33	1.05–1.69	1.24	0.93–1.66	1.26	1.08–1.47
Urgency UI component (N = 1,596)	1.23	0.77–1.96	1.38	0.97–1.95	1.61	1.13–2.30	1.42	1.14–1.77
Stress UI component (N = 3,334)	1.25	0.90–1.72	1.30	1.01–1.67	1.25	0.92–1.71	1.25	1.06–1.47
Incident HADS-A $\geq$ 11 (N = 158)								
Continence (N = 11,683)	Ref.							
Any UI (N = 3,856)	1.37	0.85–2.20	0.93	0.61–1.42	1.30	0.71–2.41	1.12	0.84–1.48
Urgency UI component (N = 1,596)	1.84	0.96–3.53	0.64	0.29–1.39	2.55	1.32–4.94	1.33	0.90–1.96
Stress UI component (N = 3,334)	1.41	0.85–2.33	0.90	0.57–1.42	1.57	0.85–2.91	1.15	0.86–1.55

Results are given as odds ratios (OR) with 95% confidence intervals (CI). The analyses are adjusted for age, body mass index, parity, myocardial infarction, cerebral stroke, asthma and diabetes.

Unadjusted results from logistic regression analyses for Tables I–V are not shown due to very similar results and trends.

DISCUSSION

This study indicates that both depression and anxiety are predictors for the onset of UI and that UI is a predictor for the onset of both anxiety and depression in women from 20 years of age. We investigated the association between the degree of depression and anxiety score, the UI component, and age group. With both depression and anxiety at baseline, the association with the onset of UI is stronger with a higher HADS-score. The highest ORs are found in the groups with HADS-D and HADS-A $\geq$ 11 at baseline developing a urgency UI component, in the eldest group for depression score and in the middle-aged group for anxiety. The association between urinary incontinence at baseline and the incidence of anxiety and depression is strongest with HADS 8–10 in the total sample, and we see the highest ORs for a urgency UI component.

In a large prospective study like ours the design indicates more certain evidence than can be found in a cross-sectional study, but the associations found are not proof of causality.

The strengths of the study include a population-based design with a large sample size and a good response rate; as far as we know one of the largest studies investigating this topic. All adult women 20 years and older were invited to participate, and results from the study give representative knowledge about the entire adult female population. Most other studies focus on elderly women only, or a more narrow age-group. However, in our study we experienced problems with low statistical power for small subgroups. We used validated scales for UI, anxiety and depression and the HADS and UI questions were part of a larger survey, which reduces the possibility of both under- and over-reporting. The questionnaire with symptom-based questions about UI is based on the definition of the International Continence Society.[17] The incidence of urinary incontinence in the EPINCONT study is in the lower range compared with incidences reported in other longitudinal studies. This is discussed in another study from HUNT.[23] The HADS is widely used in population-based studies. A cut-off score of eight on each subscale has been found to screen adequately for case-level depression and anxiety according to DSM-III/IV and ICD-8/9 diagnostic criteria.[22] A cut-off of 11 is also used to classify severity level.

Another strength of the study the ability to investigate the associations between the two different components of UI, the two severities of depression- and anxiety scores and the three groups of age.

The limitations of the study include the potentially lower participation in a mail-survey of the persons with the most symptoms, especially very depressed women. 73.5% and 58.5% of the invited persons met the inclusion criteria at the screening station in HUNT2 and HUNT3, respectively, and almost 80% of those who received the questionnaire answered the EPINCONT part. Even though the answering percentage is high, the lower percentage of persons meeting inclusion criteria at the screening station represents a possible selection bias. HADS is not a diagnostic instrument even if it is a good tool to assess symptom load.[21] We know that there are possible shared biological underliers for depression, anxiety and UI, and the lack of information about psychiatric medication and medical treatment of UI, represents a limitation. Lack of information about functional loss could also be a limitation as we know that this is important in both UI and anxiety and depression. One study found that only UI with functional loss was a predictor of anxiety after adjustments.[24] The broad definition of UI used in our study will include many women with no bother or only low bother due to their UI.

Depression and Anxiety at Baseline and Incident UI

We found a significant association between depression at baseline and development of UI. The association was strongest for the women with the highest HADS-score. This corresponds well with the results of a 6-year longitudinal study[10] where they found an OR of 1.46 (1.08–1.97) of developing UI in the group with major depression at baseline. That study was limited by only including patients with a major depression score and a population of only older women. Our results are also supported by an earlier study[25] which found that women with depression at baseline had a relative risk (RR) of 1.6 (1.2–2.0) of being diagnosed with UI over a 9-year follow-up. That study was limited to individuals with medical record diagnoses. In a recent prospective study among young women, the women with depressive symptoms or a history of depression were more likely to develop UI symptoms during follow-up.[26] A one-year longitudinal study found that the incidence of cases of urgency UI were predicted by anxiety at baseline, but not depression.[8] In a 5 year follow-up study investigating 475

women with UI at baseline, the persistence of UI was associated with depression symptoms. They also found that treatment of UI did not affect the association.[11] In a 18-year follow-up study with a median follow-up of 12 years depressive symptoms were associated with incidence of UI with a hazard ratio of 1.31 (1.09–1.56).[12]

There are fewer studies on anxiety as a risk factor for UI. In one longitudinal study anxiety was both a risk factor and a consequence of urgency incontinence.[8] A longitudinal study found a strong association between anxiety at baseline and UI with incontinence-related functional loss. They did not find any significant association with UI without function loss.[25] A later longitudinal study investigating the relationship between anxiety disorder and UI, also found that persons with anxiety at baseline had a significantly higher incidence of UI, but this was only significant with condition-specific functional loss.[27]

In the present study, among those with anxiety at baseline and an incidence of UI, there were higher ORs for developing a urgency UI component compared to a stress UI component in all age groups. This is similar to the strong association between urgency UI and anxiety found in a cross-sectional study[5] and a longitudinal study.[8]

UI at Baseline and Incident Anxiety and Depression

We found an association between UI at baseline and the incidence of depression, only significant with a mild depression score (HADS 8–10), with the highest ORs for a urgency UI component at baseline. One earlier study did not find this association,[10] but that study only investigated major depression, and thus might not catch the association with mild depression. In another one year longitudinal study using HADS and data on both stress and urgency UI at baseline, depression was found to predict urgency UI, but not stress UI.[8]

Our study found an association between UI at baseline and the onset of anxiety, also most significant for a mild HADS-score and with highest ORs for a urgency UI component in most age groups. This corresponds with two other studies,[8,27] but in the latter the association was only significant when the UI was accompanied with a condition-specific functional loss.[27]

No other study we know of has been able to differentiate between severities of depression and anxiety in association with UI. Our study indicates a ''dose-response'' effect in the association between depression or anxiety at baseline and the development UI. With UI at baseline the association with the incidence of depression and anxiety is only significant with a mild symptom score, but this could be a result of low statistical power in the small subgroup.

Possible Mechanisms

Leakage represents loss of control, and the less predictable the UI, the more disturbing it is for the person, which could lead to helplessness, anxiety and depression.[28] Dysfunctional beliefs and automatic negative thoughts about social stigma could lead to increased functional loss with increased anxiety symptoms and sadness. Cognitive barriers may also decrease a person's benefit from treatment for UI.[28] In one longitudinal study depression at baseline was associated with persistence of UI.[11] UI also often remains underdiagnosed because many patients never consult a doctor for their problem.[29] Depression and anxiety could also contribute to a delay in help-seeking. Having a chronic illness also in itself represents a burden that could lead to sadness and depression. In addition, UI can lead to social isolation and fewer outside activities, which may contribute to depression.[10,13]

Serotonergic pathways are linked to both the regulation of voiding function and depression. Serotonin inhibits the micturition reflex pathway and facilitates the closure of the urethral sphincter. The level of serotonin is low in clinically depressed persons. Duloxetine is a serotonin and noradrenalin reuptake inhibitor and has been shown to improve incontinence and quality of life in patients with stress UI.[15,30,31]

CONCLUSIONS

In this large 10-year follow-up study of 16,253 women aged 20 years and older we found that women with depression or anxiety at baseline were about 50% more likely to develop UI during follow-up than other women, increasing with a high HADS-score. UI at baseline was associated with developing both anxiety and depression, with highest ORs for a mild to moderate depression-score. We know that women with comorbid depression or anxiety and UI have an increased symptom burden from their conditions compared to women with only one of the conditions, therefore it is important to be aware of the association between the conditions, both as a public-health priority and for physicians in their management of such patients.

ACKNOWLEDGMENTS

The HUNT Study is a collaboration between the HUNT Research Centre (Faculty of medicine, Norwegian University of Science and Technology NTNU), the Nord-Trøndelag County Council, the Central Norway Health Authority, and the Norwegian Institute of Public Health. The study is funded by the Norwegian Medical Association Fund for Research in General Practice.

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DOI: 10.1002/nau.24262

Neurourology Urodynamics ICS SUFU WILEY

ERRATUM

Roger Dmochowski, Editor-in-Chief

Dear Editor,

This is a notice with regard to a paper that we published in *Neurourology and Urodynamics* in 2015/2017.[1]

During our further scientific work in this field, we have discovered an error in Table 1 of that paper. It concerns the first part of the Table, about Mixed UI and Other/unclassified UI. All the numbers in these two lines are wrong. Below we show the printed version and the correct numbers (in red):

Printed version

Age at inclusion, y	**19-39**		**40-54**		**55+**		**All**	
Number of women (N)	**N = 5147**		**N = 6330**		**N = 4780**		**N = 16 263**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Urinary incontinence (UI)								
Any UI	889	17.3	1753	27.7	1213	25.4	3856	23.7
Stress UI component	744	14.5	1567	24.8	1022	21.4	3334	20.5
Urgency UI component	334	6.5	645	10.2	617	12.9	1596	9.8
Mixed UI	**252**	**4.9**	**533**	**8.5**	**533**	**11.2**	**1321**	**8.1**
Other/unclassified	**153**	**3.0**	**229**	**3.6**	**280**	**5.9**	**662**	**4.1**

Correct version

Age at inclusion, y	**19-39**		**40-54**		**55+**		**All**	
Number of women (N)	**N = 5147**		**N = 6330**		**N = 4780**		**N = 16 263**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Urinary incontinence (UI)								
Any UI	889	17.3	1753	27.7	1213	25.4	3856	23.7
Stress UI component	744	14.5	1567	24.8	1022	21.4	3334	20.5
Urgency UI component	334	6.5	645	10.2	617	12.9	1596	9.8
Mixed UI	**247**	**4.8**	**513**	**8.1**	**481**	**10.1**	**1241**	**7.6**
Other/unclassified	**51**	**1.0**	**48**	**0.8**	**34**	**0.7**	**133**	**0.8**

For Mixed UI the errors are small and of no practical impact. For Other/unclassified the changes in numbers (N) are significant and the changes in percentages (%) are larger. However, the group of Other/unclassified is now much smaller and of much lower impact, and was anyway not an important focus of the paper and is not given any special emphasis further in the paper. In addition, the variables with wrong numbers are not used in further analyses, especially not in the logistic regression analyses, and do therefore not influence the main results in the study.

However, as we recently discovered this fact, we feel obliged to inform you as Editor-In-Chief about the errors. We ask for your decision on the matter, and whether an Errata should be printed in the Journal.

Sincerely yours

Gunhild Felde, Marit Ebbesen, and Steinar Hunskaar

The authors

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Questionnaires

HUSK

Questionnaire K2 (Kvinner 2)

HUNT2

Questionnaire 1

Questionnaire 2 (20-69 years)

Questionnaire 2 (70+ years, version 1)

Questionnaire 2 (70+ years, version 2)

HUNT3

Questionnaire 2 (20-29 years)

Questionnaire 2 (30-69 years)

Questionnaire 2 (70+ years)

HELSEUNDERSØKELSEN I HORDALAND 1997-99

Kvinner 2

Dato for utfylling av skjema: DAG MÅNED ÅR

HUSK

Takk for at du har tatt deg tid til å komme til helseundersøkelsen! Denne undersøkelsen omfatter flere delprosjekt, og vi ber deg derfor om at du også fyller ut dette spørreskjemaet. Resultatene vil bli brukt i forskning om forebyggende helsearbeid. Noen av spørsmålene ligner på de du har svart på tidligere. Der er likevel viktig at du svarer på alle spørsmålene også i dette skjemaet. Du kan enten fylle ut skjemaet og levere konvolutten til sykepleierne når du går, eller du kan ta det med hjem og returnere skjemaet per post. Porto er betalt.

Alle svar vil bli behandlet strengt fortrolig.

Det utfylte skjemaet vil bli lest av en maskin. Bruk blå eller sort farge ved utfylling.
Det er viktig at du går frem slik:
- i de små boksene setter du kryss for det svaret som passer best for deg.
- i de store boksene skriver du tall eller blokkbokstaver – NB! innenfor rammen for boksene.

Eksempler:
Avkrysning: ☒ Tall: 1 2 3 4 5 6 7 8 9 0 Bokstaver: A B C

Vennlig hilsen
Helseundersøkelsen i Hordaland 1997 – 99. Statens helseundersøkelser – Universitetet i Bergen – Kommunehelsetjenesten

BOFORHOLD

I hvilken kommune bodde du da du fylte 1 år?
Hvis du ikke bodde i Norge, oppgi land i stedet for kommune.

Ikke skriv i disse rutene ▸

Hvilken type bolig bor du i? *Sett bare ett kryss*

- Enebolig/villa ☐
- Gårdsbruk ☐
- Blokk/terrasseleilighet ☐
- Rekkehus/2-4 mannsbolig ☐
- Annen bolig ☐

Hvor stor er din boenhet? ..... m²

	JA	NEI
Er det heldekkende tepper i stua?	☐	☐
Er det katt i boligen?	☐	☐
Er det hund i boligen?	☐	☐

Hvem bor du sammen med?
Sett ett kryss for hvert spørsmål og angi antall.

	JA	NEI	ANTALL
Ektefelle/samboer	☐	☐	
Andre personer over 18 år	☐	☐	
Personer under 18 år	☐	☐	

Hvor mange av barna har plass i barnehage? .....

HELSE

Har du noen gang hatt? *Sett kryss for hvert spørsmål. Oppgi også alderen ved hendelsen. Hvis det har skjedd flere ganger, hvor gammel var du sist gang.*

	JA	NEI	Alder siste gang
Lårhalsbrudd	☐	☐	År
Brudd ved håndledd/underarm	☐	☐	År
Nakkeslengskade (whiplash)	☐	☐	År
Skade som førte til sykehusinnleggelse	☐	☐	År

Har du eller har du hatt: *Kryss av «Ja» eller «Nei» for hvert spørsmål.*

	JA	NEI
Høysnue?	☐	☐
Kronisk bronkitt?	☐	☐
Benskjørhet (osteoporose)?	☐	☐
Fibromyalgi/fibrositt/kronisk smertesykdom?	☐	☐
Psykiske plager som du har søkt hjelp for?	☐	☐

Kryss av for de slektningene som har eller har hatt noen av sykdommene:

	Mor	Far	Bror	Søster	Barn
Hjerneslag eller hjerneblødning	☐	☐	☐	☐	☐
Hjerteinfarkt før 60 års alder	☐	☐	☐	☐	☐
Astma	☐	☐	☐	☐	☐
Kreftsykdom	☐	☐	☐	☐	☐
Sukkersyke (diabetes)	☐	☐	☐	☐	☐

Dersom det er sukkersyke i familien, oppgi alder da de fikk sukkersyke.

Mor	Far	Bror	Søster	Barn
År	År	År	År	År

	JA	NEI
Hoster du omtrent daglig i perioder?	☐	☐
Hvis Ja: Er hosten vanligvis ledsaget av oppspytt?	☐	☐
Har du hatt slik hoste så lenge som i en 3 måneders periode i begge de to siste år?	☐	☐
Plagsomt tørre øyne - har du hatt denne følelsen daglig i mer enn 3 måneder?	☐	☐
Har du ofte følelsen av sand på øynene	☐	☐
Tørrhet i munnen - har du hatt denne følelsen daglig i mer enn 3 måneder?	☐	☐
Må du ofte drikke for å kunne svelge tørr mat?	☐	☐

VANLIGE PLAGER

Hvor ofte opplever du plagene som er nevnt nedenfor?

	Nesten aldri	Sjelden	Iblant	Ofte	Nesten alltid
Magesmerter	☐	☐	☐	☐	☐
Kvalme	☐	☐	☐	☐	☐
Oppblåst mage	☐	☐	☐	☐	☐
Belegg på tungen eller vond smak i munnen	☐	☐	☐	☐	☐
Oppkast eller oppstøt	☐	☐	☐	☐	☐
Hyppige løse avføringer	☐	☐	☐	☐	☐
Åndenød uten at du har anstrengt deg	☐	☐	☐	☐	☐
Brystsmerter	☐	☐	☐	☐	☐
Svie ved vannlating	☐	☐	☐	☐	☐
Ubehag i skrittet	☐	☐	☐	☐	☐
Misfarving av hud eller flekker på huden	☐	☐	☐	☐	☐
Ledd- eller muskelsmerter i armer eller ben	☐	☐	☐	☐	☐
Prikking eller stikking i armer eller ben	☐	☐	☐	☐	☐
Svie eller renning fra øyne eller nese	☐	☐	☐	☐	☐
Hodepine	☐	☐	☐	☐	☐
Svimmelhet	☐	☐	☐	☐	☐
Utalt trøtthet	☐	☐	☐	☐	☐

	JA	NEI
Får du noen av plagene som er nevnt i forrige spørsmål, når du kjenner lukt av parfyme, stekelukt, eksos eller lignende?	☐	☐

ARBEID

Hva slags arbeidssituasjon har du nå?

- Lønnet arbeid ☐
- Heltids husarbeid ☐
- Utdanning, militærtjeneste ☐
- Arbeidsledig, permittert ☐

Hvor mange timer lønnet arbeid har du i uken? *Oppgi antall hele timer* ☐☐

	JA	NEI
Har du skiftarbeid, nattarbeid eller går vakter?	☐	☐

Hvor ofte får du brukt dine evner i arbeidet?

Ofte	Noen ganger	Sjelden
☐	☐	☐

Hvis du er i lønnet eller ulønnet arbeid

Hvordan vil du beskrive arbeidet ditt?

- For det meste stillesittende arbeid ☐ *(f.eks. skrivebordsarbeid, montering)*
- Arbeid som krever at du går mye? ☐ *(f.eks. ekspeditørarbeid, lett industriarbeid, undervisning)*
- Arbeid hvor du går og løfter mye? ☐ *(f.eks. postbud, pleier, bygningsarbeider)*
- Tungt kroppsarbeid? ☐ *(f.eks. skogsarb., tungt jordbruksarb., tungt bygningsarb.)*

Hva er for tiden husholdningens årsinntekt før skatt? *(lønn og pensjon)*

- Ingen inntekt ☐
- Kr. 100,- – 49.900,- ☐
- Kr. 50.000,- – 99.900,- ☐
- Kr. 100.000,- – 149.900,- ☐
- Kr. 150.000,- – 199.900,- ☐
- Kr. 200.000,- – 299.900,- ☐
- Kr. 300.000,- – 399.900,- ☐
- Kr. 400.000,- – 499.900,- ☐
- Kr. 500.000,- – eller mer ☐

	JA	NEI
Har du i løpet av de siste 12 månedene hatt sykefravær?		
Med egenmelding	☐	☐
Med sykemelding fra lege	☐	☐

Dersom JA, hvor lenge til sammen?

Mindre enn 1 uke	1-2 uker	2-8 uker	Mer enn 8 uker
☐	☐	☐	☐

Mottar du for tiden noen av følgende offentlige ytelser?	JA	NEI	Dersom JA, fra når: Måned	År
Sykepenger/sykelønn/ rehabiliteringspenger	☐	☐	☐☐	☐☐☐☐
Ytelser under yrkesrettet attføring	☐	☐	☐☐	☐☐☐☐
Uførepensjon	☐	☐	☐☐	☐☐☐☐
Sosialstøtte	☐	☐	☐☐	☐☐☐☐
Arbeidsløshetstrygd	☐	☐	☐☐	☐☐☐☐
Etterlattepensjon	☐	☐	☐☐	☐☐☐☐
Andre ytelser	☐	☐	☐☐	☐☐☐☐

Er det andre i din nærmeste familie som mottar noen av de følgende ytelser?

	Ektefelle/ samboer	Mor	Far
Sykepenger/sykelønn/ rehabiliteringspenger	☐	☐	☐
Yrkesrettet attføring	☐	☐	☐
Uføretrygd	☐	☐	☐
Arbeidsløshetstrygd	☐	☐	☐

HELSE OG TRIVSEL

Her kommer noen flere spørsmål om hvordan du føler deg. For hvert spørsmål setter du kryss for ett av de fire svarene som beskriver dine følelser

Jeg føler meg nervøs og urolig.
- ☐ Mesteparten av tiden
- ☐ Mye av tiden
- ☐ Fra tid til annen
- ☐ Ikke i det hele tatt

Jeg gleder meg fortsatt over ting, slik jeg pleide før.
- ☐ Avgjort like mye
- ☐ Bare lite grann
- ☐ Ikke fullt så mye
- ☐ Ikke i det hele tatt

Jeg har en urofølelse, som om noe forferdelig vil skje.
- ☐ Ja, og noe svært ille
- ☐ Litt, bekymrer meg lite
- ☐ Ja, ikke så veldig ille
- ☐ Ikke i det hele tatt

Jeg kan le og se det morsomme i situasjoner.
- ☐ Like mye nå som før
- ☐ Avgjort ikke som før
- ☐ Ikke like mye nå som før
- ☐ Ikke i det hele tatt

Jeg har hodet fullt av bekymringer.
- ☐ Veldig ofte
- ☐ Av og til
- ☐ Ganske ofte
- ☐ En gang i blant

Jeg er i godt humør.
- ☐ Aldri
- ☐ Ganske ofte
- ☐ Noen ganger
- ☐ For det meste

Jeg kan sitte i fred og ro og kjenne meg avslappet.
- ☐ Ja, helt klart
- ☐ Ikke så ofte
- ☐ Vanligvis
- ☐ Ikke i det hele tatt

Jeg føler meg som om alt går langsommere.
- ☐ Nesten hele tiden
- ☐ Fra tid til annen
- ☐ Svært ofte
- ☐ Ikke i det hele tatt

Jeg føler meg urolig som om jeg har sommerfugler i magen.
- ☐ Ikke i det hele tatt
- ☐ Ganske ofte
- ☐ Fra tid til annen
- ☐ Svært ofte

Jeg bryr meg ikke lenger om hvordan jeg ser ut.
- ☐ Ja, jeg har sluttet å bry meg
- ☐ Kan hende ikke nok
- ☐ Ikke som jeg burde
- ☐ Bryr meg som før

Jeg er rastløs som om jeg stadig må være aktiv.
- ☐ Uten tvil svært mye
- ☐ Ikke så veldig mye
- ☐ Ganske mye
- ☐ Ikke i det hele tatt

Jeg ser med glede frem til hendelser og ting.
- ☐ Like mye som før
- ☐ Avgjort mindre enn før
- ☐ Heller mindre enn før
- ☐ Nesten ikke i det hele tatt

Jeg kan plutselig få en følelse av panikk.
- ☐ Uten tvil svært ofte
- ☐ Ikke så veldig ofte
- ☐ Ganske ofte
- ☐ Ikke i det hele tatt

Jeg kan glede meg over gode bøker, radio og TV.
- ☐ Ofte
- ☐ Ikke så ofte
- ☐ Fra tid til annen
- ☐ Svært sjelden

Har du i løpet av de siste 12 måneder hatt tanker om at det var bedre om du var død, eller hatt tanker om å skade deg selv på en eller annen måte? ..... JA ☐ NEI ☐

VANNLATING

Har du de siste 12 månedene vært plaget med akutt svie, smerte eller ubehag ved vannlating?

Nei	1-2 ganger	3-5 ganger	Mer enn 5 ganger
☐	☐	☐	☐

Hvor ofte har du vanligvis vannlating? ..... *Antall ganger i døgnet* ☐☐

Må du vanligvis opp om natten for å late vannet?

Nei	1 gang	2 ganger	Mer enn 2 ganger
☐	☐	☐	☐

	JA	NEI
Føler du at du vanligvis får tømt blæren skikkelig ved vannlating?	☐	☐
Har du ufrivillig urinlekkasje?	☐	☐

Hvis «Nei», gå til neste avsnitt

Hvor ofte har du urinlekkasje?
- Sjeldnere enn en gang per måned ..... ☐
- En eller flere ganger per måned ..... ☐
- En eller flere ganger per uke ..... ☐
- Hver dag og/eller natt ..... ☐

Hvor mye urin lekker vanligvis hver gang?

Dråper eller lite	Små skvetter	Større mengder
☐	☐	☐

	JA	NEI
Har du lekkasje av urin i forbindelse med hosting, nysing, latter eller tunge løft?	☐	☐
Har du lekkasje av urin i forbindelse med sterk vannlatingstrang?	☐	☐

Hvor lenge har du hatt urinlekkasje?

0-5 år	5-10 år	Mer enn 10 år
☐	☐	☐

ÅRSTIDSVARIASJONER I HUMØRET

***Din følelse av velvære og dine aktiviteter:* I hvilken grad endrer dette seg med årstiden?**

	Ingen	Lett	Moderat	Markert	Sterkt
Søvnlengde	☐	☐	☐	☐	☐
Humør (velvære)	☐	☐	☐	☐	☐
Vekt	☐	☐	☐	☐	☐
Tiltakslyst	☐	☐	☐	☐	☐
Sosiale aktiviteter	☐	☐	☐	☐	☐
Matlyst	☐	☐	☐	☐	☐

SØVN

Har du merket følgende besvær siste 3 måneder?

	Aldri	Sjelden *Noen ganger pr. år*	Iblant *Noen ganger pr. mnd.*	For det meste *Flere ganger pr. uke*	Alltid
Vanskelig for å sovne	☐	☐	☐	☐	☐
Gjentatte oppvåkninger med vansker for å sovne igjen	☐	☐	☐	☐	☐
Våknet opp for tidlig (endelig oppvåkning)	☐	☐	☐	☐	☐
For lite søvn (minst 1 time under ditt søvnbehov)	☐	☐	☐	☐	☐
Snorking (ifølge andre)	☐	☐	☐	☐	☐
Pustepauser under søvn (ifølge andre)	☐	☐	☐	☐	☐
Trett/søvnig på arbeid eller i fritiden	☐	☐	☐	☐	☐
Utilsiktede søvnepisoder («hodet dupper») - på arbeid	☐	☐	☐	☐	☐
- i fritiden	☐	☐	☐	☐	☐
Behov for å kjempe mot søvnen for å holde deg våken	☐	☐	☐	☐	☐
Plutselig tap av muskelkraft (f.eks. «knekker i knærne») ved følelsesmessige reaksjoner (som f.eks. latter, sinne, frykt)	☐	☐	☐	☐	☐

Hvordan syns du at du sover totalt sett?

- Veldig bra ☐
- Ganske bra ☐
- Hverken bra eller dårlig ☐
- Ganske dårlig ☐
- Veldig dårlig ☐

Hvor ofte er du plaget av søvnløshet?

- Aldri, eller noen få ganger i året ☐
- 1 - 2 ganger i måneden ☐
- Omtrent en gang i uken ☐
- Mer enn en gang i uken ☐

Har du siste året vært plaget av søvnløshet slik at det har gått ut over arbeidsevnen? JA ☐ NEI ☐

Når går du normalt til senga for å sove?

I arbeidsuken: ..... kl.: ☐☐ ,☐☐

I fritiden: ..... kl.: ☐☐ ,☐☐

Når våkner du normalt opp (endelig oppvåkning)?

I arbeidsuken: ..... kl.: ☐☐ ,☐☐

I fritiden: ..... kl.: ☐☐ ,☐☐

Hvor lenge ligger du våken før du sovner?

I arbeidsuken: ..... ☐☐☐ *minutter*

I fritiden: ..... ☐☐☐ *minutter*

Hvor mye søvn trenger du? ..... ☐☐ *timer* ☐☐ *min.*

Hvor ofte tar du deg en blund på dagtid?

- Aldri ☐
- Sjelden *(noen ganger pr. år)* ☐
- Iblant *(noen ganger pr. måned)* ☐
- For det meste *(flere ganger i uken)* ☐
- Alltid *(hver dag)* ☐

Hvis du tar deg en blund, hvor lenge bruker den å vare? ..... ☐☐ *timer* ☐☐ *min.*

Er du morgen- eller kveldsmenneske?

- Utpreget morgenmenneske ☐
- Mer morgen- enn kveldsmenneske ☐
- Hverken eller ☐
- Mer kvelds- enn morgenmenneske ☐
- Utpreget kveldsmenneske ☐

Mener du at du får tilstrekkelig med søvn?

- Ja, absolutt tilstrekkelig ☐
- Ja, stort sett tilstrekkelig ☐
- Nei, noe utilstrekkelig ☐
- Nei, klart utilstrekkelig ☐
- Nei, langt fra tilstrekkelig ☐

Hvis du bruker sovemedisiner, føler du at de hjelper?

- Veldig mye ☐
- Ganske bra ☐
- Litt ☐
- Ganske dårlig ☐
- Ikke i det hele tatt ☐

Hvis du bruker sovemedisiner, hvor lenge har du brukt slike?

- Mer enn 5 år ☐
- 1 - 5 år ☐
- 3 - 12 måneder ☐
- 1 - 3 måneder ☐
- Under 1 måned ☐

DIN VURDERING AV DIN ARBEIDSPLASS

Ta stilling til de følgende påstandene om din arbeidsplass.

Det er en rolig og behagelig stemning på min arbeidsplass.

☐ Stemmer helt ☐ Stemmer ganske bra
☐ Stemmer ikke særlig ☐ Stemmer slett ikke

Det er godt samhold på arbeidsplassen.

☐ Stemmer helt ☐ Stemmer ganske bra
☐ Stemmer ikke særlig ☐ Stemmer slett ikke

Mine kolleger stiller opp for meg (gir meg støtte).

☐ Stemmer helt ☐ Stemmer ganske bra
☐ Stemmer ikke særlig ☐ Stemmer slett ikke

På jobben har de forståelse for at jeg kan ha en «dårlig» dag.

☐ Stemmer helt ☐ Stemmer ganske bra
☐ Stemmer ikke særlig ☐ Stemmer slett ikke

Jeg kommer godt overens med mine overordnede.

☐ Stemmer helt ☐ Stemmer ganske bra
☐ Stemmer ikke særlig ☐ Stemmer slett ikke

Jeg trives godt med mine arbeidskamerater.

☐ Stemmer helt ☐ Stemmer ganske bra
☐ Stemmer ikke særlig ☐ Stemmer slett ikke

Ta stilling til følgende påstander om ditt arbeid:

Krever arbeidet ditt at du må arbeide veldig hurtig?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Krever arbeidet ditt at du må arbeide svært hardt?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Krever arbeidet ditt for stor arbeidsinnsats?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Har du tilstrekkelig tid til å rekke alle arbeidsoppgavene?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Møter du ofte motstridende krav i arbeidet ditt?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Har du anledning til å lære noe nytt i arbeidet ditt?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Krever arbeidet ditt nøyaktighet?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Krever arbeidet ditt oppfinnsomhet?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Innebærer arbeidet ditt at du gjør det samme om og om igjen?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Har du mulighet til selv å bestemme *hvordan* arbeidet skal utføres?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Har du mulighet til selv å bestemme *hva* som skal gjøres i arbeidet ditt?

☐ Ja, ofte ☐ Ja, iblant
☐ Nei, sjelden ☐ Nei, så godt som aldri

Takk enda en gang for at du har tatt deg tid til å fylle ut dette skjemaet.

Ditt bidrag vil være verdifullt for forståelsen av den betydningen mange faktorer har for menneskelig helse og trivsel.

Vennlig hilsen

Helseundersøkelsen i Hordaland 97-99
Statens helseundersøkelser

HUSK

SVANGERSKAP OG FØDSEL

Hvor gammel var du da du fikk menstruasjon første gang?

Jeg var ☐☐ år gammel

Hvis du ikke lenger har naturlig menstruasjon, hvor gammel var du da den sluttet?

Jeg var ☐☐ år gammel

	Ja	Nei	Usikker
Er du gravid nå?	☐	☐	☐

Hvor mange barn har du født tidligere?

Jeg har født ☐☐ barn

Hvis du har født, fyll ut for hvert barn, barnets fødselsår og omtrent antall måneder du ammet hvert barn.

Barn	Fødselsår	Antall måneder med amming
1. Barn	19☐☐	☐☐ måneder
2. Barn	19☐☐	☐☐ måneder
3. Barn	19☐☐	☐☐ måneder
4. Barn	19☐☐	☐☐ måneder
5. Barn	19☐☐	☐☐ måneder
6. Barn	19☐☐	☐☐ måneder

Bruker du eller har du brukt:	Nå	Før	Aldri
P-pille (også minipille)	☐	☐	☐
Hormonspiral	☐	☐	☐
Østrogen (tabletter eller plaster)	☐	☐	☐
Østrogen (krem eller stikkpiller)	☐	☐	☐

Hvis du bruker p-pille, hormonspiral eller østrogen, hvilket merke bruker du?

☐☐☐☐☐☐☐☐☐☐☐☐☐☐

☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Ikke skriv i disse rutene ▸ ☐☐ ☐☐

VOLD

Med vold mener vi slag, spark, dytting, lugging, knivstikking og/eller andre typer fysisk vold som ble påført deg av en annen, kjent eller ukjent person.

	JA	NEI
Har du det siste året vært utsatt for fysisk vold?	☐	☐
Dersom du har vært utsatt for vold, oppsøkte du lege eller sykehus på grunn av skaden?	☐	☐

Dersom du har vært utsatt for vold, hvilken type vold var dette?

☐ Slagsmål der du selv deltok ☐ Ran/overfall ☐ Annet
☐ Mishandling ☐ Blind/tilfeldig vold

MEDISINBRUK

Har du i løpet av det siste året brukt noen av følgende midler daglig eller nesten daglig?
Angi hvor mange måneder du brukte dem.
Sett 0 hvis du ikke har brukt noen av midlene.

Legemidler

Smertestillende	Antall måneder ☐☐
Sovemedisin	Antall måneder ☐☐
Beroligende midler	Antall måneder ☐☐
Midler mot depresjon	Antall måneder ☐☐
Allergimedisin	Antall måneder ☐☐
Astmamedisin	Antall måneder ☐☐

Kosttilskudd

Jerntabletter	Antall måneder ☐☐
Vitamintilskudd	Antall måneder ☐☐
Tran	Antall måneder ☐☐

VENNER

Hvor mange gode venner har du? *Regn med de du kan snakke fortrolig med og som kan gi deg hjelp når du trenger det.*
Tell ikke med de du bor sammen med, men ta med andre slektninger.

Jeg har ☐☐ gode venner

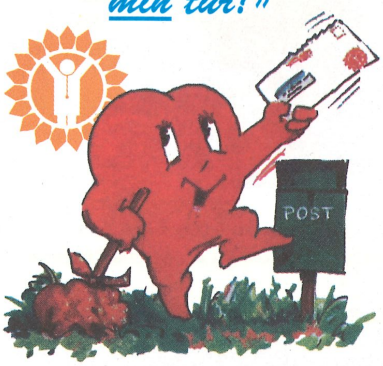
	JA	NEI
Føler du at du har nok gode venner?	☐	☐

Hvor ofte tar du vanligvis del i foreningsvirksomhet som f.eks. idrettslag, politiske lag, religiøse eller andre foreninger?

- Aldri, eller noen få ganger i året ☐
- 1-3 ganger i måneden ☐
- Omtrent en gang i uken ☐
- Mer enn en gang i uken ☐

HELSEUNDERSØKELSEN
I NORD-TRØNDELAG

«JA, nå er det min tur!»



Personlig innbydelse

Spørreskjemaet er en viktig del av Helseundersøkelsen. Her finner du spørsmål om tidligere sykdom og om andre forhold som har betydning for helsa. Vennligst fyll ut skjemaet på forhånd og ta det med til Helseundersøkelsen. Dersom enkelte spørsmål er uklare, lar du dem bare stå ubesvarte til du møter fram, og drøfter dem med personalet som gjennomfører undersøkelsen. Alle svar vil bli behandlet strengt fortrolig.

Flere steder i skjemaet ber vi deg oppgi din alder da eventuell sykdom inntrådte. Hvis du ikke husker nøyaktig hvor gammel du var, skriver du et tall som er nærmest det du antar er korrekt.

Når resultatene fra undersøkelsen foreligger, vil det være enkelte som trenger ny undersøkelse hos egen lege. Dette vil du få beskjed om i det brevet som vi sender deg om dine resultater. Samtidig sender vi melding om resultatene dine til legen din. Det er derfor om å gjøre at du i rubrikken helt til slutt i skjemaet oppgir navnet på den allmennpraktiserende lege, kommunelege eller det helsesenter som du ønsker skal ta hånd om eventuell etterundersøkelse, og som vi skal sende resultatene til.

Med vennlig hilsen

Helsetjenesten i Nord-Trøndelag • Statens helseundersøkelser • Statens Institutt for Folkehelse

DET HANDLER OM HELSA DI

Hvordan er helsa di nå?

Bare ett kryss

Dårlig	12	1
Ikke helt god		2
God		3
Svært god		4

LUFTVEGSPLAGER

Hoster du daglig i perioder av året? .....

Hvis JA:

Er hosten vanligvis ledsaget av oppspytt? .. 14

Har du hatt hoste med oppspytt i minst 3 mnd. sammenhengende i hvert av de to siste åra?

Har du hatt noe anfall med pipende eller tung pust de siste 12 måneder? 16

Har du eller har du hatt astma? 17

Har du brukt eller bruker du astmamedisiner? 20

HJERTE-KARSYKDOMMER, DIABETES

Har du, eller har du hatt:

		JA	NEI	Alder første gang
Hjerteinfarkt	21			år
Angina pectoris (hjertekrampe)	24			år
Hjerneslag/hjerneblødning	27			år
Diabetes (sukkersyke)	30			år

Hva ble resultatet siste gang du målte blodtrykket ditt?

Bare ett kryss

Begynne med/fortsette med blodtrykksmedisin	33	1
Komme til kontroll, men ikke ta blodtrykksmedisin		2
Ingen kontroll og ingen medisin nødvendig		3
Har aldri fått målt blodtrykket		4

Bruker du medisin mot høyt blodtrykk?

Bare ett kryss

Nå	34	1
Før, men ikke nå		2
Aldri brukt		3

Har en eller flere av foreldre eller søsken hatt hjerteinfarkt (sår på hjertet) eller angina pectoris (hjertekrampe)? .....

JA	NEI	VET IKKE

STOFFSKIFTE

Har du noen gang fått påvist:

		JA	NEI	Alder første gang
for høyt stoffskifte	36			år
for lavt stoffskifte	39			år
struma	42			år
annen sykdom i skjoldbruskkjertelen				år

Bruker du eller har du brukt noen av disse medisinene:

Thyroxin	48	år
Neo-Mercazole	51	år
Er du operert i skjoldbruskkjertelen		år
Har du fått radiojodbehandling	57	år

MUSKEL/SKJELETT-PLAGER

Har du i løpet av det siste året vært plaget med smerter og/eller stivhet i muskler og ledd som har vart i minst 3 måneder sammenhengende? 60

Hvis NEI, gå videre til neste side øverst.

Hvis JA, svar på følgende:

Hvor har du hatt disse plagene?

		JA	NEI
Nakke	61		
Skuldre (aksler)			
Albuer			
Håndledd, hender			
Bryst/mage	65		
Øvre del av ryggen			
Korsryggen			
Hofter			
Knær			
Ankler, føtter	70		

Hvis du har hatt plager i flere områder i minst 3 mnd. det siste året, setter du ring rundt det ja-krysset hvor plagene har vart lengst

Hvor lenge har plagene vart sammenhengende?

Svar for det området hvor plagene har vart lengst

Hvis under 1 år, oppgi antall mnd. .	71	Antall mnd.
Hvis 1 år eller mer, oppgi antall år..	73	Antall år

Har plagene redusert din arbeidsevne det siste året?

Gjelder også hjemmearbeidende. Bare ett kryss

Nei/ubetydelig	I noen grad	I betydelig grad	Vet ikke

Har du vært sykmeldt pga. disse plagene det siste året? 76

JA	NEI	IKKE I ARBEID

Har plagene ført til redusert aktivitet i fritida?

JA	NEI

Har lege noen gang sagt at du har/har hatt noen av disse sykdommene:

		JA	NEI
Beinskjørhet (osteoporose)	78		
Fibromyalgi (fibrositt/kronisk smertesyndrom)			
Leddgikt (reumatoid artritt)			
Slitasjegikt (artrose)			
Bechterews sykdom	82		
Andre langvarige skjelett- eller muskelsykdommer			

Har du noen gang hatt:

		JA	NEI	Alder *siste* gang
Lårhalsbrudd	84			år
Brudd i håndledd/underarm	87			år
Nakkesleng (whiplash)	90			år
Skade som førte til sykehusinnleggelse				år

ANDRE PLAGER

I hvilken grad har du hatt disse plagene i de siste 12 månedene?

		Ikke plaget	Litt plaget	Mye plaget
Kvalme	96	☐	☐	☐
Brystbrann/sure oppstøt		☐	☐	☐
Diaré		☐	☐	☐
Treg mage		☐	☐	☐
Hjertebank		☐	☐	☐
Åndenød	101	☐	☐	☐

ANDRE SYKDOMMER

Har du eller har du noen gang hatt:

		JA	NEI	Alder første gang
Epilepsi	102			år
Psykiske plager hvor du har søkt hjelp				år
Kreftsykdom	108			år
Annen langvarig sykdom	111			

DAGLIGE FUNKSJONER

Har du noen langvarig sykdom, skade eller lidelse av fysisk eller psykisk art som nedsetter dine funksjoner i ditt daglige liv? ... 112 JA ☐ NEI ☐

Langvarig: minst ett år

Hvis JA:

Hvor mye vil du si at dine funksjoner er nedsatt?

		Litt nedsatt	Middels nedsatt	Mye nedsatt
Er bevegelseshemmet	113	☐	☐	☐
Har nedsatt syn		☐	☐	☐
Har nedsatt hørsel		☐	☐	☐
Hemmet pga. kroppslig sykdom.		☐	☐	☐
Hemmet pga. psykiske plager...	117	☐	☐	☐

MENN fortsetter øverst neste spalte

BESVARES BARE AV KVINNER

Hvor mange barn har du født? ..... 118 Antall barn

Sett 0 hvis du ikke har født barn

Hvis du har født barn, besvar:

Hvor gammel var du da du fødte ditt første barn? ..... 120 Alder ... år

Hvor gammel var du da du fødte ditt siste barn? ..... 122 ... år

Besvares ikke hvis du har født bare ett barn

Hvor gammel var du da du fikk menstruasjon? ..... 124 ... år

Sett 0 hvis du ikke noen gang har hatt menstruasjon

Fortsett neste spalte øverst

RØYKING

Røykte noen av de voksne hjemme da du vokste opp? ..... 126 JA ☐ NEI ☐

Bor du, eller har du bodd, sammen med noen dagligrøykere etter at du fylte 20 år? ..... 127 JA ☐ NEI ☐

Hvor lenge er du vanligvis daglig til stede i røykfylt rom? ..... 128 Antall timer

Sett 0 hvis du ikke oppholder deg i røykfylt rom

Røyker du selv? JA / NEI

Sigaretter daglig? ..... 130 ☐ ☐

Sigarer/sigarillos daglig? ..... ☐ ☐

Pipe daglig? ..... 132 ☐ ☐

Aldri røykt daglig ..... *(Sett kryss)* ☐

Hvis du har røykt daglig tidligere, hvor lenge er det siden du sluttet? ..... 134 Antall år

Hvis du røyker daglig nå eller har røykt tidligere:

Hvor mange sigaretter røyker eller røykte du vanligvis daglig? ..... 136 Antall sigaretter

Hvor gammel var du da du begynte å røyke daglig? ..... 140 Alder ... år

Hvor mange år tilsammen har du røykt daglig? ..... 142 Antall år

KAFFE/TE/ALKOHOL

Hvor mange kopper kaffe/te drikker du daglig?

Sett 0 hvis du ikke drikker kaffe/te daglig

		Antall kopper
Kokekaffe	144	
Annen kaffe	146	
Te	148	

Alkohol:
Er du total avholdsmann/-kvinne? .... 150 JA ☐ NEI ☐

Hvor mange ganger i måneden drikker du vanligvis alkohol? ..... 151 Antall ganger

Regn ikke med lettøl. Sett 0 hvis mindre enn 1 gang i mnd.

Hvor mange glass øl, vin eller brennevin drikker du vanligvis i løpet av to uker?

Regn ikke med lettøl.
Sett 0 hvis du ikke drikker alkohol 153

Øl	Vin	Brennevin
glass	glass	glass

FYSISK AKTIVITET

I FRITIDA

Hvordan har din fysiske aktivitet i fritida vært det siste året? *Tenk deg et ukentlig gjennomsnitt for året.*

Arbeidsveg regnes som fritid

		Timer pr. uke: Ingen	Under 1	1-2	3 og mer
Lett aktivitet *(ikke svett/andpusten)*	159	☐	☐	☐	☐
Hard fysisk aktivitet *(svett/andpusten)*	160	☐ 1	☐ 2	☐ 3	☐ 4

UNDER ARBEID

Hvis du er i lønnet eller ulønnet arbeid:

Hvorledes vil du beskrive arbeidet ditt?

Bare ett kryss

For det meste stillesittende arbeid *(f.eks. skrivebordsarbeid, montering)* ..... 161 ☐ 1

Arbeid som krever at du går mye *(f.eks. ekspeditørarb., lett industriarb., undervisning)* ..... ☐ 2

Arbeid hvor du går og løfter mye *(f.eks. postbud, pleier, bygningsarbeid)* ..... ☐ 3

Tungt kroppsarbeid *(f.eks. skogsarbeid, tungt jordbruksarb.,tungt bygningsarb.)* ☐ 4

Bla om!

HVORLEDES FØLER DU DEG?

Har du de siste to ukene følt deg:

	Nei	Litt	En god del	Svært mye
Trygg og rolig? 162	☐	☐	☐	☐
Glad og optimistisk?	☐	☐	☐	☐
Har du følt deg:				
Nervøs og urolig?	☐	☐	☐	☐
Plaget av angst? 165	☐	☐	☐	☐
Irritabel?	☐	☐	☐	☐
Nedfor/deprimert?	☐	☐	☐	☐
Ensom? 168	☐ 1	☐ 2	☐ 3	☐ 4

Her kommer noen flere spørsmål om hvorledes du føler deg. For hvert spørsmål setter du kryss for ett av de fire svarene som best beskriver dine følelser ***den siste uka.*** *Ikke tenk for lenge på svaret - de spontane svarene er best*

Jeg gleder meg fortsatt over ting slik jeg pleide før 169
Avgjort like mye ..... ☐ 1 Bare lite grann ..... ☐ 3
Ikke fullt så mye ..... ☐ 2 Ikke i det hele tatt ..... ☐ 4

Jeg har en urofølelse som om noe forferdelig vil skje 170
Ja, og noe svært ille .... ☐ 1 Litt, bekymrer meg lite . ☐ 3
Ja, ikke så veldig ille ... ☐ 2 Ikke i det hele tatt ..... ☐ 4

Jeg kan le og se det morsomme i situasjoner 171
Like mye nå som før .... ☐ 1 Avgjort ikke som før .... ☐ 3
Ikke like mye nå som før ☐ 2 Ikke i det hele tatt ..... ☐ 4

Jeg har hodet fullt av bekymringer 172
Veldig ofte ..... ☐ 1 Av og til ..... ☐ 3
Ganske ofte ..... ☐ 2 En gang i blant ..... ☐ 4

Jeg er i godt humør 173
Aldri ..... ☐ 1 Ganske ofte ..... ☐ 3
Noen ganger ..... ☐ 2 For det meste ..... ☐ 4

Jeg kan sitte i fred og ro og kjenne meg avslappet 174
Ja, helt klart ..... ☐ 1 Ikke så ofte ..... ☐ 3
Vanligvis ..... ☐ 2 Ikke i det hele tatt ..... ☐ 4

Jeg føler meg som om alt går langsommere 175
Nesten hele tiden ..... ☐ 1 Fra tid til annen ..... ☐ 3
Svært ofte ..... ☐ 2 Ikke i det hele tatt ..... ☐ 4

Jeg føler meg urolig som om jeg har sommerfugler i magen 176
Ikke i det hele tatt ..... ☐ 1 Ganske ofte ..... ☐ 3
Fra tid til annen ..... ☐ 2 Svært ofte ..... ☐ 4

Jeg bryr meg ikke lenger om hvordan jeg ser ut 177
Ja, har sluttet å bry meg ☐ 1 Kan hende ikke nok .... ☐ 3
Ikke som jeg burde ..... ☐ 2 Bryr meg som før ..... ☐ 4

Jeg er rastløs som om jeg stadig må være aktiv 178
Uten tvil svært mye ..... ☐ 1 Ikke så veldig mye ..... ☐ 3
Ganske mye ..... ☐ 2 Ikke i det hele tatt ..... ☐ 4

Jeg ser med glede frem til hendelser og ting 179
Like mye som før ..... ☐ 1 Avgjort mindre enn før . ☐ 3
Heller mindre enn før ... ☐ 2 Nesten ikke i det hele tatt ☐ 4

Jeg kan plutselig få en følelse av panikk 180
Uten tvil svært ofte ..... ☐ 1 Ikke så veldig ofte ..... ☐ 3
Ganske ofte ..... ☐ 2 Ikke i det hele tatt ..... ☐ 4

Jeg kan glede meg over gode bøker, radio og TV 181
Ofte ..... ☐ 1 Ikke så ofte ..... ☐ 3
Fra tid til annen ..... ☐ 2 Svært sjelden ..... ☐ 4

UTDANNING

Hvilken utdanning er den høyeste du har fullført?

Grunnskole 7-10 år, framhaldsskole, folkehøgskole ..... 182 ☐ 1
Realskole, middelskole, yrkesskole, 1-2 årig videregående skole ..... ☐ 2
Artium, øk.gymnas, allmennfaglig retning i videregående skole ..... ☐ 3
Høgskole/universitet, mindre enn 4 år ..... ☐ 4
Høgskole/universitet, 4 år eller mer ..... ☐ 5

ARBEID

Hva slags arbeidssituasjon har du nå?
Ett eller flere kryss

Lønnet arbeid ..... 183 ☐
Selvstendig næringsdrivende ..... ☐
Heltids husarbeid ..... ☐
Utdanning, militærtjeneste ..... ☐
Arbeidsledig, permittert ..... ☐
Pensjonist/trygdet ..... 188 ☐

Hvor mange timer lønnet arbeid har du i uka? ..... 189 Antall timer

Har du skiftarbeid, nattarbeid eller går vakt?	JA	NEI

ALT I ALT

Når du tenker på hvordan du har det for tida, er du stort sett fornøyd med tilværelsen eller er du stort sett misfornøyd?
Bare ett kryss

Svært fornøyd ..... 192 ☐ 1
Meget fornøyd ..... ☐ 2
Ganske fornøyd ..... ☐ 3
Både/og ..... ☐ 4
Nokså misfornøyd ..... ☐ 5
Meget misfornøyd ..... ☐ 6
Svært misfornøyd ..... ☐ 7

DIN LEGE

Hvis denne helseundersøkelsen viser at du bør undersøkes nærmere, hvilken allmennpraktiserende lege/kommunelege ønsker du skal foreta undersøkelsen?

Skriv navnet på legen her: 193

	Ikke skriv her

Takk for utfyllingen!

Nok en gang:

Velkommen til undersøkelsen!

IE 332 5201 - 50.000 - 09.96

hunt
Helseundersøkelsen i Nord-Trøndelag

SKJEMA FOR KVINNER 20–69 ÅR

Takk for frammøtet til undersøkelsen!
Vi vil også be deg fylle ut dette spørreskjemaet. Opplysningene vil bli brukt i større forskningsarbeider om forebyggende helsearbeid. Noen av spørsmålene likner på spørsmål du har svart på i det skjemaet du fylte ut heime og leverte ved frammøte til helseundersøkelsen. Det er likevel viktig at du svarer på alle spørsmålene også i dette skjemaet. Det utfylte skjemaet returneres i vedlagte svarkonvolutt. Porto er betalt.
Alle opplysningene er underlagt streng taushetsplikt.

Vennlig hilsen
Helsetjenesten i Nord-Trøndelag
Statens Institutt for Folkehelse Statens helseundersøkelser

Hvis du ikke ønsker å besvare spørreskjemaet, sett kryss her og returner skjemaet. Da slipper du purring.
Jeg ønsker ikke å besvare skjemaet ○

UTFYLLING

Dato for utfylling av skjema: / 19 19

OPPVEKST

I hvilken kommune bodde du da du fylte 1 år?
Hvis du ikke bodde i Norge, oppgi ***land*** *i stedet for kommune.*

24

ARBEID

Nåværende eller tidligere arbeid:
Hva slags inntektsgivende arbeid har du og event. din ektefelle/samboer? *Hvis du/dere ikke har inntektsgivende arbeid nå: Oppgi det siste yrket.*

	Deg selv	Ektefelle/ samboer
Spesialarbeider eller ufaglært arbeider 25	☐	☐ 36
Fagarbeider, handverker, formann	☐	☐
Underordnet funksjonær (f.eks. butikk, kontor, off. tjenester)	☐	☐
Fagfunksjonær (f.eks. sykepleier, tekniker, lærer)	☐	☐
Overordnet stilling i off. eller privat virksomhet	☐	☐
Sjåfør 30	☐	☐ 41
Gårdbruker eller skogeier	☐	☐
Fisker	☐	☐
Selvstendig i akademisk erverv (f.eks. tannlege, advokat)	☐	☐
Annen selvstendig næringsvirksomhet	☐	☐
Har ikke vært i inntektsgivende arbeid 35	☐	☐ 46

Hvis du NÅ ikke har inntektsgivende arbeid eller du ikke har heltids husarbeid: Gå til BOLIG.

Har du i løpet av de siste 12 månedene hatt sykefravær:

	Ja	Nei
med egenmelding 47	☐	☐
med sykmelding fra lege 48	☐	☐

Hvis «Ja»: **Hvor lenge *tilsammen*?** *Bare ett kryss*

2 uker eller mindre 49	☐ 1
2-8 uker	☐ 2
Mer enn 8 uker	☐ 3

Har du i løpet av de siste 12 månedene vurdert å skifte yrke eller arbeidsplass? 50 Ja ☐ Nei ☐

Er arbeidet ditt så fysisk anstrengende at du ofte er sliten i kroppen etter en arbeidsdag? *Bare ett kryss* 51

Ja, nesten alltid	☐ 1	Ganske sjelden	☐ 3
Ganske ofte	☐ 2	Aldri, eller nesten aldri	☐ 4

Krever arbeidet ditt så mye konsentrasjon og oppmerksomhet at du ofte føler deg utslitt etter en arbeidsdag? 52

Ja, nesten alltid	☐ 1	Ganske sjelden	☐ 3
Ganske ofte	☐ 2	Aldri, eller nesten aldri	☐ 4

Hvordan trives du alt i alt med arbeidet ditt? 53

Veldig godt	☐ 1	Ikke særlig godt	☐ 3
Godt	☐ 2	Dårlig	☐ 4

BOLIG

Hvem bor du sammen med?
Ett kryss for hver linje og angi antall

	Ja	Nei	Antall
Ektefelle/samboer 54	☐	☐	
Andre personer over 18 år 55	☐	☐	
Personer under 18 år 58	☐	☐	

Hvor mange av barna har plass i barnehage? 61 Antall

Hvilken type bolig bor du i? *Bare ett kryss*

Enebolig/villa 63	☐ 1
Gårdsbruk	☐ 2
Blokk/terrasseleilighet	☐ 3
Rekkehus/2-4 mannsbolig	☐ 4
Annen bolig	☐ 5

Hvor stor er din boenhet? 64 kvm

	Ja	Nei
Er det heldekkende tepper i stua? 67	☐	☐
Er det heldekkende tepper på ditt soverom?	☐	☐
Er det katt i boligen? 69	☐	☐
Er det hund i boligen?	☐	☐
Er det andre pelskledde dyr eller fugler i boligen?	☐	☐

ØKONOMI

Mottar du noen av følgende *offentlige* ytelser?

	Ja	Nei
Sykepenger/sykelønn/rehabiliteringspenger 72	☐	☐
Ytelser under yrkesrettet attføring	☐	☐
Uførepensjon 74	☐	☐
Alderspensjon	☐	☐
Sosialstøtte	☐	☐
Arbeidsløshetstrygd	☐	☐
Overgangsstønad	☐	☐
Etterlattepensjon 79	☐	☐
Andre ytelser	☐	☐

Har det i løpet av det siste året hendt at husholdningen har hatt vansker med å klare de løpende utgifter til mat, transport, bolig og liknende? *Bare ett kryss* 81

Ja, ofte	☐ 1	Ja, en sjelden gang	☐ 3
Ja, av og til	☐ 2	Nei, aldri	☐ 4

VENNER

Hvor mange gode venner har du?
Regn med de du kan snakke fortrolig med og som kan gi deg god hjelp når du trenger det 82 Antall
Tell ikke med de du bor sammen med, men regn med andre slektninger

Føler du at du har mange nok gode venner? 84 Ja ☐ Nei ☐

Hvor ofte tar du vanligvis del i foreningsvirksomhet som f.eks. syklubb, idrettslag, politiske lag, religiøse eller andre foreninger? 85

Aldri, eller noen få ganger i året	☐ 1	Omtrent en gang i uka	☐ 1
1-2 ganger i måneden	☐ 2	Mer enn en gang i uka	☐ 2

DER DU BOR

Svar ut fra nærmiljøet, dvs. nabolaget/grenda:
Ett kryss for hvert spørsmål

Jeg føler et sterkt fellesskap med de som bor her 86
Helt enig ☐ 1 Delvis enig ☐ 2 Usikker ☐ 3 Delvis uenig ☐ 4 Helt uenig ☐ 5

Selv om noen tar initiativ, er det ingen som blir med på det som settes i gang her 87
Helt enig ☐ Delvis enig ☐ Usikker ☐ Delvis uenig ☐ Helt uenig ☐

Hvis jeg flytter herfra, vil jeg lengte tilbake 88
Helt enig ☐ Delvis enig ☐ Usikker ☐ Delvis uenig ☐ Helt uenig ☐

Man kan ikke stole på hverandre her 89
Helt enig ☐ Delvis enig ☐ Usikker ☐ Delvis uenig ☐ Helt uenig ☐

Når noe skal gjøres her, er det lett å få folk med 90
Helt enig ☐ Delvis enig ☐ Usikker ☐ Delvis uenig ☐ Helt uenig ☐

Det er vanskelig å få kontakt med folk her 91
Helt enig ☐ Delvis enig ☐ Usikker ☐ Delvis uenig ☐ Helt uenig ☐

Det er godt samhold her 92
Helt enig ☐ Delvis enig ☐ Usikker ☐ Delvis uenig ☐ Helt uenig ☐

Ingen orker å ta initiativ til noe lenger her 93
Helt enig ☐ Delvis enig ☐ Usikker ☐ Delvis uenig ☐ Helt uenig ☐

Folk trives godt her 94
Helt enig ☐ Delvis enig ☐ Usikker ☐ Delvis uenig ☐ Helt uenig ☐

Folk her kan ha store problemer uten at naboen vet noe 95
Helt enig ☐ Delvis enig ☐ Usikker ☐ Delvis uenig ☐ Helt uenig ☐

Det er alltid noen som tar initiativ til å løse nødvendige oppgaver her 96
Helt enig ☐ Delvis enig ☐ Usikker ☐ Delvis uenig ☐ Helt uenig ☐

Folk snakker lite med hverandre her 97
Helt enig ☐ 1 Delvis enig ☐ 2 Usikker ☐ 3 Delvis uenig ☐ 4 Helt uenig ☐ 5

SYKDOM I FAMILIEN

Kryss av for de slektningene som har eller har hatt noen av sykdommene. Kryss av for "ingen" hvis ingen av slektningene har hatt denne sykdommen: *Evt. flere kryss på hver linje*

		Mor	Far	Bror	Søster	Barn	Ingen
Hjerneslag eller hjerneblødning	98	☐	☐	☐	☐	☐	☐
Hjerteinfarkt før 60 års alder	104	☐	☐	☐	☐	☐	☐
Astma	110	☐	☐	☐	☐	☐	☐
Allergi	116	☐	☐	☐	☐	☐	☐
Kreftsykdom	122	☐	☐	☐	☐	☐	☐
Høyt blodtrykk	128	☐	☐	☐	☐	☐	☐
Psykiske plager	134	☐	☐	☐	☐	☐	☐
Osteoporose (benskjørhet)	140	☐	☐	☐	☐	☐	☐
Diabetes (sukkersyke)	146	☐	☐	☐	☐	☐	☐
Alder da de fikk diabetes	152	år	år	år	år	år	

Har du *selv* høysnue eller neseallergi? 162 Ja ☐ Nei ☐

BRUK AV HELSETJENESTER

Har du i løpet av de siste 12 månedene vært hos:
Ett kryss på hver linje

		Ja	Nei
allmennpraktiserende lege (kommunelege, privatpraktiserende lege, turnuskandidat)	163	☐	☐
bedriftslege		☐	☐
lege ved sykehus (uten at du var innlagt)		☐	☐
annen lege		☐	☐
fysioterapeut		☐	☐
kiropraktor		☐	☐
homøopat	169	☐	☐
annen behandler (naturmedisiner, fotsoneterapeut, håndspålegger, "healer", "synsk", e.l.)		☐	☐

Har du vært innlagt i sykehus de siste 5 åra? 171 Ja ☐ Nei ☐

ALKOHOL

Hvis du er totalavholdskvinne: Gå til KOSTHOLD.

Ett kryss for hver spørsmål

		Ja	Nei
Har du noen gang følt at du burde redusere alkoholforbruket ditt?	172	☐	☐
Har andre noen gang kritisert alkoholbruken din?	173	☐	☐
Har du noen gang følt ubehag eller skyldfølelse pga. alkoholbruken din?	174	☐	☐
Har det å ta en drink noen gang vært det første du har gjort om morgenen for å roe nervene, kurere bakrus eller som en oppkvikker?	175	☐	☐

KOSTHOLD

Hvor mange måltider spiser du vanligvis daglig (middag og brødmåltid)? 176 — Antall: ☐

Hvor mange dager i uka spiser du varm middag? — Antall: ☐

Hva slags type brød (kjøpt eller hjemmebakt) spiser du vanligvis? *Inntil to kryss*

Brødtypen ligner mest på		Loff	Fint brød	Kneipp-brød	Grov-brød	Knekke-brød
	178	☐	☐	☐	☐	☐

Hva slags *fett* blir vanligvis brukt i din husholdning?

Ett kryss for matlaging og ett kryss for brød	*Til matlaging*	*På brød*
Bruker *ikke* smør eller margarin	183 ☐ 1	184 ☐ 1
Meierismør	☐ 2	☐ 2
Hard margarin	☐ 3	☐ 3
Bløt (soft) margarin	☐ 4	☐ 4
Smør/margarin blanding	☐ 5	☐ 5
Lettmargarin	☐ 6	☐ 6
Oljer	☐ 7	

MEDISINBRUK

Har du i deler av de siste 12 måneder brukt noen medisiner daglig eller nesten daglig? 185 Ja ☐ Nei ☐

Hvis «Ja»:
Angi hvor mange måneder du brukte følgende medisiner: *Sett 0 hvis du ikke har brukt medisinene*

		Antall mndr.			Antall mndr.
smertestillende	186		hjertemedisin (ikke blodtrykksmedisin)		
sovemedisin	188		annen medisin		
beroligende medisin			*Kosttilskudd:*		
medisin mot depresjon			jerntabletter	202	
allergimedisin	194		vitamintilskudd		
astmamedisin	196		tran/fiskeoljer	206	

Hvor ofte har du brukt avslappende/beroligende medisin eller sovemedisin den siste måneden? 208

Daglig ☐ 1 Sjeldnere enn hver uke ☐ 3
Hver uke, men ikke hver dag ☐ 2 Aldri ☐ 4

HODEPINE

Har du vært plaget av hodepine i løpet av de siste 12 måneder? 209

Ja, anfallsvis (migrene)..... ☐ 1
Ja, annen slags hodepine.... ☐ 2
Nei ..... ☐ 3

Antall anfall siste 12 mndr. 210 ☐

Hvis «Nei»: Gå til MUSKEL-/SKJELETTPLAGER

Omtrent hvor mange dager i pr. måned har du hodepine?
Mindre enn 7 dager ☐ 1 7 til 14 dager ☐ 2 Mer enn 14 d. ☐ 3

Hvor lenge varer hodepinen vanligvis hver gang? 213
Mindre enn 4 timer ☐ 1 4 timer–3 døgn ☐ 2 Mer enn 3 døgn ☐ 3

Hvor ofte er hodepinen preget av eller ledsaget av:

Ett kryss på hver linje	*Sjelden eller aldri*	*Av og til*	*Ofte*
bankende/dunkende smerte 214	☐	☐	☐
pressende smerte	☐	☐	☐
halvsidighet, alltid samme side	☐	☐	☐
halvsidighet, vekselvis h. og v. side	☐	☐	☐
smerter i «hele hodet»	☐	☐	☐
kvalme 219	☐	☐	☐
lys- og/eller lydskyhet	☐	☐	☐
forverring ved fysisk aktivitet.....	☐	☐	☐
synsforstyrrelser *før* hodepine 222	☐	☐	☐

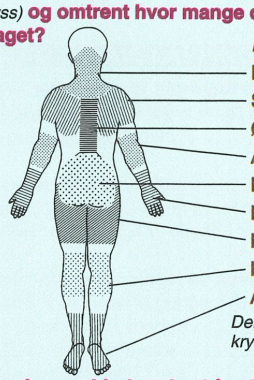
Hvor mange tabletter/stikkpiller har du eventuelt brukt av disse medisinene *alt i alt i løpet av den siste måneden*?
Skriv 0 hvis du ikke har brukt medisinen.

Cafergot 223 ☐ Anervan 225 ☐ Imigran 227 ☐

MUSKEL-/SKJELETTPLAGER

Har du hatt plager (smerter, verk, ubehag) i muskler og/eller ledd i *den siste måneden*? 229 Ja ☐ Nei ☐

Hvis «Ja»: **Hvor har du hatt disse plagene** *(ett eller flere kryss)* **og omtrent hvor mange dager tilsammen var du plaget?**



Plager (Sett kryss)	Antall dager
Nakke 230	☐
Skuldre/aksler.....233	☐
Øvre del av ryggen	☐
Albuer 239	☐
Korsryggen 242	☐
Handledd/hender 245	☐
Hofter.....248	☐
Knær.....251	☐
Ankler/føtter 254	☐

*Dersom flere kryss: Sett **ring** rundt krysset **der plagen var verst***

Har plagene hindret deg i å utføre daglige aktiviteter den siste måneden?

	Ja	*Nei*
I arbeidet.....257	☐	☐
I fritida 258	☐	☐

SMERTER I BEINA

	Ja	*Nei*
Har du sår på tå, fot eller ankel som ikke vil gro? 259	☐	☐
Har du smerter i det ene eller i begge beina når du går? 260	☐	☐
Har du oppsøkt lege p.g.a. smerter i beina? 261	☐	☐

Hvis «NEI» på disse spørsmålene: Gå til MENSTRUASJON

	Ja	*Nei*
Kan du gå lenger enn 50 meter? 262	☐	☐
Forsvinner smerten når du står stille en stund? 263	☐	☐
Må du sette deg for at smerten skal gå over? 264	☐	☐

Hvor gjør det mest vondt? *Ett kryss* 265

Fot ☐ Legg ☐ Lår ☐ Hofte ☐

	Ja	*Nei*
Har du smerter i beina når du er i ro? 266	☐	☐
Er smertene verst når du ligger i senga? 267	☐	☐
Blir søvnen forstyrret av smertene? 268	☐	☐
Får du mindre vondt når beinet ligger høyt? 269	☐	☐
Får du mindre vondt når beinet ligger lavt, f.eks. om beinet henger utfor sengekanten? 270	☐	☐
Bedres smertene når du står opp og går litt? 271	☐	☐

MENSTRUASJON

	Ja	*Nei*
Har du menstruasjon fremdeles?..... 272	☐	☐

Hvis «Nei»: **Hvor gammel var du da den sluttet?** 273 ☐ år

	Ja	*Nei*	*Vet ikke*
Er du gravid nå? 275	☐	☐	☐

	Ja	*Nei*
Har du innsatt spiral nå? 276	☐	☐

Når hadde du siste menstruasjon? ..... 277 *Dag Måned År* ☐☐ ☐☐ ☐☐☐☐
Husker du ikke dag, bare angi måned og år, husker du bare år, angi år.

Menstruasjonen din de siste 12 måneder:

Har du det siste året hatt regelmessige menstruasjoner?
At menstruasjonen har vart omtrent like lenge hver gang med omtrent like lange mellomrom 283

Ja	*Nei*	*Usikker*
☐	☐	☐

Hvor mange dager hadde du blødning siste gang du hadde menstruasjon? ..... 284 *Antall dager* ☐☐

Hvor mange dager var du uten blødning mellom nest siste og siste menstruasjon? ... 286 *Antall dager* ☐☐

	Ja	*Nei*
Har menstruasjonen din det siste året uteblitt i mer enn 3 måneder uten at du var gravid? 289	☐	☐

Hvis «Ja»: **Hvor mange måneder i trekk har du vært uten menstruasjonsblødninger?** ..... 290 *Antall mndr.* ☐☐

	Ja	*Nei*
Hvis «Ja»: **Oppsøkte du lege?** 292	☐	☐

Menstruasjonen tidligere (dvs. før de siste 12 månedene):

	Ja	*Nei*
Har menstruasjonen din tidligere uteblitt uten at du var gravid? 293	☐	☐

Hvis «Ja»: **Hvor lenge og hvor ofte var den borte sammenhengende?** *Sett kryss eventuelt flere steder*

	1 gang	*2 ganger*	*Oftere*
3–6 måneder..... 294	☐	☐	☐
6–12 måneder.....	☐	☐	☐
Over ett år..... 296	☐	☐	☐

OPERASJONER I UNDERLIVET

	Ja	Nei	Vet ikke
Har du noen gang blitt operert i underlivet? 297	☐	☐	☐

Hvis «Ja»: Kryss av for hver operasjon:

	Ja	Nei	Vet ikke
Fjernet deler av eller bare én eggstokk 298	☐	☐	☐
Fjernet begge eggstokkene (totalt) 299	☐	☐	☐

Hvis du har fjernet begge eggstokkene, hvor gammel var du da? 300 ____ år

	Ja	Nei	Vet ikke
Operert for endometriose 302	☐	☐	☐
Sterilisert	☐	☐	☐
Utskraping fra livmor (sykehus)	☐	☐	☐
Fjernet hele livmoren 305	☐	☐	☐

Hvis du har fjernet hele livmoren, hvor gammel var du da? 306 ____ år

P-PILLER

	Ja	Nei
Har du noen gang brukt p-piller, minipiller inkludert? 308	☐	☐

Hvis «Ja»: Hvor gammel var du første gang du brukte p-piller? 309 ____ år

Hvor lenge har du brukt p-piller i alt? 311 ____ år

Hvis under ett år, antall måneder 313 ____ mndr.

	Ja	Nei
Bruker du p-piller nå?	☐	☐

Hvilket merke bruker du? 316 ____

HORMONBEHANDLING

Utenom p-piller

Har du noen gang brukt medisiner som inneholder østrogen? Vanlige navn på slike medisiner er: Cyclabil, Estraderm, Kilogest, Ovesterin, Progynova, Trisekvens.

	Nå	Før	Aldri
Tabletter eller plaster 318	☐	☐	☐
Krem eller stikkpiller 319	☐	☐	☐

Hvis «Ja»: Hvor gammel var du første gang du fikk østrogenmedisin, og omtrent hvor mange år brukte du slik medisin?

	Din alder	Antall år
Tabletter eller plaster 320		
Krem eller stikkpiller 324		

Hvis du bruker østrogenmedisin nå, hvilket merke bruker du? 328 ____

PROBLEMER MED Å BLI GRAVID

	Ja	Nei
Har du noen gang prøvd i mer enn ett år å bli gravid? 329	☐	☐

Hvis «Ja»: Hvor gammel var du første gang du hadde problemer med å bli gravid? 330 ____ år

	Ja	Nei
Har du noen gang oppsøkt lege fordi du hadde problemer med å bli gravid? 332	☐	☐

GRAVIDITETER, FØDSLER OG AMMING

Hvor mange ganger har du vært gravid totalt?
*Regn med **alle** svangerskap, spontane eller selvbestemte aborter, så vel som fødsler (også dødfødsler)* 333 ____ ganger

Hvor mange barn har du født? 335 ____ barn

Fyll ut for hvert barn (de første 7) opplysninger om fødselsår og omtrent antall måneder du ammet hvert barn og antall måneder menstruasjonen din var borte etter fødselen (fylles ut også for dødfødte eller for barn som er døde senere i livet).

Barn	Fødselsår	Antall måneder med amming	Antall blødningsfrie måneder
1	336 19		
2	342 19		
3	348 19		
4	354 19		
5	360 19		
6	366 19		
7	372 19		

URINLEKKASJE

	Ja	Nei
Har du ufrivillig urinlekkasje? 378	☐	☐

Hvis «Nei»: Gå til KALK I KOSTEN ...

Hvor ofte har du urinlekkasje? 379
- sjeldnere enn en gang pr. måned ☐
- en eller flere ganger pr. måned ☐
- en eller flere ganger pr. uke ☐
- hver dag og/eller natt ☐

Hvor mye urin lekker du vanligvis hver gang? 380
dråper eller lite ☐ små skvetter ☐ større mengder ☐

	Ja	Nei
Har du lekkasje av urin i forbindelse med hosting, nysing, latter, tunge løft 381	☐	☐
Har du lekkasje av urin i forbindelse med plutselig og sterk vannlatingstrang? 382	☐	☐

Hvor lenge har du hatt urinlekkasje? 383
0-5 år ☐ 5-10 år ☐ Over 10 år ☐

	Ja	Nei
Har du søkt lege på grunn av urinlekkasje? 384	☐	☐

Hvordan opplever du lekkasjeplagene dine? 385 *Ett kryss*
- ikke noe problem ☐
- en liten plage ☐
- en del plaget ☐
- mye plaget ☐
- svært stort problem ☐

KALK I KOSTEN OG KOSTTILSKUDD

Hvor mange glass melk (alle sorter, også drikkeyoghurt) drikker du vanligvis daglig? *Bare ett kryss* 386
- Ingen ☐ 1
- Mindre enn ett ... ☐ 2
- 1–2 glass ..... ☐ 3
- 3 eller mer .... ☐ 4

Hvor mange brødskiver med kvitost spiser du vanligvis daglig? *Bare ett kryss*
- Ingen ☐ 1
- Mindre enn en ... ☐ 2
- 1–2 skiver .... ☐ 3
- 3 eller mer ... ☐ 4

Bruker du vanligvis noen av disse kosttilskuddene?

	Ja	Nei
vitamin D-tilskudd 388	☐	☐
kalktabletter eller benmel	☐	☐

HUMØR OG TRIVSEL

Ett kryss på hver linje

Angi hvordan du har følt deg den siste måneden:

	Aldri	*Noen ganger*	*Ganske ofte*	*For det meste*
i godt humør 390	☐	☐	☐	☐
i dårlig humør 391	☐	☐	☐	☐

Er du rask til å oppfatte et humoristisk poeng? 392

Svært treg	*Ganske treg*	*Ganske rask*	*Svært rask*
☐	☐	☐	☐

Er du enig i at det er noe ansvarsløst over folk som stadig prøver å være morsomme? 393

☐1 Nei, slett ikke ☐2 I noen grad ☐3 Ganske enig ☐4 Ja, absolutt

Er du en munter person? 394

☐1 Nei, slett ikke ☐2 I noen grad ☐3 Ganske munter ☐4 Ja, absolutt

SINNE

Sett kryss på det svaret som best beskriver deg i forhold til de to påstandene nedenfor:

Jeg gir uttrykk for mitt sinne, og andre mennesker vet at jeg er sint 395

☐1 Nesten aldri ☐2 Noen ganger ☐3 Ganske ofte ☐4 Nesten alltid

Jeg koker av sinne, men jeg viser det ikke til andre 396

☐1 Nesten aldri ☐2 Noen ganger ☐3 Ganske ofte ☐4 Nesten alltid

HVILE OG AVSLAPPING

Hvor mange timer tilbringer du *vanligvis* i *liggende* stilling i løpet av et døgn?
(nattesøvn, middagshvil) 397

Antall timer

Hvor mange timer tilbringer du *vanligvis* i *sittende* stilling i løpet av et døgn?
(arbeid, måltider, TV, bil etc.) 399

Antall timer

Hvor ofte er du plaget av søvnløshet? 401

☐1 Aldri, eller noen få ganger i året
☐2 1–2 ganger i måneden
☐3 Omtrent 1 gang i uka
☐4 Mer enn en gang i uka

Har du siste år vært plaget av søvnløshet slik at det har gått ut over arbeidsevnen? ....402 ☐ *Ja* ☐ *Nei*

Har du i løpet av siste måned hatt innsovningsproblemer? *Bare ett kryss* 403

☐1 Nesten hver natt ☐2 Ofte ☐3 Av og til ☐4 Aldri

Har du i løpet av siste måned våknet for tidlig og ikke fått sove igjen? *Bare ett kryss* 404

☐1 Nesten hver natt ☐2 Ofte ☐3 Av og til ☐4 Aldri

Har du i løpet av siste måned vært plaget av nervøsitet (irritabel, urolig, anspent eller rastløs)? 405

☐1 Nesten hele tida
☐2 Ofte
☐3 Av og til
☐4 Aldri

HVORDAN DU HAR HATT DET

Har det noen gang i løpet av ditt liv vært *sammenhengende perioder på 2 uker eller mer* da du:

	Ja	*Nei*
følte deg deprimert, trist og nedfor 406	☐	☐
hadde problemer med matlysten eller spiste alt for lite	☐	☐
var plaget av kraftløshet eller mangel på overskudd	☐	☐
virkelig bebreidet deg selv og følte deg verdiløs ...	☐	☐
hadde problemer med å konsentrere deg eller vanskelig for å ta beslutninger	☐	☐
hadde minst tre av de problemene som er nevnt ovenfor samtidig....411	☐	☐

HVORDAN DU SER PÅ DEG SELV

Folk ser på seg selv på ulike måter. Kryss av for hvert utsagn hvor enig eller uenig du er. *Ett kryss på hver linje*

	Svært enig	*Enig*	*Uenig*	*Svært uenig*
Jeg har en positiv holdning til meg selv 412	☐	☐	☐	☐
Jeg føler meg virkelig ubrukelig til tider 413	☐	☐	☐	☐
Jeg føler at jeg ikke har mye å være stolt av 414	☐	☐	☐	☐
Jeg føler at jeg er en verdifull person, i allefall på lik linje med andre 415	☐	☐	☐	☐

	Ja	*Nei*
Synes du at du har funnet et virkelig betydningsfullt innhold i livet ditt? 416	☐	☐
Føler du at du lever fullt ut? 417	☐	☐

HVORDAN DU FØLER DEG NÅ

*Sett kryss i den ruta utenfor det svaret som best beskriver dine følelser **den siste uka.** Bare ett kryss*

Er du vanligvis glad eller nedstemt? 418

☐1 Svært nedstemt
☐2 Nedstemt
☐3 Nokså nedstemt
☐4 Både – og
☐5 Nokså glad
☐6 Glad
☐7 Svært glad

Har du i det store og hele en rolig og god følelse inne i deg? 419

☐1 Nesten hele tida
☐2 Ofte
☐3 Av og til
☐4 Aldri

Føler du deg stort sett sterk og opplagt, eller trøtt og sliten? 420

☐1 Meget sterk og opplagt
☐2 Sterk og opplagt
☐3 Ganske sterk og opplagt
☐4 Både – og
☐5 Ganske trøtt og sliten
☐6 Trøtt og sliten
☐7 Svært trøtt og sliten

Legg det utfylte spørreskjemaet i den vedlagte svarkonvolutten og postlegg den så snart som mulig!
Porto er betalt.

Hjertelig takk for hjelpa!

Steinkjer Trykkeri AS – 74 16 30 00

hunt
Helseundersøkelsen i Nord-Trøndelag

SKJEMA FOR KVINNER 70 ÅR OG ELDRE

Takk for frammøtet til undersøkelsen!
Vi vil også be deg fylle ut dette spørreskjemaet. Opplysningene vil bli brukt i større forskningsarbeider om forebyggende helsearbeid. Noen av spørsmålene likner på spørsmål du har svart på i det skjemaet du fylte ut heime og leverte ved frammøte til helseundersøkelsen. Det er likevel viktig at du svarer på alle spørsmålene også i dette skjemaet. Det utfylte skjemaet returneres i vedlagte svarkonvolutt. Porto er betalt.
Alle opplysningene er underlagt streng taushetsplikt.

Vennlig hilsen
Helsetjenesten i Nord-Trøndelag
Statens Institutt for Folkehelse Statens helseundersøkelser

Hvis du ikke ønsker å besvare spørreskjemaet, sett kryss her og returner skjemaet. Da slipper du purring.
Jeg ønsker ikke å besvare skjemaet ○

UTFYLLING

Dato for utfylling av skjema: / 19 19

OPPVEKST

I hvilken kommune bodde du da du fylte 1 år?
Hvis du ikke bodde i Norge, oppgi ***land*** *i stedet for kommune*

24

BOLIG

Hvilken type bolig bor du i? *Bare ett kryss*

Enebolig/villa	25	1
Gårdsbruk		2
Blokk/terrasseleilighet		3
Rekkehus/2-4 mannsbolig		4
Trygdebolig/aldersbolig/servicebolig		5
Sykeheim/aldersheim		6
Annen bolig		7

Hvor stor er din boenhet? 26 kvm

	Ja	Nei
Er det heldekkende tepper i stua? 29		
Er det heldekkende tepper på ditt soverom?		
Er det katt i boligen? 31		
Er det hund i boligen?		
Er det andre pelskledde dyr eller fugler i boligen?		

Hvem bor du sammen med? *Ett eller flere kryss*

Ektefelle/samboer	34	Søster/bror	37
Barn/svigerbarn		Annen familie/slekt	
Bor alene	36	Andre	39

SYKDOM I FAMILIEN

Kryss av for de slektningene som har eller har hatt noen av sykdommene. Kryss av for "ingen" hvis ingen av slektningene har hatt denne sykdommen. *Evt. flere kryss på hver linje*

		Mor	Far	Bror	Søster	Barn	Ingen
Hjerneslag eller hjerneblødning	40						
Hjerteinfarkt før 60 års alder	46						
Astma	52						
Allergi	58						
Kreftsykdom	64						
Høyt blodtrykk	70						
Psykiske plager	76						
Osteoporose (benskjørhet)	82						
Diabetes (sukkersyke)	88						
Alder da de fikk diabetes	94	år	år	år	år	år	

		Ja	Nei
Har du *selv* høysnue eller neseallergi?	104		

SIVILSTAND

Hva er din sivilstand? 105

Gift	1	Enke	3
Skilt/separert	2	Har aldri vært gift	4

BRUK AV HELSETJENESTER

Har du i løpet av de siste 12 månedene vært hos:

Ett kryss på hver linje		Ja	Nei
allmennpraktiserende lege (kommunelege, privatpraktiserende lege, turnuskandidat)	106		
lege ved sykehus (uten at du var innlagt)			
annen lege			
fysioterapeut			
kiropraktor			
homøopat	111		
annen behandler (naturmedisiner, fotsoneterapeut, håndspålegger, "healer", "synsk", e.l.)			

SYKEHUS

		Ja	Nei
Har du vært innlagt i sykehus de siste 5 åra?	113		

Hvis «Ja»: Svar ut fra siste gang du var innlagt

Synes du at du ble utskrevet for tidlig, i passe tid eller for seint? 114

For tidlig	
I passe tid	
For seint	

Hvor ble du utskrevet til? 115

Heim	
Kuropphold	
Sykeheim	

		Ja	Nei
Fikk du tilstrekkelig hjelp og oppfølging etter utskrivingen?	116		

HEIMEHJELP

Har du heimehjelp?		Ja	Nei
Privat	117		
Kommunal	118		

Dersom du har KOMMUNAL heimehjelp: **Har du nok kommunal heimehjelp, eller trenger du mer?** 119

Ja, jeg har nok	
Nei, jeg trenger mer	

I tilfelle du IKKE har kommunal heimehjelp:		Ja	Nei
Trenger du kommunal heimehjelp?	120		

HEIMESYKEPLEIE

Ja Nei

Har du heimesykepleie? ..... 121 ☐ ☐

Hvis «Ja»:

Har du nok heimesykepleie, eller trenger du mer?

- Ja, jeg har nok ..... ☐
- Nei, jeg trenger mer ..... ☐

SYKEHEIM

Har du vært innlagt på sykeheim i løpet av de siste 12 månedene? 123

- Nei ..... ☐
- Ja, jeg har vært der en periode ..... ☐
- Ja, jeg bor der fast ..... ☐

Hvis «Nei», kan du hoppe over de neste to spørsmålene

Hvis «Ja»:

Hvor var du FØR du ble innlagt på sykeheimen siste gang? 124

- Bodde i egen heim ..... ☐
- Var innlagt i sykehus ..... ☐
- Var annet sted ..... ☐

Hvis du har vært på sykeheimen EN PERIODE i løpet av de siste 12 mndr.:

Bodde du på sykeheimen passe lenge? 125

- Det var for kort tid ..... ☐
- Passe tid ..... ☐
- Det var for lang tid ..... ☐

KOMMUNAL HJELP ALT I ALT

Hvordan er du alt i alt fornøyd med hjelpa du får fra kommunen? 126

- Meget fornøyd ..... ☐ 1
- Nokså fornøyd ..... ☐ 2
- Nokså misfornøyd .. ☐ 3
- Meget misfornøyd .. ☐ 4
- Jeg får ingen hjelp, men burde ha hatt det ..... ☐ 5
- Jeg får ingen hjelp, og trenger det ikke ..... ☐ 6

KOSTHOLD

Hvor mange måltider spiser du vanligvis daglig (middag og brødmåltid)? ..... 127 — Antall

Hvor mange dager i uka spiser du varm middag? — Antall

Hva slags type brød (kjøpt eller hjemmebakt) spiser du vanligvis? *Inntil to kryss*

Brødtypen ligner mest på 129	*Loff*	*Fint brød*	*Kneipp-brød*	*Grov-brød*	*Knekke-brød*
	☐	☐	☐	☐	☐

Hva slags *fett* blir vanligvis brukt i din husholdning?

Ett kryss for matlaging og ett kryss for brød

	Til matlaging	*På brød*
Bruker *ikke* smør eller margarin	134 ☐ 1	135 ☐ 1
Meierismør	☐ 2	☐ 2
Hard margarin	☐ 3	☐ 3
Bløt (soft) margarin	☐ 4	☐ 4
Smør/margarin blanding	☐ 5	☐ 5
Lettmargarin	☐ 6	☐ 6
Oljer	☐ 7	

Hvor mange glass melk (alle sorter, også drikkeyoghurt) drikker du vanligvis daglig? *Bare ett kryss* 136

- Ingen ..... ☐ 1
- Mindre enn ett ..... ☐ 2
- 1–2 glass ..... ☐ 3
- 3 eller mer ..... ☐ 4

Hvor mange brødskiver med kvitost spiser du vanligvis daglig? *Bare ett kryss* 137

- Ingen ..... ☐ 1
- Mindre enn en ..... ☐ 2
- 1–2 skiver ..... ☐ 3
- 3 eller mer ..... ☐ 4

HVILE OG AVSLAPPING

Hvor mange timer tilbringer du *vanligvis* i *liggende* stilling i løpet av et døgn? (nattesøvn, middagshvil) ..... 138 — Antall timer

Hvor mange timer tilbringer du *vanligvis* i *sittende* stilling i løpet av et døgn? (arbeid, måltider, TV, bil etc.) ..... 140 — Antall timer

Har du i løpet av siste måned hatt innsovningsproblemer? *Bare ett kryss* 142

- Nesten hver natt ..... ☐ 1
- Ofte ..... ☐ 2
- Av og til ..... ☐ 3
- Aldri ..... ☐ 4

Har du i løpet av siste måned våknet for tidlig og ikke fått sove igjen? *Bare ett kryss* 143

- Nesten hver natt ..... ☐ 1
- Ofte ..... ☐ 2
- Av og til ..... ☐ 3
- Aldri ..... ☐ 4

MEDISINBRUK

Ja Nei

Har du i deler av de siste 12 måneder brukt noen medisiner daglig eller nesten daglig? ..... 144 ☐ ☐

Hvis "Ja":

Angi hvor mange måneder du brukte følgende medisiner: *Sett 0 hvis du ikke har brukt medisinene*

	Antall mndr.		Antall mndr.
smertestillende 145		hjertemedisin (ikke blodtrykksmedisin)	
sovemedisin 147		annen medisin	
beroligende medisin		*Kosttilskudd:*	
medisin mot depresjon		jerntabletter 161	
allergimedisin 153		vitamin D-tilskudd	
astmamedisin 155		andre vitamintilskudd	
		tran/fiskeoljer 167	

Hvor ofte har du brukt avslappende/beroligende medisin eller sovemedisin den siste måneden? 169

- Daglig ..... ☐ 1
- Hver uke, men ikke hver dag ☐ 2
- Sjeldnere enn hver uke ☐ 3
- Aldri ..... ☐ 4

VENNER

Hvor mange gode venner har du? Regn med de du kan snakke fortrolig med og som kan gi deg god hjelp når du trenger det ..... 170 — Antall

Tell ikke med de du bor sammen med, men regn med andre slektninger

Ja Nei

Føler du at du har mange nok gode venner? .... 172 ☐ ☐

Hvor ofte tar du vanligvis del i foreningsvirksomhet som f.eks. syklubb, eldresenter, pensjonistforening, politiske lag, religiøse eller andre foreninger? *Bare ett kryss* 173

Aldri, eller noen få ganger i året ..... ☐1 Omtrent en gang i uka ... ☐3
1–2 ganger i måneden ... ☐2 Mer enn en gang i uka ... ☐4

HUMØR OG TRIVSEL

Ett kryss på hver linje

Angi hvordan du har følt deg den siste måneden:	*Aldri*	*Noen ganger*	*Ganske ofte*	*For det meste*
i godt humør 174	☐	☐	☐	☐
i dårlig humør 175	☐	☐	☐	☐

Er du rask til å oppfatte et humoristisk poeng? 176	*Svært treg*	*Ganske treg*	*Ganske rask*	*Svært rask*
	☐	☐	☐	☐

Er du enig i at det er noe ansvarsløst over folk som stadig prøver å være morsomme? 177

Nei, slett ikke ..... ☐1 Ganske enig ..... ☐3
I noen grad ..... ☐2 Ja, absolutt ..... ☐4

Er du en munter person? 178

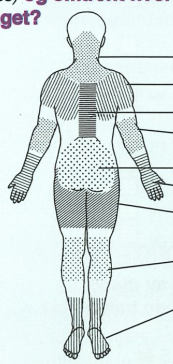
Nei, slett ikke ..... ☐1 Ganske munter ..... ☐3
I noen grad ..... ☐2 Ja, absolutt ..... ☐4

MUSKEL-/SKJELETTPLAGER

Har du hatt plager (smerter, verk, ubehag) i muskler og/eller ledd i *den siste måneden*? 179	*Ja*	*Nei*
	☐	☐

Hvis «Nei»: Gå til HODEPINE

Hvis «Ja»: Hvor har du hatt disse plagene *(ett eller flere kryss)* **og omtrent hvor mange dager tilsammen var du plaget?**



Plager (Sett kryss)		Antall dager
Nakke	180	
Skuldre/aksler	183	
Øvre del av ryggen		
Albuer	189	
Korsryggen	192	
Handledd/hender		
Hofter	198	
Knær	201	
Ankler/føtter	204	

Dersom flere kryss: Sett ***ring*** *rundt krysset* ***der plagen var verst***

Har plagene hindret deg i å utføre daglige aktiviteter den siste måneden? 207	*Ja*	*Nei*
	☐	☐

HODEPINE

Har du vært plaget av hodepine i løpet av de siste 12 måneder? 208

Ja, anfallsvis (migrene) ..... 1 ☐
Ja, annen slags hodepine .. 2 ☐
Nei ..... 3 ☐

Antall anfall siste 12 mndr. 209 ☐☐☐

Hvis «Nei»: Gå til URINLEKKASJE

Omtrent hvor mange dager pr. måned har du hodepine?

Mindre enn 7 dager ☐1 7 til 14 dager ☐2 Mer enn 14 d. ☐3

Hvor lenge varer hodepinen vanligvis hver gang? 212

Mindre enn 4 timer ☐1 4 timer–3 døgn ☐2 Mer enn 3 døgn ☐3

Hvor ofte er hodepinen preget av eller ledsaget av:

Ett kryss på hver linje

	Sjelden eller aldri	*Av og til*	*Ofte*
bankende/dunkende smerte 213	☐	☐	☐
pressende smerte	☐	☐	☐
halvsidighet, alltid samme side	☐	☐	☐
halvsidighet, vekselvis h. og v. side	☐	☐	☐
smerter i «hele hodet»	☐	☐	☐
kvalme 218	☐	☐	☐
lys- og/eller lydskyhet	☐	☐	☐
forverring ved fysisk aktivitet	☐	☐	☐
synsforstyrrelser *før* hodepine 221	☐	☐	☐

Hvor mange tabletter/stikkpiller har du eventuelt brukt av disse medisinene *alt i alt i løpet av den siste måneden*?

Skriv 0 hvis du ikke har brukt medisinen.

Cafergot 222 ☐☐ Anervan 224 ☐☐ Imigran 226 ☐☐

URINLEKKASJE

Har du ufrivillig urinlekkasje? 228	*Ja*	*Nei*
	☐	☐

Hvis «Nei»: Gå til MENSTRUASJON OG OVERGANG...

Hvor ofte har du urinlekkasje? 229

sjeldnere enn en gang pr. måned ..... ☐
en eller flere ganger pr. måned ..... ☐
en eller flere ganger pr. uke ..... ☐
hver dag og/eller natt ..... ☐

Hvor mye urin lekker du vanligvis hver gang? 230

dråper eller lite ☐ små skvetter ☐ større mengder ☐

Har du lekkasje av urin i forbindelse med hosting, nysing, latter, tunge løft 231	*Ja*	*Nei*
	☐	☐

Har du lekkasje av urin i forbindelse med plutselig og sterk vannlatingstrang? 232	*Ja*	*Nei*
	☐	☐

Hvor lenge har du hatt urinlekkasje? 233

0-5 år ☐ 5-10 år ☐ Over 10 år ☐

Har du søkt lege på grunn av urinlekkasje? 234	*Ja*	*Nei*
	☐	☐

Hvordan opplever du lekkasjeplagene dine? 235 *Ett kryss*

ikke noe problem ☐ mye plaget ☐
en liten plage ☐ svært stort problem ☐
en del plaget ☐

MENSTRUASJON OG OVERGANGSALDER

Hvor gammel var du da menstruasjonen sluttet? ☐☐ år

HORMONBEHANDLING

Utenom p-piller

Har du noen gang brukt medisiner som inneholder østrogen? Vanlige navn på slike medisiner er: Cyclabil, Estraderm, Kilogest, Ovesterin, Progynova, Trisekvens.

	Nå	*Før*	*Aldri*
Tabletter eller plaster 238	☐	☐	☐
Krem eller stikkpiller 239	☐	☐	☐

Hvis «Ja»: Hvor gammel var du første gang du fikk østrogenmedisin, og omtrent hvor mange år brukte du slik medisin?

	Din alder	*Antall år*
Tabletter eller plaster 240	☐☐	☐☐
Krem eller stikkpiller 244	☐☐	☐☐

Hvis du bruker østrogenmedisin nå, hvilket merke bruker du? 248 ☐☐☐☐☐☐☐☐☐☐

OPERASJONER I UNDERLIVET

	Ja	Nei	Vet ikke
Har du fått fjernet begge eggstokkene (totalt)? 249	☐	☐	☐

Hvis du har fjernet begge eggstokkene, hvor gammel var du da? 250 ___ år

	Ja	Nei	Vet ikke
Har du fått fjernet hele livmoren? 252	☐	☐	☐

Hvis du har fjernet hele livmoren, hvor gammel var du da? 253 ___ år

GRAVIDITETER, FØDSLER OG AMMING

Hvor mange ganger har du vært gravid totalt?
*Regn med **alle** svangerskap, spontane eller selvbestemte aborter, så vel som fødsler (også dødfødsler).* 255 ___ ganger

Hvor mange barn har du født? 257 ___ barn

Fyll ut for hvert barn (de første 6) opplysninger om fødselsår og omtrent antall måneder du ammet hvert barn og antall måneder menstruasjonen din var borte etter fødselen (fylles ut også for dødfødte eller for barn som er døde senere i livet).

Barn	Fødselsår	Antall måneder med amming	Antall blødningsfrie måneder
1	258 19		
2	264 19		
3	270 19		
4	276 19		
5	282 19		
6	288 19		

HVORDAN DU SER PÅ DEG SELV

Folk ser på seg selv på ulike måter. Kryss av for hvert utsagn hvor enig eller uenig du er. *Ett kryss på hver linje*

	Svært enig	Enig	Uenig	Svært uenig
Jeg har en positiv holdning til meg selv 294	☐	☐	☐	☐
Jeg føler meg virkelig ubrukelig til tider 295	☐	☐	☐	☐
Jeg føler at jeg ikke har mye å være stolt av 296	☐	☐	☐	☐
Jeg føler at jeg er en verdifull person, i allefall på lik linje med andre 297	☐	☐	☐	☐

	Ja	Nei
Synes du at du har funnet et virkelig betydningsfullt innhold i livet ditt? 298	☐	☐
Føler du at du lever fullt ut? 299	☐	☐

HVORDAN DU FØLER DEG NÅ

*Sett kryss i den ruta utenfor det svaret som best beskriver dine følelser **den siste uka.** Bare ett kryss*

Føler du deg stort sett sterk og opplagt, eller trøtt og sliten? 300

- Meget sterk og opplagt ☐ 1
- Sterk og opplagt ☐ 2
- Ganske sterk og opplagt ☐ 3
- Både – og ☐ 4
- Ganske trøtt og sliten ☐ 5
- Trøtt og sliten ☐ 6
- Svært trøtt og sliten ☐ 7

Har du i det store og hele en rolig og god følelse inne i deg? 301

- Nesten hele tida ☐ 1
- Ofte ☐ 2
- Av og til ☐ 3
- Aldri ☐ 4

Er du vanligvis glad eller nedstemt? 302

- Svært nedstemt ☐ 1
- Nedstemt ☐ 2
- Nokså nedstemt ☐ 3
- Både – og ☐ 4
- Nokså glad ☐ 5
- Glad ☐ 6
- Svært glad ☐ 7

LEGEMLIGE FUNKSJONER

Klarer du selv, uten hjelp av andre, i det daglige å:
Ett kryss på hver linje

	Ja	Med noe hjelp	Nei
Gå innendørs i samme etasje 303	☐	☐	☐
Gå på toalettet 304	☐	☐	☐
Vaske deg på kroppen 305	☐	☐	☐
Bade eller dusje 306	☐	☐	☐
Kle på og av deg 307	☐	☐	☐
Legge deg og stå opp 308	☐	☐	☐
Spise selv 309	☐	☐	☐

Hvis du har hatt hjelp til noe av dette, omtrent hvor lenge har du hatt hjelp? *Bare ett kryss* 310

- Under 3 måneder ☐ 1
- 3 – 6 måneder ☐ 2
- 1/2 – 1 år ☐ 3
- 1 – 5 år ☐ 4
- Mer enn 5 år ☐ 5

Hvis du trenger hjelp til ett eller flere av disse gjøremålene, hvem er det som for det meste hjelper deg?
Bare ett kryss

- Ektefelle/samboer ☐ 1
- Barn/svigerbarn ☐ 2
- Søster/bror ☐ 3
- Annen familie/slekt ☐ 4
- Andre ☐ 5

DAGLIGE OPPGAVER

Klarer du selv disse gjøremålene i det daglige uten hjelp fra andre? *Ett kryss på hver linje*

	Ja	Med noe hjelp	Nei
Lage varm mat 312	☐	☐	☐
Gjøre lett husarbeid (f.eks. oppvask) 313	☐	☐	☐
Gjøre tyngre husarbeid (f.eks. gulvvask) 314	☐	☐	☐
Vaske klær 315	☐	☐	☐
Betale regninger 316	☐	☐	☐
Ta medisinene 317	☐	☐	☐
Komme deg ut 318	☐	☐	☐
Gjøre innkjøp 319	☐	☐	☐
Ta bussen 320	☐	☐	☐

Hvis du trenger hjelp til ett eller flere av disse gjøremålene, omtrent hvor lenge har du hatt hjelp?
Bare ett kryss 321

- Under 3 måneder ☐ 1
- 3 – 6 måneder ☐ 2
- 1/2 – 1 år ☐ 3
- 1 – 5 år ☐ 4
- Mer enn 5 år ☐ 5

Hvis du trenger hjelp til ett eller flere av disse gjøremålene, hvem er det som for det meste hjelper deg?
Bare ett kryss 322

- Ektefelle/samboer ☐ 1
- Barn/svigerbarn ☐ 2
- Søster/bror ☐ 3
- Annen familie/slekt ☐ 4
- Andre ☐ 5

Legg det utfylte spørreskjemaet i den vedlagte svarkonvolutten og postlegg den så snart som mulig!
Porto er betalt.
Hjertelig takk for hjelpa!

Steinkjer Trykkeri AS – 74 16 30 00

hunt
Helseundersøkelsen i Nord-Trøndelag

SKJEMA FOR KVINNER 70 ÅR OG ELDRE

Takk for frammøtet til undersøkelsen!
Vi vil også be deg fylle ut dette spørreskjemaet. Opplysningene vil bli brukt i større forskningsarbeider om forebyggende helsearbeid. Noen av spørsmålene likner på spørsmål du har svart på i det skjemaet du fylte ut heime og leverte ved frammøte til helseundersøkelsen. Det er likevel viktig at du svarer på alle spørsmålene også i dette skjemaet. Det utfylte skjemaet returneres i vedlagte svarkonvolutt. Porto er betalt.
Alle opplysningene er underlagt streng taushetsplikt.

Vennlig hilsen
Helsetjenesten i Nord-Trøndelag
Statens Institutt for Folkehelse Statens helseundersøkelser

Hvis du ikke ønsker å besvare spørreskjemaet, sett kryss her og returner skjemaet. Da slipper du purring
Jeg ønsker ikke å besvare skjemaet ○

UTFYLLING

Dato for utfylling av skjema: / 19 (19)

OPPVEKST

I hvilken kommune bodde du da du fylte 1 år?
Hvis du ikke bodde i Norge, oppgi ***land*** *i stedet for kommune*

(24)

BOLIG

Hvilken type bolig bor du i? *Bare ett kryss*

Enebolig/villa	25	☐ 1
Gårdsbruk		☐ 2
Blokk/terrasseleilighet		☐ 3
Rekkehus/2-4 mannsbolig		☐ 4
Trygdebolig/aldersbolig/servicebolig		☐ 5
Sykeheim/aldersheim		☐ 6
Annen bolig		☐ 7

Hvor stor er din boenhet? (26) ____ kvm

	Ja	Nei
Er det heldekkende tepper i stua? (29)	☐	☐
Er det heldekkende tepper på ditt soverom?	☐	☐
Er det katt i boligen? (31)	☐	☐
Er det hund i boligen?	☐	☐
Er det andre pelskledde dyr eller fugler i boligen?	☐	☐

Hvem bor du sammen med? *Ett eller flere kryss*

Ektefelle/samboer	34 ☐	Søster/bror	37 ☐
Barn/svigerbarn	☐	Annen familie/slekt	☐
Bor alene	36 ☐	Andre	39 ☐

SYKDOM I FAMILIEN

Kryss av for de slektningene som har eller har hatt noen av sykdommene. Kryss av for "ingen" hvis ingen av slektningene har hatt denne sykdommen. *Evt. flere kryss på hver linje*

		Mor	Far	Bror	Søster	Barn	Ingen
Hjerneslag eller hjerneblødning	40	☐	☐	☐	☐	☐	☐
Hjerteinfarkt før 60 års alder	46	☐	☐	☐	☐	☐	☐
Astma	52	☐	☐	☐	☐	☐	☐
Allergi	58	☐	☐	☐	☐	☐	☐
Kreftsykdom	64	☐	☐	☐	☐	☐	☐
Høyt blodtrykk	70	☐	☐	☐	☐	☐	☐
Psykiske plager	76	☐	☐	☐	☐	☐	☐
Osteoporose (benskjørhet)	82	☐	☐	☐	☐	☐	☐
Diabetes (sukkersyke)	88	☐	☐	☐	☐	☐	☐
Alder da de fikk diabetes	94	___ år	___ år	___ år	___ år	___ år	

		Ja	Nei
Har du *selv* høysnue eller neseallergi?	104	☐	☐

SIVILSTAND

Hva er din sivilstand? (105)

Gift	☐ 1	Enke	☐ 3
Skilt/separert	☐ 2	Har aldri vært gift	☐ 4

BRUK AV HELSETJENESTER

Har du i løpet av de siste 12 månedene vært hos:

Ett kryss på hver linje		Ja	Nei
allmennpraktiserende lege (kommunelege, privatpraktiserende lege, turnuskandidat)	106	☐	☐
lege ved sykehus (uten at du var innlagt)		☐	☐
annen lege		☐	☐
fysioterapeut		☐	☐
kiropraktor		☐	☐
homøopat	111	☐	☐
annen behandler (naturmedisiner, fotsoneterapeut, håndspålegger, "healer", "synsk", e.l.)		☐	☐

SYKEHUS

		Ja	Nei
Har du vært innlagt i sykehus de siste 5 åra?	113	☐	☐

Hvis «Ja»: Svar ut fra siste gang du var innlagt

Synes du at du ble utskrevet for tidlig, i passe tid eller for seint? (114)

For tidlig	☐
I passe tid	☐
For seint	☐

Hvor ble du utskrevet til? (115)

Heim	☐
Kuropphold	☐
Sykeheim	☐

		Ja	Nei
Fikk du tilstrekkelig hjelp og oppfølging etter utskrivingen?	116	☐	☐

HEIMEHJELP

Har du heimehjelp?		Ja	Nei
Privat	117	☐	☐
Kommunal	118	☐	☐

Dersom du har KOMMUNAL heimehjelp: **Har du nok kommunal heimehjelp, eller trenger du mer?** (119)

Ja, jeg har nok	☐
Nei, jeg trenger mer	☐

I tilfelle du IKKE har kommunal heimehjelp:		Ja	Nei
Trenger du kommunal heimehjelp?	120	☐	☐

HEIMESYKEPLEIE

Ja Nei

Har du heimesykepleie? ..... 121 ☐ ☐

Hvis «Ja»:

Har du nok heimesykepleie, eller trenger du mer?

- Ja, jeg har nok ..... ☐
- Nei, jeg trenger mer ..... ☐

SYKEHEIM

Har du vært innlagt på sykeheim i løpet av de siste 12 månedene? 123

- Nei ..... ☐
- Ja, jeg har vært der en periode ..... ☐
- Ja, jeg bor der fast ..... ☐

Hvis «Nei», kan du hoppe over de neste to spørsmålene

Hvis «Ja»:

Hvor var du FØR du ble innlagt på sykeheimen siste gang? 124

- Bodde i egen heim ..... ☐
- Var innlagt i sykehus ..... ☐
- Var annet sted ..... ☐

Hvis du har vært på sykeheimen EN PERIODE i løpet av de siste 12 mndr.:

Bodde du på sykeheimen passe lenge? 125

- Det var for kort tid ..... ☐
- Passe tid ..... ☐
- Det var for lang tid ..... ☐

KOMMUNAL HJELP ALT I ALT

Hvordan er du alt i alt fornøyd med hjelpa du får fra kommunen? 126

- Meget fornøyd ..... ☐ 1
- Nokså fornøyd ..... ☐ 2
- Nokså misfornøyd .. ☐ 3
- Meget misfornøyd .. ☐ 4
- Jeg får ingen hjelp, men burde ha hatt det ..... ☐ 5
- Jeg får ingen hjelp, og trenger det ikke ..... ☐ 6

KOSTHOLD

Hvor mange måltider spiser du vanligvis daglig (middag og brødmåltid)? ..... 127 — Antall

Hvor mange dager i uka spiser du varm middag?

Hva slags type brød (kjøpt eller hjemmebakt) spiser du vanligvis? *Inntil to kryss*

Brødtypen ligner mest på 129	*Loff*	*Fint brød*	*Kneipp-brød*	*Grov-brød*	*Knekke-brød*
	☐	☐	☐	☐	☐

Hva slags *fett* blir vanligvis brukt i din husholdning?

Ett kryss for matlaging og ett kryss for brød

	Til matlaging	*På brød*
Bruker *ikke* smør eller margarin	134 ☐ 1	135 ☐ 1
Meierismør	☐ 2	☐ 2
Hard margarin	☐ 3	☐ 3
Bløt (soft) margarin	☐ 4	☐ 4
Smør/margarin blanding	☐ 5	☐ 5
Lettmargarin	☐ 6	☐ 6
Oljer	☐ 7	

Hvor mange glass melk (alle sorter, også drikkeyoghurt) drikker du vanligvis daglig? *Bare ett kryss* 136

- Ingen ..... ☐ 1
- Mindre enn ett ..... ☐ 2
- 1–2 glass ..... ☐ 3
- 3 eller mer ..... ☐ 4

Hvor mange brødskiver med kvitost spiser du vanligvis daglig? *Bare ett kryss* 137

- Ingen ..... ☐ 1
- Mindre enn en ..... ☐ 2
- 1–2 skiver ..... ☐ 3
- 3 eller mer ..... ☐ 4

HVILE OG AVSLAPPING

Hvor mange timer tilbringer du *vanligvis* i *liggende* stilling i løpet av et døgn? (nattesøvn, middagshvil) ..... 138 — Antall timer

Hvor mange timer tilbringer du *vanligvis* i *sittende* stilling i løpet av et døgn? (arbeid, måltider, TV, bil etc.) ..... 140 — Antall timer

Har du i løpet av siste måned hatt innsovningsproblemer? *Bare ett kryss* 142

- Nesten hver natt ..... ☐ 1
- Ofte ..... ☐ 2
- Av og til ..... ☐ 3
- Aldri ..... ☐ 4

Har du i løpet av siste måned våknet for tidlig og ikke fått sove igjen? *Bare ett kryss* 143

- Nesten hver natt ..... ☐ 1
- Ofte ..... ☐ 2
- Av og til ..... ☐ 3
- Aldri ..... ☐ 4

MEDISINBRUK

Ja Nei

Har du i deler av de siste 12 måneder brukt noen medisiner daglig eller nesten daglig? ..... 144 ☐ ☐

Hvis "Ja":

Angi hvor mange måneder du brukte følgende medisiner: *Sett 0 hvis du ikke har brukt medisinene*

	Antall mndr.		Antall mndr.
smertestillende 145		hjertemedisin (ikke blodtrykksmedisin)	
sovemedisin 147		annen medisin	
beroligende medisin		*Kosttilskudd:*	
medisin mot depresjon		jerntabletter 161	
allergimedisin 153		vitamin D-tilskudd	
astmamedisin 155		andre vitamintilskudd	
		tran/fiskeoljer 167	

Hvor ofte har du brukt avslappende/beroligende medisin eller sovemedisin den siste måneden? 169

- Daglig ..... ☐ 1
- Hver uke, men ikke hver dag ☐ 2
- Sjeldnere enn hver uke ☐ 3
- Aldri ..... ☐ 4

VENNER

Hvor mange gode venner har du?
Regn med de du kan snakke fortrolig med og som kan gi deg god hjelp når du trenger det ..... 170 — Antall

Tell ikke med de du bor sammen med, men regn med andre slektninger

Ja Nei

Føler du at du har mange nok gode venner? .... 172 ☐ ☐

Hvor ofte tar du vanligvis del i foreningsvirksomhet som f.eks. syklubb, eldresenter, pensjonistforening, politiske lag, religiøse eller andre foreninger? *Bare ett kryss* 173

Aldri, eller noen
få ganger i året ..... ☐1 Omtrent en gang i uka ... ☐3
1–2 ganger i måneden ... ☐2 Mer enn en gang i uka ... ☐4

HUMØR OG TRIVSEL

Ett kryss på hver linje

Angi hvordan du har følt deg den siste måneden:	*Aldri*	*Noen ganger*	*Ganske ofte*	*For det meste*
i godt humør 174	☐	☐	☐	☐
i dårlig humør 175	☐	☐	☐	☐

Er du rask til å oppfatte et humoristisk poeng? 176	*Svært treg*	*Ganske treg*	*Ganske rask*	*Svært rask*
	☐	☐	☐	☐

Er du enig i at det er noe ansvarsløst over folk som stadig prøver å være morsomme? 177

Nei, slett ikke ..... ☐1 Ganske enig ..... ☐3
I noen grad ..... ☐2 Ja, absolutt ..... ☐4

Er du en munter person? 178

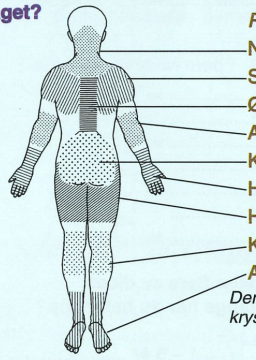
Nei, slett ikke ..... ☐1 Ganske munter ..... ☐3
I noen grad ..... ☐2 Ja, absolutt ..... ☐4

MUSKEL-/SKJELETTPLAGER

Har du hatt plager (smerter, verk, ubehag) i muskler og/eller ledd i *den siste måneden*? ..... 179 *Ja* ☐ *Nei* ☐

Hvis «Nei»: Gå til HODEPINE

Hvis «Ja»: Hvor har du hatt disse plagene *(ett eller flere kryss)* **og omtrent hvor mange dager tilsammen var du plaget?**



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Hofter.....198	
Knær.....201	
Ankler/føtter 204	

*Dersom flere kryss: Sett **ring** rundt krysset **der plagen var verst***

Har plagene hindret deg i å utføre daglige aktiviteter den siste måneden? ..... 207 *Ja* ☐ *Nei* ☐

HODEPINE

Har du vært plaget av hodepine i løpet av de siste 12 måneder? 208

Ja, anfallsvis (migrene)..... 1☐
Ja, annen slags hodepine.. 2☐
Nei ..... 3☐

Antall anfall siste 12 mndr. 209 ☐

Hvis «Nei»: Gå til URINLEKKASJE

Omtrent hvor mange dager pr. måned har du hodepine?
Mindre enn 7 dager ☐1 7 til 14 dager ☐2 Mer enn 14 d. ☐3

Hvor lenge varer hodepinen vanligvis hver gang? 212
Mindre enn 4 timer ☐1 4 timer–3 døgn ☐2 Mer enn 3 døgn ☐3

Hvor ofte er hodepinen preget av eller ledsaget av:

Ett kryss på hver linje

	Sjelden eller aldri	*Av og til*	*Ofte*
bankende/dunkende smerte 213	☐	☐	☐
pressende smerte	☐	☐	☐
halvsidighet, alltid samme side	☐	☐	☐
halvsidighet, vekselvis h. og v. side	☐	☐	☐
smerter i «hele hodet»	☐	☐	☐
kvalme 218	☐	☐	☐
lys- og/eller lydskyhet	☐	☐	☐
forverring ved fysisk aktivitet.....	☐	☐	☐
synsforstyrrelser *før* hodepine 221	☐	☐	☐

Hvor mange tabletter/stikkpiller har du eventuelt brukt av disse medisinene *alt i alt i løpet av den siste måneden*?

Skriv 0 hvis du ikke har brukt medisinen.

Cafergot 222 ☐ Anervan 224 ☐ Imigran 226 ☐

URINLEKKASJE

Har du lekkasje av urin (uansett mengde) minst to ganger per måned? ..... 228 *Ja* ☐ *Nei* ☐

Hvis «Nei»: Gå til MENSTRUASJON OG OVERGANG...

Hvor ofte har du urinlekkasje? 229

noen få ganger per måned ..... ☐
en eller flere ganger per uke ..... ☐
hver dag og/eller natt ..... ☐

Hvor mye urin lekker du vanligvis hver gang? 230

dråper eller lite ..... ☐
små skvetter eller mer ..... ☐

Har du lekkasje av urin i forbindelse med *Ja* *Nei*

hosting, nysing eller latter .....231 ☐ ☐
løft ..... ☐ ☐

Hender det at du har lekkasje av urin i forbindelse med plutselig og sterk vannlatingstrang? 233 *Ja* ☐ *Nei* ☐

Hvordan opplever du lekkasjeplagene dine? *Bare ett kryss*

ikke noe problem ..... ☐
en liten plage ..... ☐
en del plaget ..... ☐
mye plaget ..... ☐
svært stort problem ..... ☐

Har du søkt lege pga. urinlekkasje? ..... 235 *Ja* ☐ *Nei* ☐

MENSTRUASJON OG OVERGANGSALDER

Hvor gammel var du da menstruasjonen sluttet? ☐ år

HORMONBEHANDLING

Utenom p-piller

Har du noen gang brukt medisiner som inneholder østrogen? Vanlige navn på slike medisiner er: Cyclabil, Estraderm, Kilogest, Ovesterin, Progynova, Trisekvens.

	Nå	*Før*	*Aldri*
Tabletter eller plaster 238	☐	☐	☐
Krem eller stikkpiller 239	☐	☐	☐

Hvis «Ja»: Hvor gammel var du første gang du fikk østrogenmedisin, og omtrent hvor mange år brukte du slik medisin?

	Din alder	*Antall år*
Tabletter eller plaster 240		
Krem eller stikkpiller 244		

Hvis du bruker østrogenmedisin nå, hvilket merke bruker du? 248

OPERASJONER I UNDERLIVET

	Ja	Nei	Vet ikke
Har du fått fjernet begge eggstokkene (totalt)? 249	☐	☐	☐

Hvis du har fjernet begge eggstokkene, hvor gammel var du da? 250 ____ år

	Ja	Nei	Vet ikke
Har du fått fjernet hele livmoren? 252	☐	☐	☐

Hvis du har fjernet hele livmoren, hvor gammel var du da? 253 ____ år

GRAVIDITETER, FØDSLER OG AMMING

Hvor mange ganger har du vært gravid totalt?
*Regn med **alle** svangerskap, spontane eller selvbestemte aborter, så vel som fødsler (også dødfødsler).* 255 ____ ganger

Hvor mange barn har du født? 257 ____ barn

Fyll ut for hvert barn (de første 6) opplysninger om fødselsår og omtrent antall måneder du ammet hvert barn og antall måneder menstruasjonen din var borte etter fødselen (fylles ut også for dødfødte eller for barn som er døde senere i livet).

Barn	Fødselsår	Antall måneder med amming	Antall blødningsfrie måneder
1	258 19		
2	264 19		
3	270 19		
4	276 19		
5	282 19		
6	288 19		

HVORDAN DU SER PÅ DEG SELV

Folk ser på seg selv på ulike måter. Kryss av for hvert utsagn hvor enig eller uenig du er. *Ett kryss på hver linje*

	Svært enig	Enig	Uenig	Svært uenig
Jeg har en positiv holdning til meg selv 294	☐	☐	☐	☐
Jeg føler meg virkelig ubrukelig til tider 295	☐	☐	☐	☐
Jeg føler at jeg ikke har mye å være stolt av 296	☐	☐	☐	☐
Jeg føler at jeg er en verdifull person, i allefall på lik linje med andre 297	☐	☐	☐	☐

	Ja	Nei
Synes du at du har funnet et virkelig betydningsfullt innhold i livet ditt? 298	☐	☐
Føler du at du lever fullt ut? 299	☐	☐

HVORDAN DU FØLER DEG NÅ

*Sett kryss i den ruta utenfor det svaret som best beskriver dine følelser **den siste uka.** Bare ett kryss*

Føler du deg stort sett sterk og opplagt, eller trøtt og sliten? 300

- Meget sterk og opplagt ☐ 1
- Sterk og opplagt ☐ 2
- Ganske sterk og opplagt ☐ 3
- Både – og ☐ 4
- Ganske trøtt og sliten ☐ 5
- Trøtt og sliten ☐ 6
- Svært trøtt og sliten ☐ 7

Har du i det store og hele en rolig og god følelse inne i deg? 301

- Nesten hele tida ☐ 1
- Ofte ☐ 2
- Av og til ☐ 3
- Aldri ☐ 4

Er du vanligvis glad eller nedstemt? 302

- Svært nedstemt ☐ 1
- Nedstemt ☐ 2
- Nokså nedstemt ☐ 3
- Både – og ☐ 4
- Nokså glad ☐ 5
- Glad ☐ 6
- Svært glad ☐ 7

LEGEMLIGE FUNKSJONER

Klarer du selv, uten hjelp av andre, i det daglige å:
Ett kryss på hver linje

	Ja	Med noe hjelp	Nei
Gå innendørs i samme etasje 303	☐	☐	☐
Gå på toalettet	☐	☐	☐
Vaske deg på kroppen 305	☐	☐	☐
Bade eller dusje	☐	☐	☐
Kle på og av deg 307	☐	☐	☐
Legge deg og stå opp	☐	☐	☐
Spise selv 309	☐	☐	☐

Hvis du har hatt hjelp til noe av dette, omtrent hvor lenge har du hatt hjelp? *Bare ett kryss* 310

- Under 3 måneder ☐ 1
- 3 – 6 måneder ☐ 2
- 1/2 – 1 år ☐ 3
- 1 – 5 år ☐ 4
- Mer enn 5 år ☐ 5

Hvis du trenger hjelp til ett eller flere av disse gjøremålene, hvem er det som for det meste hjelper deg?
Bare ett kryss

- Ektefelle/samboer ☐ 1
- Barn/svigerbarn ☐ 2
- Søster/bror ☐ 3
- Annen familie/slekt ☐ 4
- Andre ☐ 5

DAGLIGE OPPGAVER

Klarer du selv disse gjøremålene i det daglige uten hjelp fra andre? *Ett kryss på hver linje*

	Ja	Med noe hjelp	Nei
Lage varm mat 312	☐	☐	☐
Gjøre lett husarbeid (f.eks. oppvask)	☐	☐	☐
Gjøre tyngre husarbeid (f.eks. gulvvask) 314	☐	☐	☐
Vaske klær	☐	☐	☐
Betale regninger 316	☐	☐	☐
Ta medisinene	☐	☐	☐
Komme deg ut 318	☐	☐	☐
Gjøre innkjøp	☐	☐	☐
Ta bussen 320	☐	☐	☐

Hvis du trenger hjelp til ett eller flere av disse gjøremålene, omtrent hvor lenge har du hatt hjelp?
Bare ett kryss 321

- Under 3 måneder ☐ 1
- 3 – 6 måneder ☐ 2
- 1/2 – 1 år ☐ 3
- 1 – 5 år ☐ 4
- Mer enn 5 år ☐ 5

Hvis du trenger hjelp til ett eller flere av disse gjøremålene, hvem er det som for det meste hjelper deg?
Bare ett kryss 322

- Ektefelle/samboer ☐ 1
- Barn/svigerbarn ☐ 2
- Søster/bror ☐ 3
- Annen familie/slekt ☐ 4
- Andre ☐ 5

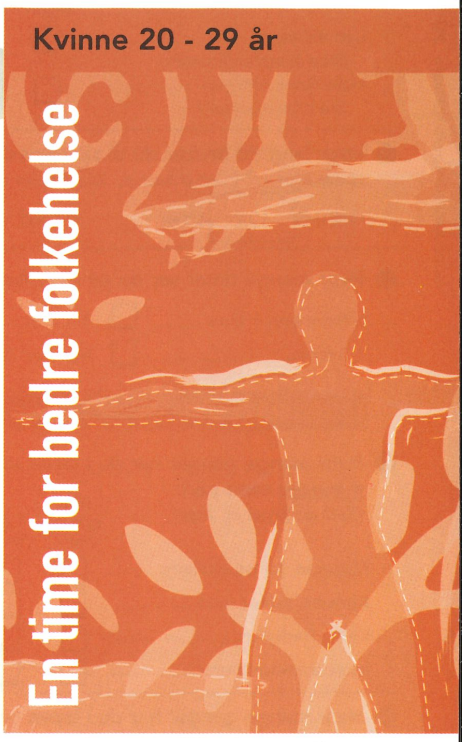
Legg det utfylte spørreskjemaet i den vedlagte svarkonvolutten og postlegg den så snart som mulig!
Porto er betalt.
Hjertelig takk for hjelpa!

Steinkjer Trykkeri AS – 74 16 30 00

hunt 3
Helseundersøkelsen i Nord-Trøndelag

Kjære HUNT-deltaker

Takk for at du møtte til Helseundersøkelsen. Vi vil også be deg om å fylle ut dette spørreskjemaet. Noen av spørsmålene likner de som du har svart på før, men det er viktig at du allikevel besvarer alt. Opplysningene blir brukt til forskning og forebyggende helsearbeid. Forskere vil kun ha tilgang til avidentifiserte data, det vil si at opplysningene ikke kan spores tilbake til en enkeltperson.



Slik fyller du ut skjemaet

- Skjemaet vil bli lest maskinelt.
- Det er derfor viktig at du krysser av riktig: **Rett** ☒ **Galt** ☒ ☑
- Krysser du feil sted, retter du ved å fylle boksen slik: ■
- Skriv tydelige tall: 0 1 2 3 4 5 6 7 8 9
- Bruk bare svart eller blå penn. Ikke bruk blyant eller tusj.

Dato for utfylling:

Dag / Måned 20 År

Vennligst fyll ut skjemaet, og post det snarest mulig.
Porto er betalt.

BOLIGFORHOLD OG VENNER

1 Hvem bor du sammen med?
(Sett ett eller flere kryss)

- Ingen ☐
- Foreldre ☐
- Ektefelle/samboer ☐
- Andre personer over 18 år ☐
- Personer under 18 år ☐
- Antall under 18 år ..

2 Er det kjæledyr i boligen?

- Nei ☐
- Ja, katt ☐
- Ja, hund ☐
- Ja, andre pelsdyr/fugl ☐

3 Har du venner som kan gi deg hjelp når du trenger det? Ja ☐ Nei ☐

4 Har du venner som du kan snakke fortrolig med? Ja ☐ Nei ☐

DITT NÆRMILJØ, DVS. NABOLAGET/GRENDA

5 Jeg føler et sterkt fellesskap med de som bor her
(Sett ett kryss)

Helt enig	Delvis enig	Usikker	Delvis uenig	Helt uenig
☐	☐	☐	☐	☐

6 Man kan ikke stole på hverandre her *(Sett ett kryss)*

Helt enig	Delvis enig	Usikker	Delvis uenig	Helt uenig
☐	☐	☐	☐	☐

7 Folk trives godt her *(Sett ett kryss)*

Helt enig	Delvis enig	Usikker	Delvis uenig	Helt uenig
☐	☐	☐	☐	☐

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AKTIVITET

8 Hvordan har din fysiske aktivitet i fritida vært det siste året? *(Tenk deg et ukentlig gjennomsnitt for året. Arbeidsvei regnes som fritid.)*

	Timer pr. uke			
	Ingen	Under 1	1-2	3 el. mer
Lett aktivitet *(ikke svett/andpusten)*	☐	☐	☐	☐
Hard fysisk aktivitet *(svett/andpusten)*	☐	☐	☐	☐

9 Hvor lang tid bruker du til sammen daglig foran dataskjerm? *(Sett 0 hvis du ikke bruker data)*

I arbeid ____ timer I fritid ____ timer

10 Hvor mange timer ser du på TV/video/DVD daglig?

Mindre enn 1 time ☐ 4-6 timer ☐
1-3 timer ☐ Mer enn 6 timer ☐

KULTUR/LIVSSYN

11 Hvor mange ganger har du i løpet av de siste 6 måneder vært på/i: *(Sett ett kryss pr. linje)*

	Mer enn 3g /mnd	1-3g /mnd	1-6g siste 6 mnd	Aldri
Museum, kunstutstilling	☐	☐	☐	☐
Konsert, teater, kino	☐	☐	☐	☐
Kirke, bedehus	☐	☐	☐	☐
Idrettsarrangement	☐	☐	☐	☐

12 Hvor mange ganger har du i løpet av de siste 6 måneder selv drevet med: *(Sett ett kryss pr. linje)*

	Mer enn 1g /uke	1g /uke	1-3g /mnd	1-5g siste 6 mnd	Ingen gang
Foreningsvirksomhet	☐	☐	☐	☐	☐
Musikk, sang, teater	☐	☐	☐	☐	☐
Menighetsarbeid	☐	☐	☐	☐	☐
Friluftsliv	☐	☐	☐	☐	☐
Dans	☐	☐	☐	☐	☐
Trening, idrett	☐	☐	☐	☐	☐

13 Hvilket livssyn vil du si ligger nærmest opp til ditt eget? *(Sett ett kryss)*

Kristent livssyn ☐ Ateistisk livssyn ☐
Humanetisk livssyn ☐ Annet livssyn ☐

14 Når det skjer vonde ting i livet mitt, tenker jeg: "det er ei mening med det".

Ja ☐ Nei ☐ Vet ikke ☐

15 Jeg søker hjelp hos Gud når jeg trenger styrke og trøst.

Aldri ☐ Av og til ☐ Ofte ☐

PERSONLIGHET

16 Beskriv deg selv slik du vanligvis er:

	Ja	Nei
Klarer du å få fart i et selskap?	☐	☐
Er du stort sett stille og tilbakeholden når du er sammen med andre?	☐	☐
Liker du å treffe nye mennesker?	☐	☐
Liker du å ha masse liv og røre rundt deg?	☐	☐
Er du forholdsvis livlig?	☐	☐
Tar du vanligvis selv initiativet for å få nye venner?	☐	☐
Er du ofte bekymret?	☐	☐
Blir dine følelser lett såret?	☐	☐
Hender det ofte at du "går trøtt"?	☐	☐
Plages du av "nerver"?	☐	☐
Har du ofte følt deg trøtt og likeglad uten grunn?	☐	☐
Bekymrer du deg for at fryktelige ting kan skje?	☐	☐

HODEPINE

17 Har du vært plaget av hodepine det siste året? *Hvis nei, gå til spørsmål 24.*

	Ja	Nei
	☐	☐

Hvis ja:
Hva slags hodepine:
Migrene ☐
Annen hodepine ☐

18 Omtrent antall dager pr. måned med hodepine:

Mindre enn 1 dag ☐ 7-14 dager ☐
1-6 dager ☐ Mer enn 14 dager ☐

19 Hvor sterk er hodepina vanligvis?

Mild *(hemmer ikke aktivitet)* ☐
Moderat *(hemmer aktivitet)* ☐
Sterk *(forhindrer aktivitet)* ☐

20 Hvor lenge varer hodepina vanligvis?

Mindre enn 4 timer ☐ 1-3 døgn ☐
4 timer – 1 døgn ☐ Mer enn 3 døgn ☐

21 Er hodepina vanligvis preget av eller ledsaget av: *(Sett ett kryss pr. linje)*

	Ja	Nei
Bankende/dunkende smerte?	☐	☐
Pressende smerte?	☐	☐
Ensidig smerte (høyre eller venstre)?	☐	☐
Forverring ved moderat fysisk aktivitet?	☐	☐
Kvalme og/eller oppkast?	☐	☐
Lys- og lydskyhet?	☐	☐

22 Før eller under hodepina; kan du ha forbigående: *(Sett ett kryss pr. linje)*

	Ja	Nei
Synsforstyrrelse? *(takkede linjer, flimring, tåkesyn, lysglimt)*	☐	☐
Nummenhet i halve ansiktet eller i handa?	☐	☐

23 Angi hvor mange dager du har vært borte fra arbeid eller skole siste måned på grunn av hodepine: ____ dager

LUFTVEIER

24 Hoster du daglig i perioder av året? Ja ☐ Nei ☐

Hvis ja:
Er hosten vanligvis ledsaget av oppspytt? Ja ☐ Nei ☐

Har du hatt hoste med oppspytt, i minst 3 måneder, sammenhengende i hvert av de to siste åra? Ja ☐ Nei ☐

25 Har du, eller har du hatt, høysnue eller neseallergi? Ja ☐ Nei ☐

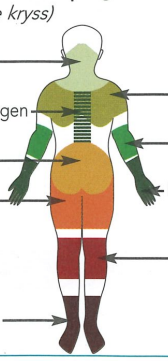
Hvis ja:
Har du hatt slike plager i løpet av de siste 12 måneder? Ja ☐ Nei ☐

26 Har du i løpet av de siste 12 måneder blitt vekket av anfall med tung pust? Ja ☐ Nei ☐

MUSKLER OG LEDD

27 Har du i løpet av det siste året vært plaget med smerter og/eller stivhet i muskler og ledd, som har vart i minst 3 måneder sammenhengende? Ja ☐ Nei ☐
Hvis nei, gå til spørsmål 30.

Hvis ja:
Hvor har du hatt disse plagene?
(Sett ett eller flere kryss)



☐ Nakke
☐ Øvre del av ryggen
☐ Korsryggen
☐ Hofter
☐ Ankler/føtter
☐ Skuldre (aksler)
☐ Albuer
☐ Handledd/hender
☐ Knær

28 Har du vært plaget både i høyre og venstre kroppshalvdel? Ja ☐ Nei ☐

29 Har plagene hindret deg i å utføre daglige aktiviteter?

	Ja	Nei
I arbeid	☐	☐
I fritid	☐	☐

30 Er du operert for ryggplager? Ja ☐ Nei ☐

Hvis ja: Hvilken type operasjon?

Prolaps/ischias-operasjon ☐ Annet ☐
Avstivning ☐

STOFFSKIFTE

31 Har du noen gang fått påvist for lavt stoffskifte (hypotyreose)? Ja ☐ Nei ☐
Hvis ja, hvor gammel var du **første** gang?
Eksempel: 34 *år gammel*
___ *år gammel*

32 Har du noen gang fått påvist for høyt stoffskifte (hypertyreose)? Ja ☐ Nei ☐
Hvis ja, hvor gammel var du **første** gang?
Eksempel: 34 *år gammel*
___ *år gammel*

Hvis ja:
Har du brukt Neo-Mercazole? ☐ ☐ ___ *år gammel*
Har du fått radiojodbehandling? ☐ ☐ ___ *år gammel*

MAGE OG TARM

33 Har du vært plaget med smerter eller ubehag fra magen de siste 12 måneder?
Ja, mye ... ☐ Ja, litt.. ☐ Nei, aldri.. ☐
Hvis nei, gå til spørsmål 34.

Hvis ja: Ja ☐ Nei ☐
Er disse lokalisert øverst i magen? ☐ ☐
Har du de siste 3 måneder hatt disse plagene så ofte som 1 dag i uka i minst 3 uker? ☐ ☐
Blir smertene eller ubehaget bedre etter at du har hatt avføring? ☐ ☐
Har smertene eller ubehaget noen sammenheng med hyppigere eller sjeldnere avføring enn vanlig? ☐ ☐
Har smertene eller ubehaget noen sammenheng med at avføringen blir løsere eller fastere enn vanlig? ☐ ☐
Kommer smertene eller ubehaget etter måltid? ☐ ☐

34 I hvilken grad har du hatt følgende plager i de siste 12 måneder?

	Aldri	Litt	Mye
Kvalme	☐	☐	☐
Halsbrann/sure oppstøt	☐	☐	☐
Diaré	☐	☐	☐
Treg mage	☐	☐	☐
Vekslende treg mage og diaré	☐	☐	☐
Oppblåsthet	☐	☐	☐

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HVORDAN FØLER DU DEG

Her kommer noen utsagn om hvordan du føler deg. For hvert spørsmål setter du kryss for ett av de fire svarene som best beskriver dine følelser den siste uken. Ikke tenk for lenge på svaret – de spontane svarene er best.

35 Jeg føler meg nervøs og urolig

Nei ☐ | En god del ☐
Litt ☐ | Svært mye ☐

36 Jeg gleder meg fortsatt over ting slik jeg pleide før

Avgjort like mye ☐ | Bare lite grann ☐
Ikke fullt så mye ☐ | Ikke i det hele tatt ☐

37 Jeg har en urofølelse som om noe forferdelig vil skje

Ja, og noe svært ille ☐ | Litt, bekymrer meg lite ☐
Ja, ikke så veldig ille ☐ | Ikke i det hele tatt ☐

38 Jeg kan le og se det morsomme i situasjoner

Like mye nå som før ☐ | Avgjort ikke som før ☐
Ikke like mye nå som før ☐ | Ikke i det hele tatt ☐

39 Jeg har hodet fullt av bekymringer

Veldig ofte ☐ | Av og til ☐
Ganske ofte ☐ | En gang i blant ☐

40 Jeg er i godt humør

Aldri ☐ | Ganske ofte ☐
Noen ganger ☐ | For det meste ☐

41 Jeg kan sitte i fred og ro og kjenne meg avslappet

Ja, helt klart ☐ | Ikke så ofte ☐
Vanligvis ☐ | Ikke i det hele tatt ☐

42 Jeg føler meg som om alt går langsommere

Nesten hele tiden ☐ | Fra tid til annen ☐
Svært ofte ☐ | Ikke i det hele tatt ☐

43 Jeg føler meg urolig som om jeg har sommerfugler i magen

Ikke i det hele tatt ☐ | Ganske ofte ☐
Fra tid til annen ☐ | Svært ofte ☐

44 Jeg bryr meg ikke lenger om hvordan jeg ser ut

Ja, har sluttet å bry meg ☐ | Kan hende ikke nok ☐
Ikke som jeg burde ☐ | Bryr meg som før ☐

45 Jeg er rastløs som om jeg stadig må være aktiv

Uten tvil svært mye ☐ | Ikke så veldig mye ☐
Ganske mye ☐ | Ikke i det hele tatt ☐

46 Jeg ser med glede fram til hendelser og ting

Like mye som før ☐ | Avgjort mindre enn før ☐
Heller mindre enn før ☐ | Nesten ikke i hele tatt ☐

47 Jeg kan plutselig få en følelse av panikk

Uten tvil svært ofte ☐ | Ikke så veldig ofte ☐
Ganske ofte ☐ | Ikke i det hele tatt ☐

48 Jeg kan glede meg over gode bøker, radio/TV

Ofte ☐ | Ikke så ofte ☐
Fra tid til annen ☐ | Svært sjelden ☐

SØVN

49 Hvor ofte har det hendt i løpet av de siste 3 måneder at du:	Aldri/ sjelden	Av og til	Flere ggr/ uka
Snorker høyt og sjenerende?	☐	☐	☐
Får pustestopp når du sover?	☐	☐	☐
Har vanskelig for å sovne om kvelden?	☐	☐	☐
Våkner gjentatte ganger om natta?	☐	☐	☐
Våkner for tidlig og får ikke sove igjen?	☐	☐	☐
Kjenner deg søvnig om dagen?	☐	☐	☐
Har plagsom nattesvette?	☐	☐	☐
Våkner med hodepine?	☐	☐	☐
Får ubehag, kribling eller mauring i bein?	☐	☐	☐

ALKOHOL

Hvis du ikke drikker alkohol, gå til spørsmål 54.

	Ja	Nei
50 Har du noen gang følt at du burde redusere alkoholforbruket ditt?	☐	☐
51 Har andre noen gang kritisert alkoholbruken din?	☐	☐
52 Har du noen gang følt ubehag eller skyldfølelse pga. alkoholbruken din?	☐	☐
53 Har det å ta en drink noen gang vært det første du har gjort om morgenen for å roe nervene, kurere bakrus eller som en oppkvikker?	☐	☐

KOSTHOLD

54 Hvor mange skiver brød spiser du vanligvis?
(Sett ett kryss for hver type brød)

	0-4 /uke	5-7 /uke	2-3 /dag	4-5 /dag	6 el flere /dag
Loff/fint brød	☐	☐	☐	☐	☐
Kneipp/mellomgrovt	☐	☐	☐	☐	☐
Grovt brød	☐	☐	☐	☐	☐

55 Hvor ofte spiser du vanligvis disse måltidene?
(Sett ett kryss pr. måltid)

	Sjelden /aldri	1-2 g /uke	3-4 g /uke	5-6 g /uke	Hver dag
Frokost	☐	☐	☐	☐	☐
Formiddagsmat	☐	☐	☐	☐	☐
Varm middag	☐	☐	☐	☐	☐
Kveldsmat	☐	☐	☐	☐	☐
Annet måltid	☐	☐	☐	☐	☐
Nattmat (kl 24-06)	☐	☐	☐	☐	☐

56 Hva slags fett bruker du oftest?
(Sett ett kryss pr. linje)

	Meieri-smør	Margarin: Hard	Margarin: Myk /lett	Oljer	Bruker ikke
På brød	☐	☐	☐	☐	☐
I matlaging	☐	☐	☐	☐	☐

TANNHELSE

57 Har du de siste 12 måneder vært hos tannlege/tannhelsetjeneste? Ja ☐ Nei ☐

58 Hvordan vurderer du tannhelsa di?

Meget dårlig ☐ God ☐
Dårlig ☐ Meget god ☐
Verken god eller dårlig ☐

59 Hva betyr god tannhelse for helsa di ellers?

Svært mye ☐ Lite ☐
Mye ☐ Svært lite ☐
Både og ☐

BRUK AV RESEPTFRIE MEDISINER

60 Hvor ofte har du brukt reseptfrie medisiner mot følgende plager i løpet av den siste måneden?
(Sett ett kryss pr. linje)

	Sjelden /aldri	1-3 g /uke	4-6 g /uke	Dag-lig
Halsbrann/sure oppstøt	☐	☐	☐	☐
Treg mage	☐	☐	☐	☐
Hodepine	☐	☐	☐	☐
Smerter i muskler/ledd	☐	☐	☐	☐

61 Har du brukt noen av disse reseptfrie medisinene minst en gang i uka i løpet av den siste måneden?

	Ja	Nei
Paracetamol, Paracet, Panodil, Pamol, Pinex, Perfalgan	☐	☐
Albyl E (500 mg), Aspirin, Globoid, Dispril	☐	☐
Ibuprofen, Ibux, Ibuprox, Ibumetin, Brufen	☐	☐
Naproxen, Naprosyn, Ledox	☐	☐
Andre	☐	☐

HVORDAN FØLER DU DEG NÅ

62 Føler du deg stort sett sterk og opplagt, eller trøtt og sliten?

Meget sterk og opplagt ☐
Sterk og opplagt ☐
Ganske sterk og opplagt ☐
Både – og ☐
Ganske trøtt og sliten ☐
Trøtt og sliten ☐
Svært trøtt og sliten ☐

SVANGERSKAP OG PREVENSJON

63 Når du ser bort fra svangerskap og barselperiode, har du noen gang vært blødningsfri i minst 6 måneder? Ja ☐ Nei ☐

Hvis ja:
Hvor mange ganger? ____ ganger

64 Hvor mange ganger har du i alt vært gravid? ____ ganger

65 Har du noen gang prøvd i mer enn ett år å bli gravid? Ja ☐ Nei ☐

Hvis ja:
Hvor gammel var du første gang du hadde problemer med å bli gravid? ____ år gammel

66 Bruker du eller har du brukt:
(Sett ett kryss pr. linje)

	Nå	Før, ikke nå	Aldri
P-piller?	☐	☐	☐
P-plaster?	☐	☐	☐
Annen hormonprevensjon?	☐	☐	☐

(P-sprøyte, P-ring, P-implantat, hormonspiral)

67 Hvis du har brukt P-piller:

Hvor gammel var du første gang du begynte med dette? ____ år gammel

Hvor mange år har du i alt brukt P-piller?

Mindre enn 1 år ☐ 4-10 år ☐
1-3 år ☐ Over 10 år ☐

90400015667

URINVEIER

68 Har du ufrivillig urinlekkasje? *Hvis nei, gå til spørsmål 72.* Ja ☐ Nei ☐

Hvis ja:

Hvor ofte har du urinlekkasje?

- Mindre enn 1 gang pr. mnd ☐
- En eller flere ganger pr. mnd ☐
- En eller flere ganger pr. uke ☐
- Hver dag og/eller natt ☐

Hvor mye urin lekker du vanligvis hver gang?

- Dråper ☐
- Små skvetter ☐
- Større mengder ☐

69 Har du lekkasje av urin i forbindelse med hosting, nysing, latter eller tunge løft? Ja ☐ Nei ☐

70 Har du lekkasje av urin i forbindelse med plutselig og sterk vannlatingstrang? Ja ☐ Nei ☐

71 Hvordan opplever du lekkasjeplagene dine?

- Ikke noe problem ☐
- En liten plage ☐
- En del plaget ☐
- Mye plaget ☐
- Svært stort problem ☐

ARBEID

72 Er arbeidet ditt så fysisk anstrengende at du ofte er sliten i kroppen etter en arbeidsdag? *(Sett ett kryss)*

- Ja, nesten alltid ☐
- Ganske ofte ☐
- Ganske sjelden ☐
- Aldri, eller nesten aldri ☐

73 Krever arbeidet ditt så mye konsentrasjon og oppmerksomhet at du ofte føler deg utslitt etter en arbeidsdag? *(Sett ett kryss)*

- Ja nesten alltid ☐
- Ganske ofte ☐
- Ganske sjelden ☐
- Aldri, eller nesten aldri ☐

74 Hvordan trives du alt i alt med arbeidet ditt? *(Sett ett kryss)*

- Veldig godt ☐
- Godt ☐
- Ikke særlig godt ☐
- Dårlig ☐

FØLELSE SISTE 14 DAGER

75 Har du vært plaget av noe av dette de siste 14 dager? *(Sett ett kryss pr. linje)*

	Ikke plaget	Litt plaget	Ganske plaget	Veldig plaget
Vært stadig redd og engstelig?	☐	☐	☐	☐
Følt deg anspent eller urolig?	☐	☐	☐	☐
Følt håpløshet når du tenker på framtida?	☐	☐	☐	☐
Følt deg nedfor og trist?	☐	☐	☐	☐
Bekymret deg for mye om forskjellige ting?	☐	☐	☐	☐

LIVSHENDELSER

76 Har du opplevd noe av følgende de siste 10 år? *(Sett ett kryss pr. linje)*

	Nei	Siste 12 mnd	Ja, tidligere
Hatt problemer på arbeidsplassen eller der du utdanner deg?	☐	☐	☐
Hatt økonomiske problemer?	☐	☐	☐
Hatt problemer eller konflikter med familie eller venner?	☐	☐	☐
Hatt store problemer i kjærlighetslivet?	☐	☐	☐
Vært alvorlig syk eller skadet?	☐	☐	☐
Hatt alvorlig sykdom eller skade blant dine nærmeste?	☐	☐	☐

SPISEVANER

77 Nedenfor er en liste over ting som gjelder spisevaner. Kryss av for hva som passer deg. *(Sett ett kryss pr. linje)*

	Aldri	Sjelden	Ofte	Alltid
Når jeg først har begynt å spise, kan det være vanskelig å stoppe	☐	☐	☐	☐
Jeg bruker for mye tid til å tenke på mat	☐	☐	☐	☐
Jeg føler at maten kontrollerer livet mitt	☐	☐	☐	☐
Når jeg spiser, skjærer jeg maten opp i små biter	☐	☐	☐	☐
Jeg bruker lengre tid enn andre på et måltid	☐	☐	☐	☐
Eldre mennesker synes at jeg er for tynn	☐	☐	☐	☐
Jeg føler at andre presser meg til å spise	☐	☐	☐	☐
Jeg kaster opp etter at jeg har spist	☐	☐	☐	☐

PENGESPILL

78 Har du noensinne følt behov for å spille med stadig økte pengebeløp? Ja ☐ Nei ☐

79 Har du noensinne måttet lyve for personer som er viktige for deg om hvor mye du har spilt for? Ja ☐ Nei ☐

NB!

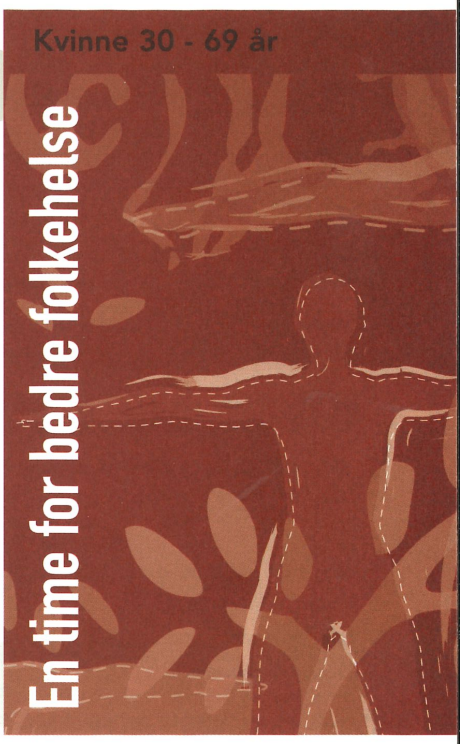
Det utfylte skjemaet returneres i den vedlagte svarkonvolutten. Porto er betalt.

Takk for hjelpa!

hunt 3
Helseundersøkelsen i Nord-Trøndelag

Kjære HUNT-deltaker

Takk for at du møtte til Helseundersøkelsen. Vi vil også be deg om å fylle ut dette spørreskjemaet. Noen av spørsmålene likner de som du har svart på før, men det er viktig at du allikevel besvarer alt. Opplysningene blir brukt til forskning og forebyggende helsearbeid. Forskere vil kun ha tilgang til avidentifiserte data, det vil si at opplysningene ikke kan spores tilbake til en enkeltperson.



Slik fyller du ut skjemaet

- Skjemaet vil bli lest maskinelt.
- Det er derfor viktig at du krysser av riktig: **Rett** ☒ **Galt** ☒ ☑
- Krysser du feil sted, retter du ved å fylle boksen slik: ■
- Skriv tydelige tall: 0 1 2 3 4 5 6 7 8 9
- Bruk bare svart eller blå penn. Ikke bruk blyant eller tusj.

Dato for utfylling:

Dag / Måned 20 År

Vennligst fyll ut skjemaet, og post det snarest mulig. Porto er betalt.

BOLIGFORHOLD OG VENNER

1 Hvem bor du sammen med?
(Sett ett eller flere kryss)

- Ingen ☐
- Foreldre ☐
- Ektefelle/samboer ☐
- Andre personer over 18 år ☐
- Personer under 18 år ☐
- Antall under 18 år ..

2 Er det kjæledyr i boligen?

- Nei ☐
- Ja, katt ☐
- Ja, hund ☐
- Ja, andre pelsdyr/fugl ☐

3 Har du venner som kan gi deg hjelp når du trenger det? Ja ☐ Nei ☐

4 Har du venner som du kan snakke fortrolig med? Ja ☐ Nei ☐

DITT NÆRMILJØ, DVS. NABOLAGET/GRENDA

5 Jeg føler et sterkt fellesskap med de som bor her
(Sett ett kryss)

Helt enig	Delvis enig	Usikker	Delvis uenig	Helt uenig
☐	☐	☐	☐	☐

6 Man kan ikke stole på hverandre her *(Sett ett kryss)*

Helt enig	Delvis enig	Usikker	Delvis uenig	Helt uenig
☐	☐	☐	☐	☐

7 Folk trives godt her *(Sett ett kryss)*

Helt enig	Delvis enig	Usikker	Delvis uenig	Helt uenig
☐	☐	☐	☐	☐

90500025436

AKTIVITET

8 Hvordan har din fysiske aktivitet i fritida vært det siste året? *(Tenk deg et ukentlig gjennomsnitt for året. Arbeidsvei regnes som fritid.)*

	Timer pr. uke			
	Ingen	Under 1	1-2	3 el. mer
Lett aktivitet *(ikke svett/andpusten)*	☐	☐	☐	☐
Hard fysisk aktivitet *(svett/andpusten)*	☐	☐	☐	☐

9 Hvor lang tid bruker du til sammen daglig foran dataskjerm? (*Sett 0 hvis du ikke bruker data*)

I arbeid ☐ timer I fritid ☐ timer

10 Hvor mange timer ser du på TV/video/DVD daglig?

Mindre enn 1 time ☐ 4-6 timer ☐
1-3 timer ☐ Mer enn 6 timer ☐

KULTUR/LIVSSYN

11 Hvor mange ganger har du i løpet av de siste 6 måneder vært på/i:
(Sett ett kryss pr. linje)

	Mer enn 3g /mnd	1-3g /mnd	1-6g siste 6 mnd	Aldri
Museum, kunstutstilling	☐	☐	☐	☐
Konsert, teater, kino	☐	☐	☐	☐
Kirke, bedehus	☐	☐	☐	☐
Idrettsarrangement	☐	☐	☐	☐

12 Hvor mange ganger har du i løpet av de siste 6 måneder selv drevet med:
(Sett ett kryss pr. linje)

	Mer enn 1g /uke	1g /uke	1-3g /mnd	1-5g siste 6 mnd	Ingen gang
Foreningsvirksomhet	☐	☐	☐	☐	☐
Musikk, sang, teater	☐	☐	☐	☐	☐
Menighetsarbeid	☐	☐	☐	☐	☐
Friluftsliv	☐	☐	☐	☐	☐
Dans	☐	☐	☐	☐	☐
Trening, idrett	☐	☐	☐	☐	☐

13 Hvilket livssyn vil du si ligger nærmest opp til ditt eget? *(Sett ett kryss)*

Kristent livssyn ☐ Ateistisk livssyn ☐
Humanetisk livssyn ☐ Annet livssyn ☐

14 Når det skjer vonde ting i livet mitt, tenker jeg: "det er ei mening med det".

Ja ☐ Nei ☐ Vet ikke ☐

15 Jeg søker hjelp hos Gud når jeg trenger styrke og trøst.

Aldri ☐ Av og til ☐ Ofte ☐

PERSONLIGHET

16 Beskriv deg selv slik du vanligvis er:

	Ja	Nei
Klarer du å få fart i et selskap?	☐	☐
Er du stort sett stille og tilbakeholden når du er sammen med andre?	☐	☐
Liker du å treffe nye mennesker?	☐	☐
Liker du å ha masse liv og røre rundt deg?	☐	☐
Er du forholdsvis livlig?	☐	☐
Tar du vanligvis selv initiativet for å få nye venner?	☐	☐
Er du ofte bekymret?	☐	☐
Blir dine følelser lett såret?	☐	☐
Hender det ofte at du "går trøtt"?	☐	☐
Plages du av "nerver"?	☐	☐
Har du ofte følt deg trøtt og likeglad uten grunn?	☐	☐
Bekymrer du deg for at fryktelige ting kan skje?	☐	☐

HODEPINE

17 Har du vært plaget av hodepine det siste året? Ja ☐ Nei ☐
Hvis nei, gå til spørsmål 24.

Hvis ja:
Hva slags hodepine:
Migrene ☐
Annen hodepine ☐

18 Omtrent antall dager pr. måned med hodepine:

Mindre enn 1 dag ☐ 7-14 dager ☐
1-6 dager ☐ Mer enn 14 dager ☐

19 Hvor sterk er hodepina vanligvis?

Mild *(hemmer ikke aktivitet)* ☐
Moderat *(hemmer aktivitet)* ☐
Sterk *(forhindrer aktivitet)* ☐

20 Hvor lenge varer hodepina vanligvis?

Mindre enn 4 timer ☐ 1-3 døgn ☐
4 timer – 1 døgn ☐ Mer enn 3 døgn ☐

21 Er hodepina vanligvis preget av eller ledsaget av:
(Sett ett kryss pr. linje)

	Ja	Nei
Bankende/dunkende smerte?	☐	☐
Pressende smerte?	☐	☐
Ensidig smerte (høyre eller venstre)?	☐	☐
Forverring ved moderat fysisk aktivitet?	☐	☐
Kvalme og/eller oppkast?	☐	☐
Lys- og lydskyhet?	☐	☐

22 Før eller under hodepina; kan du ha forbigående:
(Sett ett kryss pr. linje)

	Ja	Nei
Synsforstyrrelse? *(takkede linjer, flimring, tåkesyn, lysglimt)*	☐	☐
Nummenhet i halve ansiktet eller i handa?	☐	☐

23 Angi hvor mange dager du har vært borte fra arbeid eller skole siste måned på grunn av hodepine: ☐ dager

LUFTVEIER

24 Hoster du daglig i perioder av året? Ja ☐ Nei ☐

Hvis ja:
Er hosten vanligvis ledsaget av oppspytt? Ja ☐ Nei ☐

Har du hatt hoste med oppspytt, i minst 3 måneder, sammenhengende i hvert av de to siste åra? Ja ☐ Nei ☐

25 Har du, eller har du hatt, høysnue eller neseallergi? Ja ☐ Nei ☐

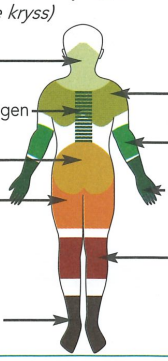
Hvis ja:
Har du hatt slike plager i løpet av de siste 12 måneder? Ja ☐ Nei ☐

26 Har du i løpet av de siste 12 måneder blitt vekket av anfall med tung pust? Ja ☐ Nei ☐

MUSKLER OG LEDD

27 Har du i løpet av det siste året vært plaget med smerter og/eller stivhet i muskler og ledd, som har vart i minst 3 måneder sammenhengende? Ja ☐ Nei ☐
Hvis nei, gå til spørsmål 30.

Hvis ja:
Hvor har du hatt disse plagene?
(Sett ett eller flere kryss)



☐ Nakke
☐ Øvre del av ryggen
☐ Korsryggen
☐ Hofter
☐ Ankler/føtter
☐ Skuldre (aksler)
☐ Albuer
☐ Handledd/hender
☐ Knær

28 Har du vært plaget både i høyre og venstre kroppshalvdel? Ja ☐ Nei ☐

29 Har plagene hindret deg i å utføre daglige aktiviteter?

	Ja	Nei
I arbeid	☐	☐
I fritid	☐	☐

30 Er du operert for ryggplager? Ja ☐ Nei ☐

Hvis ja: Hvilken type operasjon?

Prolaps/ischias-operasjon ☐ Annet ☐
Avstivning ☐

STOFFSKIFTE

31 Har du noen gang fått påvist for lavt stoffskifte (hypotyreose)? Ja ☐ Nei ☐
Hvis ja, hvor gammel var du **første** gang?
Eksempel: 34 *år gammel*
___ *år gammel*

32 Har du noen gang fått påvist for høyt stoffskifte (hypertyreose)? Ja ☐ Nei ☐
Hvis ja, hvor gammel var du **første** gang?
Eksempel: 34 *år gammel*
___ *år gammel*

Hvis ja:
Har du brukt Neo-Mercazole? ☐ ☐ ___ *år gammel*
Har du fått radiojodbehandling? ☐ ☐ ___ *år gammel*

MAGE OG TARM

33 Har du vært plaget med smerter eller ubehag fra magen de siste 12 måneder?
Ja, mye ... ☐ Ja, litt.. ☐ Nei, aldri .. ☐
Hvis nei, gå til spørsmål 34.

Hvis ja:

	Ja	Nei
Er disse lokalisert øverst i magen?	☐	☐
Har du de siste 3 måneder hatt disse plagene så ofte som 1 dag i uka i minst 3 uker?	☐	☐
Blir smertene eller ubehaget bedre etter at du har hatt avføring?	☐	☐
Har smertene eller ubehaget noen sammenheng med hyppigere eller sjeldnere avføring enn vanlig?	☐	☐
Har smertene eller ubehaget noen sammenheng med at avføringen blir løsere eller fastere enn vanlig?	☐	☐
Kommer smertene eller ubehaget etter måltid?	☐	☐

34 I hvilken grad har du hatt følgende plager i de siste 12 måneder?

	Aldri	Litt	Mye
Kvalme	☐	☐	☐
Halsbrann/sure oppstøt	☐	☐	☐
Diaré	☐	☐	☐
Treg mage	☐	☐	☐
Vekslende treg mage og diaré	☐	☐	☐
Oppblåsthet	☐	☐	☐

HVORDAN FØLER DU DEG

Her kommer noen utsagn om hvordan du føler deg. For hvert spørsmål setter du kryss for ett av de fire svarene som best beskriver dine følelser den siste uken. Ikke tenk for lenge på svaret – de spontane svarene er best.

35 Jeg føler meg nervøs og urolig

Nei ☐ En god del ☐
Litt ☐ Svært mye ☐

36 Jeg gleder meg fortsatt over ting slik jeg pleide før

Avgjort like mye ☐ Bare lite grann ☐
Ikke fullt så mye ☐ Ikke i det hele tatt ☐

37 Jeg har en urofølelse som om noe forferdelig vil skje

Ja, og noe svært ille ☐ Litt, bekymrer meg lite ☐
Ja, ikke så veldig ille ☐ Ikke i det hele tatt ☐

38 Jeg kan le og se det morsomme i situasjoner

Like mye nå som før ☐ Avgjort ikke som før ☐
Ikke like mye nå som før ☐ Ikke i det hele tatt ☐

39 Jeg har hodet fullt av bekymringer

Veldig ofte ☐ Av og til ☐
Ganske ofte ☐ En gang i blant ☐

40 Jeg er i godt humør

Aldri ☐ Ganske ofte ☐
Noen ganger ☐ For det meste ☐

41 Jeg kan sitte i fred og ro og kjenne meg avslappet

Ja, helt klart ☐ Ikke så ofte ☐
Vanligvis ☐ Ikke i det hele tatt ☐

42 Jeg føler meg som om alt går langsommere

Nesten hele tiden ☐ Fra tid til annen ☐
Svært ofte ☐ Ikke i det hele tatt ☐

43 Jeg føler meg urolig som om jeg har sommerfugler i magen

Ikke i det hele tatt ☐ Ganske ofte ☐
Fra tid til annen ☐ Svært ofte ☐

44 Jeg bryr meg ikke lenger om hvordan jeg ser ut

Ja, har sluttet å bry meg ☐ Kan hende ikke nok ☐
Ikke som jeg burde ☐ Bryr meg som før ☐

45 Jeg er rastløs som om jeg stadig må være aktiv

Uten tvil svært mye ☐ Ikke så veldig mye ☐
Ganske mye ☐ Ikke i det hele tatt ☐

46 Jeg ser med glede fram til hendelser og ting

Like mye som før ☐ Avgjort mindre enn før ☐
Heller mindre enn før ☐ Nesten ikke i hele tatt ☐

47 Jeg kan plutselig få en følelse av panikk

Uten tvil svært ofte ☐ Ikke så veldig ofte ☐
Ganske ofte ☐ Ikke i det hele tatt ☐

48 Jeg kan glede meg over gode bøker, radio/TV

Ofte ☐ Ikke så ofte ☐
Fra tid til annen ☐ Svært sjelden ☐

SØVN

49 Hvor ofte har det hendt i løpet av de siste 3 måneder at du:	Aldri/ sjelden	Av og til	Flere ggr/ uka
Snorker høyt og sjenerende?	☐	☐	☐
Får pustestopp når du sover?	☐	☐	☐
Har vanskelig for å sovne om kvelden?	☐	☐	☐
Våkner gjentatte ganger om natta?	☐	☐	☐
Våkner for tidlig og får ikke sove igjen?	☐	☐	☐
Kjenner deg søvnig om dagen?	☐	☐	☐
Har plagsom nattesvette?	☐	☐	☐
Våkner med hodepine?	☐	☐	☐
Får ubehag, kribling eller mauring i bein?	☐	☐	☐

ALKOHOL

Hvis du ikke drikker alkohol, gå til spørsmål 54.

	Ja	Nei
50 Har du noen gang følt at du burde redusere alkoholforbruket ditt?	☐	☐
51 Har andre noen gang kritisert alkoholbruken din?	☐	☐
52 Har du noen gang følt ubehag eller skyldfølelse pga. alkoholbruken din?	☐	☐
53 Har det å ta en drink noen gang vært det første du har gjort om morgenen for å roe nervene, kurere bakrus eller som en oppkvikker?	☐	☐

KOSTHOLD

54 Hvor mange skiver brød spiser du vanligvis?
(Sett ett kryss for hver type brød)

	0-4 /uke	5-7 /uke	2-3 /dag	4-5 /dag	6 el flere /dag
Loff/fint brød	☐	☐	☐	☐	☐
Kneipp/mellomgrovt	☐	☐	☐	☐	☐
Grovt brød	☐	☐	☐	☐	☐

55 Hvor ofte spiser du vanligvis disse måltidene?
(Sett ett kryss pr. måltid)

	Sjelden /aldri	1-2 g /uke	3-4 g /uke	5-6 g /uke	Hver dag
Frokost	☐	☐	☐	☐	☐
Formiddagsmat	☐	☐	☐	☐	☐
Varm middag	☐	☐	☐	☐	☐
Kveldsmat	☐	☐	☐	☐	☐
Annet måltid	☐	☐	☐	☐	☐
Nattmat (kl 24-06)	☐	☐	☐	☐	☐

56 Hva slags fett bruker du oftest?
(Sett ett kryss pr. linje)

	Meieri-smør	Margarin: Hard	Margarin: Myk /lett	Oljer	Bruker ikke
På brød	☐	☐	☐	☐	☐
I matlaging	☐	☐	☐	☐	☐

TANNHELSE

57 Har du de siste 12 måneder vært hos tannlege/tannhelsetjeneste? Ja ☐ Nei ☐

58 Hvordan vurderer du tannhelsa di?

Meget dårlig ☐ God ☐
Dårlig ☐ Meget god ☐
Verken god eller dårlig ☐

59 Hva betyr god tannhelse for helsa di ellers?

Svært mye ☐ Lite ☐
Mye ☐ Svært lite ☐
Både og ☐

BRUK AV RESEPTFRIE MEDISINER

60 Hvor ofte har du brukt reseptfrie medisiner mot følgende plager i løpet av den siste måneden?
(Sett ett kryss pr. linje)

	Sjelden /aldri	1-3 g /uke	4-6 g /uke	Dag-lig
Halsbrann/sure oppstøt	☐	☐	☐	☐
Treg mage	☐	☐	☐	☐
Hodepine	☐	☐	☐	☐
Smerter i muskler/ledd	☐	☐	☐	☐

61 Har du brukt noen av disse reseptfrie medisinene minst en gang i uka i løpet av den siste måneden?

	Ja	Nei
Paracetamol, Paracet, Panodil, Pamol, Pinex, Perfalgan	☐	☐
Albyl E (500 mg), Aspirin, Globoid, Dispril	☐	☐
Ibuprofen, Ibux, Ibuprox, Ibumetin, Brufen	☐	☐
Naproxen, Naprosyn, Ledox	☐	☐
Andre	☐	☐

HVORDAN FØLER DU DEG NÅ

62 Føler du deg stort sett sterk og opplagt, eller trøtt og sliten?

Meget sterk og opplagt ☐
Sterk og opplagt ☐
Ganske sterk og opplagt ☐
Både – og ☐
Ganske trøtt og sliten ☐
Trøtt og sliten ☐
Svært trøtt og sliten ☐

SVANGERSKAP OG PREVENSJON

63 Når du ser bort fra svangerskap og barselperiode, har du noen gang vært blødningsfri i minst 6 måneder før overgangsalder? Ja ☐ Nei ☐

Hvis ja: Hvor mange ganger? ☐☐ ganger

64 Hvor mange ganger har du i alt vært gravid? ☐☐ ganger

65 Har du noen gang prøvd i mer enn ett år å bli gravid? Ja ☐ Nei ☐

Hvis ja:
Hvor gammel var du første gang du hadde problemer med å bli gravid? ☐☐ år gammel

66 Har du noen gang fått hormonbehandling for å bli gravid? Ja ☐ Nei ☐

Hvis ja: Har du fått slik behandling *siste 3 måneder?* ☐ ☐

67 Bruker du, eller har du brukt:
(Sett ett kryss pr. linje)

	Nå	Før, ikke nå	Aldri
P-piller?	☐	☐	☐
P-plaster?	☐	☐	☐
Annen hormonprevensjon? *(P-sprøyte, P-ring, P-implantat, hormonspiral)*	☐	☐	☐

68 Hvis du har brukt P-piller:
Hvor gammel var du første gang du begynte med dette? ☐☐ år gammel

Hvor mange år har du i alt brukt P-piller?

Mindre enn 1 år ☐ 4-10 år ☐
1-3 år ☐ Over 10 år ☐

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OVERGANGSALDER

Hvis ikke kommet i overgangsalder, hopp til spm. 75.

69 Merker/merket du hetetokter i forbindelse med overgangsalder?

Om dagen ☐ Begge deler ☐
Om natten ☐ Merket ikke ☐

Hvis du merket hetetokter, hvordan vil du beskrive plagene?

Store ☐ Middels ☐ Små ☐

Ja Nei

Oppsøkte du lege i forbindelse med plagene? ☐ ☐

70 Har du noen gang brukt medisiner som inneholder østrogen?

	Nå	Før	Aldri
Tabletter eller plaster (på resept fra lege)	☐	☐	☐
Krem eller stikkpiller	☐	☐	☐

71 Hvis du har brukt reseptpliktig østrogen, hvor gammel var du da du begynte? ____ år gammel

72 Hvis du bruker eller har brukt reseptpliktig østrogen, hvor gammel er/var du siste gang du brukte dette? ____ år gammel

73 Hvis du bruker eller har brukt østrogentabletter eller -plaster, hvorfor begynte du?

Lindre plager i overgangsalder ☐
Forebygge beinskjørhet ☐ Annet ☐

74 Hvis du tidligere har brukt østrogentabletter eller -plaster, hvorfor sluttet du?

Er/var kvitt plagene ☐ Redd for bivirkninger ☐
Fikk plagsomme bivirkninger ☐ Annet ☐

OPERASJONER/STRÅLEBEHANDLING I UNDERLIVET

75 Har du noen gang blitt operert for nedsunken livmor eller skjedevegg? Ja ☐ Nei ☐ Vet ikke ☐

Hvis ja:
Hvor gammel var du da? ____ år gammel

76 Har du ved operasjon fått fjernet begge eggstokkene (totalt)? Ja ☐ Nei ☐ Vet ikke ☐

Hvis ja:
Hvor gammel var du da? ____ år gammel

77 Har du ved operasjon fått fjernet hele livmoren? Ja ☐ Nei ☐ Vet ikke ☐

Hvis ja:
Hvor gammel var du da? ____ år gammel

78 Har du noen gang hatt stråle-behandling mot underlivet? Ja ☐ Nei ☐ Vet ikke ☐

Hvis ja:
Hvor gammel var du da? ____ år gammel

URINVEIER

79 Hvor ofte later du vanligvis vannet om dagen?

1-4 ganger ☐ 8-11 ganger ☐
5-7 ganger ☐ Over 11 ganger ☐

80 Hvor mange ganger må du opp om natta for å late vannet?

Ingen	1 gang	2 ganger	3 ganger	4 ganger	5 ganger eller mer
☐	☐	☐	☐	☐	☐

81 Hvis du må opp om natta for å late vannet, hvordan opplever du dette?

Ikke noe problem ☐ Mye plaget ☐
Litt plaget ☐ Svært stort problem ☐

82 Opplever du plutselig og/eller sterk vannlatings-trang som er vanskelig å holde tilbake?

Aldri ☐ Flere ganger i uka ☐
Månedlig ☐ Daglig ☐

83 Har du ufrivillig urinlekkasje? Ja ☐ Nei ☐
(Hvis nei, gå til spm. 84)

Hvis ja:

Hvor ofte har du urinlekkasje?

Mindre enn 1 gang/mnd ☐ En el. flere ganger /uke ☐
En eller flere ganger/mnd ☐ Hver dag og/eller natt ☐

Hvor mye urin lekker du vanligvis hver gang?

Dråper ☐ Større mengder ☐
Små skvetter ☐

Har du lekkasje av urin i forbindelse med hosting, nysing, latter, tunge løft? Ja ☐ Nei ☐

Har du lekkasje av urin i forbindelse med plutselig og sterk vannlatingstrang? Ja ☐ Nei ☐

Hvordan opplever du lekkasjeplagene dine?

Ikke noe problem ☐ Mye plaget ☐
En liten plage ☐ Svært stort problem ☐
En del plaget ☐

Hvor gammel var du da du fikk urinlekkasje? ____ år gammel

84 Har du søkt lege for urinlekkasje? Ja ☐ Nei ☐

85 Har du noengang fått behandling for ufrivillig urinlekkasje?

Nei, jeg har aldri hatt urinlekkasje ☐
Nei, jeg hadde urinlekkasje, men ble bra av meg selv ☐
Ja ☐

Hvis ja: Hvilken behandling?
(Du kan sette flere kryss)

Operasjon ☐ Medisiner ☐
Bekkenbunnstrening ☐ Annet ☐

AVFØRING

	Aldri/ sjelden	Hver uke	Hver dag
86 Har du hatt ukontrollert lekkasje av luft fra tarmen i løpet av den siste måneden?	☐	☐	☐
87 Har du hatt lekkasje av avføring fra tarmen i løpet av den siste måneden?	☐	☐	☐
88 Hvis ja på spm 86 eller 87; har plagene med lekkasje fra endetarmen innvirkning på ditt hverdagsliv?	☐	☐	☐

	Ja	Nei
89 Har du evne til å holde igjen avføring og utsette toalettbesøk i 15 minutter etter første følelse av trang?	☐	☐

VURDERING AV DIN ARBEIDSPLASS

Besvares hvis du er eller har vært i arbeid. Ta stilling til følgende påstander/spørsmål om arbeidsplassen din og arbeidet ditt.

90 Det er et godt samhold på arbeidsplassen

Stemmer helt ☐ Stemmer ikke særlig ... ☐
Stemmer ganske bra ☐ Stemmer slett ikke ☐

91 Mine kolleger stiller opp for meg (gir meg støtte)

Stemmer helt ☐ Stemmer ikke særlig ... ☐
Stemmer ganske bra ☐ Stemmer slett ikke ☐

92 Jeg trives godt med mine arbeidskamerater

Stemmer helt ☐ Stemmer ikke særlig ... ☐
Stemmer ganske bra ☐ Stemmer slett ikke ☐

93 Er du blitt mobbet/trakassert på din arbeidsplass

Ja, ofte ☐ Nei, sjelden ☐
Ja, iblant ☐ Nei, så godt som aldri ☐

94 Krever arbeidet ditt at du må arbeide veldig hurtig?

Ja, ofte ☐ Nei, sjelden ☐
Ja, iblant ☐ Nei, så godt som aldri ☐

95 Krever arbeidet ditt at du må arbeide svært hardt?

Ja, ofte ☐ Nei, sjelden ☐
Ja, iblant ☐ Nei, så godt som aldri ☐

96 Krever arbeidet ditt for stor arbeidsinnsats?

Ja, ofte ☐ Nei, sjelden ☐
Ja, iblant ☐ Nei, så godt som aldri ☐

97 Krever arbeidet ditt oppfinnsomhet?

Ja, ofte ☐ Nei, sjelden ☐
Ja, iblant ☐ Nei, så godt som aldri ☐

98 Har du mulighet til selv å bestemme hvordan arbeidet skal utføres?

Ja, ofte ☐ Nei, sjelden ☐
Ja, iblant ☐ Nei, så godt som aldri ☐

99 Har du mulighet til selv å bestemme hva som skal gjøres i arbeidet ditt?

Ja, ofte ☐ Nei, sjelden ☐
Ja, iblant ☐ Nei, så godt som aldri ☐

100 Er arbeidet ditt så fysisk anstrengende at du ofte er sliten i kroppen etter en arbeidsdag?

Ja, nesten alltid ☐ Ganske sjelden ☐
Ja, ganske ofte ☐ Aldri eller nesten aldri. ☐

SMERTER I BEINA

	Ja	Nei
101 Har du sår på tå, fot eller ankel som ikke vil gro?	☐	☐
102 Har du smerter i det ene eller i begge beina når du går?	☐	☐

Hvis ja:

Hvor gjør det mest vondt?
Fot ☐
Legg ☐
Lår ☐
Hofte ☐

	Ja	Nei
Forsvinner smertene når du står stille en stund?	☐	☐
103 Har du smerter i beina når du er i ro?	☐	☐

Hvis ja:

	Ja	Nei
Er smertene verst når du ligger i senga?	☐	☐
Får du mindre vondt når beinet ligger lavt, f.eks. om beinet henger utfor sengekanten?	☐	☐
Har du hatt smertene i beina sammenhengende i mer enn 14 dager?	☐	☐
104 Har du brukt smertestillende medisin pga. smerter i beina?	☐	☐

SYN

	Ja	Nei
105 Har du noen av disse øyesykdommene?		
Katarakt *(grå stær)*	☐	☐
Glaukom *(grønn stær, høyt trykk i øyet)*	☐	☐
Aldersrelatert makuladegenerasjon *(forkalkning på netthinna)*	☐	☐

HUKOMMELSE

106 Har du problemer med hukommelsen?

Nei ..... ☐ Ja, noe .... ☐ Ja, store ..... ☐

107 Har hukommelsen endret seg siden du var yngre?

Nei ..... ☐ Ja, noe .... ☐ Ja, mye ..... ☐

108 Har du problemer med å huske:

	Aldri	Av og til	Ofte
Hendelser for få minutter siden?	☐	☐	☐
Navn på andre mennesker?	☐	☐	☐
Datoer?	☐	☐	☐
Å gjøre det du har planlagt?	☐	☐	☐
Hendelser som skjedde for noen dager siden?	☐	☐	☐
Hendelser som skjedde for år siden?	☐	☐	☐
Å holde tråden i samtaler?	☐	☐	☐

SPISEFORSTYRRELSER

Sett en ring rundt det tallet som best beskriver dine spisevaner, slik du synes det har vært den siste måneden.

109 Hvor fornøyd har du vært med dine spisevaner?

Svært fornøyd 1 2 3 4 5 6 7 Svært misfornøyd

110 Har du trøstespist eller spist ekstra på grunn av at du har vært nedstemt eller følt deg utilfreds?

Ikke i det hele tatt 1 2 3 4 5 6 7 Hver dag

111 Har du hatt skyldfølelse i forbindelse med spising?

Ikke i det hele tatt 1 2 3 4 5 6 7 Hver dag

112 Har du følt at det er nødvendig for deg å følge strenge dietter eller andre matritualer for å holde kontroll med hvor mye du spiser?

Ikke i det hele tatt 1 2 3 4 5 6 7 Hver dag

113 Har du følt at du er for tykk?

Ikke i det hele tatt 1 2 3 4 5 6 7 Hver dag

NB!

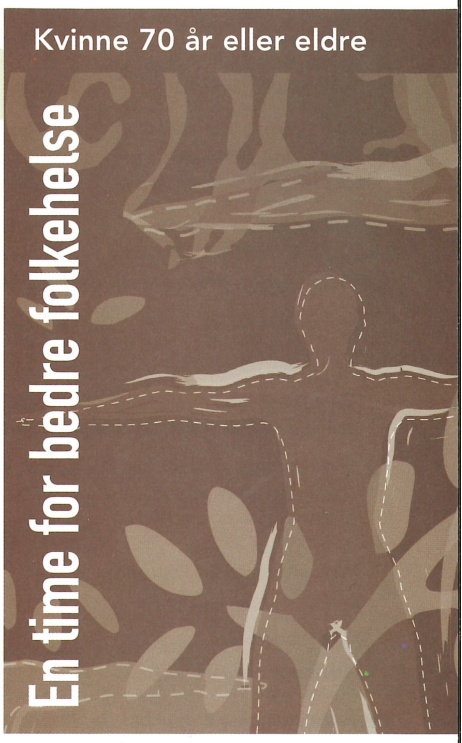
Det utfylte skjemaet returneres i den vedlagte svarkonvolutten.
Porto er betalt.

Takk for hjelpa!

hunt 3
Helseundersøkelsen i Nord-Trøndelag

Kjære HUNT-deltaker

Takk for at du møtte til Helseundersøkelsen. Vi vil også be deg om å fylle ut dette spørreskjemaet. Noen av spørsmålene likner de som du har svart på før, men det er viktig at du allikevel besvarer alt. Opplysningene blir brukt til forskning og forebyggende helsearbeid. Forskere vil kun ha tilgang til avidentifiserte data, det vil si at opplysningene ikke kan spores tilbake til en enkeltperson.



Slik fyller du ut skjemaet

- Skjemaet vil bli lest maskinelt.
- Det er derfor viktig at du krysser av riktig: **Rett** ☒ **Galt** ☐ ☑
- Krysser du feil sted, retter du ved å fylle boksen slik: ■
- Skriv tydelige tall: 0 1 2 3 4 5 6 7 8 9
- Bruk bare svart eller blå penn. Ikke bruk blyant eller tusj.

Dato for utfylling:

____ / ____ 20____
Dag / Måned / År

Vennligst fyll ut skjemaet, og post det snarest mulig. Porto er betalt.

BOLIGFORHOLD OG VENNER

1 Hvem bor du sammen med?
(Sett ett eller flere kryss)

- Ingen ☐
- Foreldre ☐
- Ektefelle/samboer ☐
- Andre personer over 18 år ☐
- Personer under 18 år ☐
- Antall under 18 år ____

2 Er det kjæledyr i boligen?

- Nei ☐
- Ja, katt ☐
- Ja, hund ☐
- Ja, andre pelsdyr/fugl ☐

3 Har du venner som kan gi deg hjelp når du trenger det? Ja ☐ Nei ☐

4 Har du venner som du kan snakke fortrolig med? Ja ☐ Nei ☐

DITT NÆRMILJØ, DVS. NABOLAGET/GRENDA

5 Jeg føler et sterkt fellesskap med de som bor her
(Sett ett kryss)

Helt enig	Delvis enig	Usikker	Delvis uenig	Helt uenig
☐	☐	☐	☐	☐

6 Man kan ikke stole på hverandre her *(Sett ett kryss)*

Helt enig	Delvis enig	Usikker	Delvis uenig	Helt uenig
☐	☐	☐	☐	☐

7 Folk trives godt her *(Sett ett kryss)*

Helt enig	Delvis enig	Usikker	Delvis uenig	Helt uenig
☐	☐	☐	☐	☐

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AKTIVITET

8 Hvordan har din fysiske aktivitet i fritida vært det siste året? *(Tenk deg et ukentlig gjennomsnitt for året. Arbeidsvei regnes som fritid.)*

	Timer pr. uke			
	Ingen	Under 1	1-2	3 el. mer
Lett aktivitet *(ikke svett/andpusten)*	☐	☐	☐	☐
Hard fysisk aktivitet *(svett/andpusten)*	☐	☐	☐	☐

9 Hvor lang tid bruker du til sammen daglig foran dataskjerm? (*Sett 0 hvis du ikke bruker data*)

I arbeid ☐ timer I fritid ☐ timer

10 Hvor mange timer ser du på TV/video/DVD daglig?

Mindre enn 1 time ☐ 4-6 timer ☐
1-3 timer ☐ Mer enn 6 timer ☐

KULTUR/LIVSSYN

11 Hvor mange ganger har du i løpet av de siste 6 måneder vært på/i: *(Sett ett kryss pr. linje)*

	Mer enn 3g /mnd	1-3g /mnd	1-6g siste 6 mnd	Aldri
Museum, kunstutstilling	☐	☐	☐	☐
Konsert, teater, kino	☐	☐	☐	☐
Kirke, bedehus	☐	☐	☐	☐
Idrettsarrangement	☐	☐	☐	☐

12 Hvor mange ganger har du i løpet av de siste 6 måneder selv drevet med: *(Sett ett kryss pr. linje)*

	Mer enn 1g /uke	1g /uke	1-3g /mnd	1-5g siste 6 mnd	Ingen gang
Foreningsvirksomhet	☐	☐	☐	☐	☐
Musikk, sang, teater	☐	☐	☐	☐	☐
Menighetsarbeid	☐	☐	☐	☐	☐
Friluftsliv	☐	☐	☐	☐	☐
Dans	☐	☐	☐	☐	☐
Trening, idrett	☐	☐	☐	☐	☐

13 Hvilket livssyn vil du si ligger nærmest opp til ditt eget? *(Sett ett kryss)*

Kristent livssyn ☐ Ateistisk livssyn ☐
Humanetisk livssyn ☐ Annet livssyn ☐

14 Når det skjer vonde ting i livet mitt, tenker jeg: "det er ei mening med det".

Ja ☐ Nei ☐ Vet ikke ☐

15 Jeg søker hjelp hos Gud når jeg trenger styrke og trøst.

Aldri ☐ Av og til ☐ Ofte ☐

PERSONLIGHET

16 Beskriv deg selv slik du vanligvis er:

	Ja	Nei
Klarer du å få fart i et selskap?	☐	☐
Er du stort sett stille og tilbakeholden når du er sammen med andre?	☐	☐
Liker du å treffe nye mennesker?	☐	☐
Liker du å ha masse liv og røre rundt deg?	☐	☐
Er du forholdsvis livlig?	☐	☐
Tar du vanligvis selv initiativet for å få nye venner?	☐	☐
Er du ofte bekymret?	☐	☐
Blir dine følelser lett såret?	☐	☐
Hender det ofte at du "går trøtt"?	☐	☐
Plages du av "nerver"?	☐	☐
Har du ofte følt deg trøtt og likeglad uten grunn?	☐	☐
Bekymrer du deg for at fryktelige ting kan skje?	☐	☐

HODEPINE

17 Har du vært plaget av hodepine det siste året? *Hvis nei, gå til spørsmål 23.*

	Ja	Nei
	☐	☐

Hvis ja:
Hva slags hodepine:
Migrene ☐
Annen hodepine ☐

18 Omtrent antall dager pr. måned med hodepine:

Mindre enn 1 dag ☐ 7-14 dager ☐
1-6 dager ☐ Mer enn 14 dager ☐

19 Hvor sterk er hodepina vanligvis?

Mild *(hemmer ikke aktivitet)* ☐
Moderat *(hemmer aktivitet)* ☐
Sterk *(forhindrer aktivitet)* ☐

20 Hvor lenge varer hodepina vanligvis?

Mindre enn 4 timer ☐ 1-3 døgn ☐
4 timer – 1 døgn ☐ Mer enn 3 døgn ☐

21 Er hodepina vanligvis preget av eller ledsaget av: *(Sett ett kryss pr. linje)*

	Ja	Nei
Bankende/dunkende smerte?	☐	☐
Pressende smerte?	☐	☐
Ensidig smerte (høyre eller venstre)?	☐	☐
Forverring ved moderat fysisk aktivitet?	☐	☐
Kvalme og/eller oppkast?	☐	☐
Lys- og lydskyhet?	☐	☐

22 Før eller under hodepina; kan du ha forbigående: *(Sett ett kryss pr. linje)*

	Ja	Nei
Synsforstyrrelse? *(takkede linjer, flimring, tåkesyn, lysglimt)*	☐	☐
Nummenhet i halve ansiktet eller i handa?	☐	☐

LUFTVEIER

23 Hoster du daglig i perioder av året? Ja ☐ Nei ☐

Hvis ja:
Er hosten vanligvis ledsaget av oppspytt? Ja ☐ Nei ☐

Har du hatt hoste med oppspytt, i minst 3 måneder, sammenhengende i hvert av de to siste åra? Ja ☐ Nei ☐

24 Har du, eller har du hatt, høysnue eller neseallergi? Ja ☐ Nei ☐

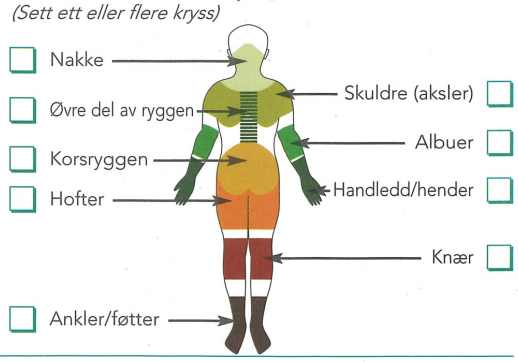
Hvis ja:
Har du hatt slike plager i løpet av de siste 12 måneder? Ja ☐ Nei ☐

25 Har du i løpet av de siste 12 måneder blitt vekket av anfall med tung pust? Ja ☐ Nei ☐

MUSKLER OG LEDD

26 Har du i løpet av det siste året vært plaget med smerter og/eller stivhet i muskler og ledd, som har vart i minst 3 måneder sammenhengende? Ja ☐ Nei ☐
Hvis nei, gå til spørsmål 29.

Hvis ja:
Hvor har du hatt disse plagene?
(Sett ett eller flere kryss)



27 Har du vært plaget både i høyre og venstre kroppshalvdel? Ja ☐ Nei ☐

28 Har plagene hindret deg i å utføre daglige aktiviteter? Ja Nei
I arbeid ☐ ☐
I fritid ☐ ☐

29 Er du operert for ryggplager? Ja ☐ Nei ☐

Hvis ja: Hvilken type operasjon?

Prolaps/ischias-operasjon ☐ Annet ☐
Avstivning ☐

STOFFSKIFTE

30 Har du noen gang fått påvist for lavt stoffskifte (hypotyreose)? Ja ☐ Nei ☐
Hvis ja, hvor gammel var du **første** gang?
Eksempel: 34 *år gammel*
___ *år gammel*

31 Har du noen gang fått påvist for høyt stoffskifte (hypertyreose)? Ja ☐ Nei ☐
Hvis ja, hvor gammel var du **første** gang?
Eksempel: 34 *år gammel*
___ *år gammel*

Hvis ja:
Har du brukt Neo-Mercazole? ☐ ☐ ___ *år gammel*
Har du fått radiojodbehandling? ☐ ☐ ___ *år gammel*

MAGE OG TARM

32 Har du vært plaget med smerter eller ubehag fra magen de siste 12 måneder?
Ja, mye ... ☐ Ja, litt.. ☐ Nei, aldri.. ☐
Hvis nei, gå til spørsmål 33.

Hvis ja: Ja Nei
Er disse lokalisert øverst i magen? ☐ ☐
Har du de siste 3 måneder hatt disse plagene så ofte som 1 dag i uka i minst 3 uker? ☐ ☐
Blir smertene eller ubehaget bedre etter at du har hatt avføring? ☐ ☐
Har smertene eller ubehaget noen sammenheng med hyppigere eller sjeldnere avføring enn vanlig? ☐ ☐
Har smertene eller ubehaget noen sammenheng med at avføringen blir løsere eller fastere enn vanlig? ☐ ☐
Kommer smertene eller ubehaget etter måltid? ☐ ☐

33 I hvilken grad har du hatt følgende plager i de siste 12 måneder?

	Aldri	Litt	Mye
Kvalme	☐	☐	☐
Halsbrann/sure oppstøt	☐	☐	☐
Diaré	☐	☐	☐
Treg mage	☐	☐	☐
Vekslende treg mage og diaré	☐	☐	☐
Oppblåsthet	☐	☐	☐

HVORDAN FØLER DU DEG

Her kommer noen utsagn om hvordan du føler deg. For hvert spørsmål setter du kryss for ett av de fire svarene som best beskriver dine følelser den siste uken. Ikke tenk for lenge på svaret – de spontane svarene er best.

34 Jeg føler meg nervøs og urolig

Nei ☐ | En god del ☐
Litt ☐ | Svært mye ☐

35 Jeg gleder meg fortsatt over ting slik jeg pleide før

Avgjort like mye ☐ | Bare lite grann ☐
Ikke fullt så mye ☐ | Ikke i det hele tatt ☐

36 Jeg har en urofølelse som om noe forferdelig vil skje

Ja, og noe svært ille ☐ | Litt, bekymrer meg lite ☐
Ja, ikke så veldig ille ☐ | Ikke i det hele tatt ☐

37 Jeg kan le og se det morsomme i situasjoner

Like mye nå som før ☐ | Avgjort ikke som før ☐
Ikke like mye nå som før. ☐ | Ikke i det hele tatt ☐

38 Jeg har hodet fullt av bekymringer

Veldig ofte ☐ | Av og til ☐
Ganske ofte ☐ | En gang i blant ☐

39 Jeg er i godt humør

Aldri ☐ | Ganske ofte ☐
Noen ganger ☐ | For det meste ☐

40 Jeg kan sitte i fred og ro og kjenne meg avslappet

Ja, helt klart ☐ | Ikke så ofte ☐
Vanligvis ☐ | Ikke i det hele tatt ☐

41 Jeg føler meg som om alt går langsommere

Nesten hele tiden ☐ | Fra tid til annen ☐
Svært ofte ☐ | Ikke i det hele tatt ☐

42 Jeg føler meg urolig som om jeg har sommerfugler i magen

Ikke i det hele tatt ☐ | Ganske ofte ☐
Fra tid til annen ☐ | Svært ofte ☐

43 Jeg bryr meg ikke lenger om hvordan jeg ser ut

Ja, har sluttet å bry meg ☐ | Kan hende ikke nok ☐
Ikke som jeg burde ☐ | Bryr meg som før ☐

44 Jeg er rastløs som om jeg stadig må være aktiv

Uten tvil svært mye ☐ | Ikke så veldig mye ☐
Ganske mye ☐ | Ikke i det hele tatt ☐

45 Jeg ser med glede fram til hendelser og ting

Like mye som før ☐ | Avgjort mindre enn før ☐
Heller mindre enn før ☐ | Nesten ikke i hele tatt ☐

46 Jeg kan plutselig få en følelse av panikk

Uten tvil svært ofte ☐ | Ikke så veldig ofte ☐
Ganske ofte ☐ | Ikke i det hele tatt ☐

47 Jeg kan glede meg over gode bøker, radio/TV

Ofte ☐ | Ikke så ofte ☐
Fra tid til annen ☐ | Svært sjelden ☐

SØVN

48 Hvor ofte har det hendt i løpet av de siste 3 måneder at du:	Aldri/ sjelden	Av og til	Flere ggr/ uka
Snorker høyt og sjenerende?	☐	☐	☐
Får pustestopp når du sover?	☐	☐	☐
Har vanskelig for å sovne om kvelden?	☐	☐	☐
Våkner gjentatte ganger om natta?	☐	☐	☐
Våkner for tidlig og får ikke sove igjen?	☐	☐	☐
Kjenner deg søvnig om dagen?	☐	☐	☐
Har plagsom nattesvette?	☐	☐	☐
Våkner med hodepine?	☐	☐	☐
Får ubehag, kribling eller mauring i bein?	☐	☐	☐

ALKOHOL

Hvis du ikke drikker alkohol, gå til spørsmål 53

	Ja	Nei
49 Har du noen gang følt at du burde redusere alkoholforbruket ditt?	☐	☐
50 Har andre noen gang kritisert alkoholbruken din?	☐	☐
51 Har du noen gang følt ubehag eller skyldfølelse pga. alkoholbruken din?	☐	☐
52 Har det å ta en drink noen gang vært det første du har gjort om morgenen for å roe nervene, kurere bakrus eller som en oppkvikker?	☐	☐

KOSTHOLD

53 Hvor mange skiver brød spiser du vanligvis?
(Sett ett kryss for hver type brød)

	0-4 /uke	5-7 /uke	2-3 /dag	4-5 /dag	6 el flere /dag
Loff/fint brød	☐	☐	☐	☐	☐
Kneipp/mellomgrovt	☐	☐	☐	☐	☐
Grovt brød	☐	☐	☐	☐	☐

54 Hvor ofte spiser du vanligvis disse måltidene?
(Sett ett kryss pr. måltid)

	Sjelden /aldri	1-2 g /uke	3-4 g /uke	5-6 g /uke	Hver dag
Frokost	☐	☐	☐	☐	☐
Formiddagsmat	☐	☐	☐	☐	☐
Varm middag	☐	☐	☐	☐	☐
Kveldsmat	☐	☐	☐	☐	☐
Annet måltid	☐	☐	☐	☐	☐
Nattmat (kl 24-06)	☐	☐	☐	☐	☐

55 Hva slags fett bruker du oftest?
(Sett ett kryss pr. linje)

	Meieri-smør	Margarin Hard	Margarin Myk /lett	Oljer	Bruker ikke
På brød	☐	☐	☐	☐	☐
I matlaging	☐	☐	☐	☐	☐

TANNHELSE

56 Har du de siste 12 måneder vært hos tannlege/tannhelsetjeneste? Ja ☐ Nei ☐

57 Hvordan vurderer du tannhelsa di?

- Meget dårlig ☐
- Dårlig ☐
- Verken god eller dårlig ☐
- God ☐
- Meget god ☐

58 Hva betyr god tannhelse for helsa di ellers?

- Svært mye ☐
- Mye ☐
- Både og ☐
- Lite ☐
- Svært lite ☐

BRUK AV RESEPTFRIE MEDISINER

59 Hvor ofte har du brukt reseptfrie medisiner mot følgende plager i løpet av den siste måneden?
(Sett ett kryss pr. linje)

	Sjelden /aldri	1-3 g /uke	4-6 g /uke	Dag-lig
Halsbrann/sure oppstøt	☐	☐	☐	☐
Treg mage	☐	☐	☐	☐
Hodepine	☐	☐	☐	☐
Smerter i muskler/ledd	☐	☐	☐	☐

60 Har du brukt noen av disse reseptfrie medisinene minst en gang i uka i løpet av den siste måneden?

	Ja	Nei
Paracetamol, Paracet, Panodil, Pamol, Pinex, Perfalgan	☐	☐
Albyl E (500 mg), Aspirin, Globoid, Dispril	☐	☐
Ibuprofen, Ibux, Ibuprox, Ibumetin, Brufen	☐	☐
Naproxen, Naprosyn, Ledox	☐	☐
Andre	☐	☐

HVORDAN FØLER DU DEG NÅ

61 Føler du deg stort sett sterk og opplagt, eller trøtt og sliten?

- Meget sterk og opplagt ☐
- Sterk og opplagt ☐
- Ganske sterk og opplagt ☐
- Både – og ☐
- Ganske trøtt og sliten ☐
- Trøtt og sliten ☐
- Svært trøtt og sliten ☐

SVANGERSKAP, BARN OG HORMONBEHANDLING

62 Hvor mange ganger har du i alt vært gravid? ☐ ganger

63 Har du noen gang prøvd i mer enn ett år å bli gravid? Ja ☐ Nei ☐

Hvis ja:
Hvor gammel var du første gang du hadde problemer med å bli gravid? ☐ år

64 Merker/merket du hetetokter i forbindelse med overgangsalder?

- Om dagen ☐
- Om natten ☐
- Begge deler ☐
- Merket ikke ☐

Hvis du merket hetetokter, hvordan vil du beskrive plagene?

- Store ☐
- Middels ☐
- Små ☐

Oppsøkte du lege i forbindelse med plagene? Ja ☐ Nei ☐

65 Har du noen gang brukt medisiner som inneholder østrogen?

	Nå	Før	Aldri
Tabletter eller plaster (på resept fra lege)	☐	☐	☐
Krem eller stikkpiller	☐	☐	☐

66 Hvis du har brukt reseptpliktig østrogen, hvor gammel var du da du begynte? ☐ år gammel

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67 Hvis du bruker eller har brukt reseptpliktig østrogen, hvor gammel er/var du siste gang du brukte dette? ☐ år gammel

68 Hvis du bruker eller har brukt østrogentabletter eller -plaster, hvorfor begynte du?
Lindre plager i overgangsalder ☐
Forebygge beinskjørhet. ☐ Annet ☐

69 Hvis du tidligere har brukt østrogentabletter eller -plaster, hvorfor sluttet du?
Er/var kvitt plagene ☐ Redd for bivirkninger ☐
Fikk plagsomme bivirkninger ☐ Annet ☐

OPERASJONER/STRÅLEBEHANDLING I UNDERLIVET

70 Har du noen gang blitt operert for nedsunken livmor eller skjedevegg? Ja ☐ Nei ☐ Vet ikke ☐
Hvis ja:
Hvor gammel var du da? ☐ år gammel

71 Har du ved operasjon fått fjernet begge eggstokkene (totalt)? Ja ☐ Nei ☐ Vet ikke ☐
Hvis ja:
Hvor gammel var du da? ☐ år gammel

72 Har du ved operasjon fått fjernet hele livmoren? Ja ☐ Nei ☐ Vet ikke ☐
Hvis ja:
Hvor gammel var du da? ☐ år gammel

73 Har du noen gang hatt strålebehandling mot underlivet? Ja ☐ Nei ☐ Vet ikke ☐
Hvis ja:
Hvor gammel var du da? ☐ år gammel

URINVEIER

74 Hvor ofte later du vanligvis vannet om dagen?
1-4 ganger ☐ 8-11 ganger ☐
5-7 ganger ☐ Over 11 ganger ☐

75 Hvor mange ganger må du opp om natta for å late vannet?
Ingen ☐ 1 gang ☐ 2 ganger ☐ 3 ganger ☐ 4 ganger ☐ 5 ganger eller mer ☐

76 Hvis du må opp om natta for å late vannet, hvordan opplever du dette?
Ikke noe problem ☐ Mye plaget ☐
Litt plaget ☐ Svært stort problem ☐

77 Opplever du plutselig og/eller sterk vannlatingstrang som er vanskelig å holde tilbake?
Aldri ☐ Flere ganger i uken ☐
Månedlig ☐ Daglig ☐

78 Har du ufrivillig urinlekkasje? Ja ☐ Nei ☐
(Hvis nei, gå til spm. 79)
Hvis ja: Hvor ofte har du urinlekkasje?
Mindre enn 1 gang/mnd ☐ En el. flere ganger /uke ☐
En eller flere ganger/mnd ☐ Hver dag og/eller natt ☐

Hvor mye urin lekker du vanligvis hver gang?
Dråper ☐ Større mengder ☐
Små skvetter ☐

Har du lekkasje av urin i forbindelse med hosting, nysing, latter, tunge løft? Ja ☐ Nei ☐

Har du lekkasje av urin i forbindelse med plutselig og sterk vannlatingstrang? Ja ☐ Nei ☐

Hvordan opplever du lekkasjeplagene dine?
Ikke noe problem ☐ Mye plaget ☐
En liten plage ☐ Svært stort problem ☐
En del plaget ☐

Hvor gammel var du da du fikk urinlekkasje? ☐ år gammel

79 Har du søkt lege for urinlekkasje? Ja ☐ Nei ☐

80 Har du noengang fått behandling for ufrivillig urinlekkasje?
Nei, jeg har aldri hatt urinlekkasje ☐
Nei, jeg hadde urinlekkasje, men ble bra av meg selv ☐
Ja ☐

Hvis ja: Hvilken behandling?
(Du kan sette flere kryss)
Operasjon ☐ Medisiner ☐
Bekkenbunnstrening ☐ Annet ☐

AVFØRING

81 Har du hatt ukontrollert lekkasje av luft fra tarmen i løpet av <u>den siste måneden?</u> Aldri/sjelden ☐ Hver uke ☐ Hver dag ☐

82 Har du hatt lekkasje av avføring fra tarmen i løpet av <u>den siste måneden?</u> Aldri/sjelden ☐ Hver uke ☐ Hver dag ☐

83 Hvis ja på spm 82 eller 83; har plagene med lekkasje fra endetarmen innvirkning på ditt hverdagsliv? Aldri/sjelden ☐ Hver uke ☐ Hver dag ☐

84 Har du evne til å holde igjen avføring og utsette toalettbesøk i 15 minutter etter første følelse av trang? Ja ☐ Nei ☐

SMERTER I BEINA

85 Har du sår på tå, fot eller ankel som ikke vil gro? Ja ☐ Nei ☐

86 Har du smerter i det ene eller i begge beina når du går? Ja ☐ Nei ☐

Hvis ja:

Hvor gjør det mest vondt?
- Fot ☐
- Legg ☐
- Lår ☐
- Hofte ☐

Forsvinner smertene når du står stille en stund? Ja ☐ Nei ☐

87 Har du smerter i beina når du er i ro? Ja ☐ Nei ☐

Hvis ja:

Er smertene verst når du ligger i senga? Ja ☐ Nei ☐

Får du mindre vondt når beinet ligger lavt, f.eks. om beinet henger utfor sengekanten? Ja ☐ Nei ☐

Har du hatt smertene i beina sammenhengende i mer enn 14 dager? Ja ☐ Nei ☐

88 Har du brukt smertestillende medisin pga. smerter i beina? Ja ☐ Nei ☐

LEGEMLIGE FUNKSJONER

89 Klarer du selv, uten hjelp av andre, i det daglige å:

	Ja	Nei
Gå innendørs i samme etasje?	☐	☐
Gå på toalettet?	☐	☐
Vaske deg på kroppen?	☐	☐
Bade eller dusje?	☐	☐
Kle på og av deg?	☐	☐
Legge deg og stå opp?	☐	☐
Spise selv?	☐	☐

DAGLIGE OPPGAVER

90 Har du førerkort? Ja ☐ Nei ☐

Hvis ja:

Kjører du fortsatt bil? Ja ☐ Nei ☐

91 Klarer du selv, uten hjelp fra andre, disse gjøremålene i det daglige:

	Ja	Nei
Lage varm mat?	☐	☐
Gjøre lett husarbeid (f.eks oppvask)?	☐	☐
Gjøre tyngre husarbeid (f.eks gulvvask)?	☐	☐
Vaske klær?	☐	☐
Gjøre innkjøp?	☐	☐
Betale regninger?	☐	☐
Ta medisiner?	☐	☐
Komme deg ut?	☐	☐
Ta bussen?	☐	☐

HUKOMMELSE

92 Har du problemer med hukommelsen?

Nei ☐ Ja, noe ☐ Ja, store ☐

93 Har hukommelsen endret seg siden du var yngre?

Nei ☐ Ja, noe ☐ Ja, mye ☐

94 Har du problemer med å huske:

	Aldri	Av og til	Ofte
Hendelser for få minutter siden?	☐	☐	☐
Navn på andre mennesker?	☐	☐	☐
Datoer?	☐	☐	☐
Å gjøre det du har planlagt?	☐	☐	☐
Hendelser som skjedde for noen dager siden?	☐	☐	☐
Hendelser som skjedde for år siden?	☐	☐	☐
Å holde tråden i samtaler?	☐	☐	☐

FALL

95 Har du falt og slått deg det siste året? Ja ☐ Nei ☐

Hvis ja:

Hvor skjedde det?

Innendørs ☐ Utendørs ☐

Har du vært til lege for fallskade det siste året? Ja ☐ Nei ☐

Har du vært innlagt på sykehus for fallskade det siste året? Ja ☐ Nei ☐

Har du falt/ramlet i løpet av de siste tre måneder? Ja ☐ Nei ☐

96 Har du problemer med balansen? Ja ☐ Nei ☐

BRUK AV HELSETJENESTER

97 Har du hatt hjemmehjelp i løpet av de siste 12 måneder? Ja ☐ Nei ☐

Hvis ja:

Har du nok hjemmehjelp? ☐ ☐

98 Har du hatt hjemmesykepleie i løpet av de siste 12 måneder? Ja ☐ Nei ☐

Hvis ja:

Har du nok hjemmesykepleie? ☐ ☐

99 Har du vært innlagt på sykeheim i løpet av de siste 12 måneder? Ja ☐ Nei ☐

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SYN

100 Har du noen av disse øyesykdommene?

	Ja	Nei
Katarakt *(grå stær)*	☐	☐
Glaukom *(grønn stær, høyt trykk i øyet)*	☐	☐
Aldersrelatert makuladegenerasjon *(forkalkning på netthinna)*	☐	☐

NB!

Det utfylte skjemaet returneres i den vedlagte svarkonvolutten.
Porto er betalt.

Takk for hjelpa!

Graphic design: Communication Division, UiB / Print: Skipnes Kommunikasjon AS

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ISBN: 9788230856024 (print)
9788230855645 (PDF)