

## **Vertebral fractures: prevalence, risk factors, and health-related quality of life**

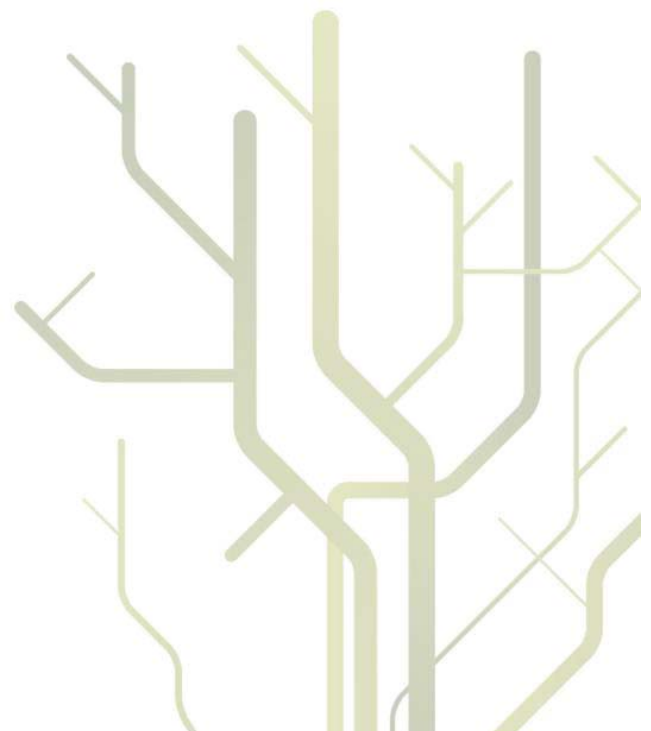
**The Tromsø study 2007/2008**



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A dissertation for the degree of  
Philosophiae Doctor

2013



**Vertebral fractures:  
Prevalence, risk factors, and  
health-related quality of life.  
A cross-sectional study**

**The Tromsø study 2007/2008**



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## Summary

**Background:** Osteoporotic fractures constitute a major health burden in western societies. Forearm, vertebral-, and hip fractures are the most common types. Norway has the highest reported prevalence of forearm- and hip fractures. Little data has been available concerning vertebral fractures, although these, together with the hip fractures, are associated with increased morbidity and mortality.

The aim of this thesis was to describe the prevalence of vertebral fractures in a general population, and to study important, associated risk factors and health-related quality of life.

**Material and method:** Information on prevalent vertebral fractures was ascertained by a vertebral fracture assessment (VFA) method (dual-energy X-ray absorptiometry (DXA), GE Lunar Prodigy) in 2887 women and men, mean age 65.4, in the population-based Tromsø Study 2007-08. Bone mineral density (BMD; g/cm<sup>2</sup>) was measured at the hip by DXA. Demographic factors, lifestyle, and health-related quality of life information was collected by questionnaires. To explore associations, we used logistic and multiple regression analyses.

**Results:** Vertebral fractures were found with an equal distribution of 12 % in women and 14 % in men, most common between 1<sup>st</sup> lumbar and 6<sup>th</sup> thoracic vertebra. In both sexes, the number of vertebral fractures increased with increasing age and declining BMD. Population attributable risk fraction for these two factors was 46% in women and 33% in men. Self-reported health-related quality of life was reduced in women with vertebral fractures compared to those without. In men there was no difference, indicating that prevalent vertebral fractures does not necessarily have an impact on men's self-perceived health.

**Conclusions:** The prevalence of vertebral fractures in this population was lower than expected. Men had similar fracture rates as women, but less bothered. These findings deserve a longitudinal follow-up.

## Sammendrag – Norwegian summary

**Bakgrunn:** Osteoporotiske brudd utgjør en betydelig helsemessig belastning i flere vestlige land. Underarms-, rygg- og hoftebrudd er de vanligste. Av ukjente grunner har Norge den høyeste rapporterte forekomst av underarms- og hoftebrudd. Til nå har vi hatt lite data om ryggbrudd, til tross for at disse er forbundet med økt sykkelighet og dødelighet.

Hensikten med dette arbeidet var å beskrive forekomst av ryggbrudd i en generell befolkning, studere viktige risikofaktorer for brudd samt konsekvenser i forhold til helserelatert livskvalitet.

**Materiale og metode:** Informasjon om ryggbrudd ble innhentet ved bruk av en metode kalt “vertebral fracture assessment” (VFA) (dual-energy X-ray absorptiometry (DXA), GE Lunar Prodigy) hos 2887 kvinner og menn, gjennomsnittsalder 65 år, i den populasjonsbaserte Tromsøundersøkelsen som ble gjennomført i 2007-08. Benmineraltetthet (BMD; g/cm<sup>2</sup>) ble målt i hoften med DXA. Demografiske variabler og informasjon om livsstil og helserelatert livskvalitet ble samlet inn ved hjelp av spørreskjema. Assosiasjoner ble studert med logistisk og multippel regresjonsanalyse.

**Resultater:** Vi fant en tilnærmet lik forekomst av ryggbrudd på ca 12% hos kvinner og 14% hos menn. Ryggbruddene var mest vanlig mellom 1. lumbale og 6. thorakale vertebra. Hos begge kjønn økte forekomsten med økende alder og synkende bentetthet. Tilskrivbar risiko av disse to faktorene utgjorde ca 46% hos kvinner og 33% hos menn. Selvrapportert helserelatert livskvalitet var lavere hos kvinner med ryggbrudd enn hos dem uten brudd. Hos menn fant vi ingen slike forskjeller. Dette viser at ryggbrudd ikke nødvendigvis påvirker menns egenoppfatning av helse.

**Konklusjon:** Forekomst av ryggbrudd var lavere enn forventet i vår populasjon. Menn og kvinner hadde nokså lik bruddforekomst, men kvinner var mere plaget. Funnene bør studeres i et longitudinelt design.



## List of papers

1. Waterloo S, Ahmed LA, Center JR, Eisman JA, Morseth B, Nguyen ND, Nguyen T, Sogaard AJ, Emaus N. **Prevalence of vertebral fractures in women and men in the population-based Tromsø Study.** *BMC Musculoskeletal Disorders* 2012, Jan 17; 13:3.
2. Waterloo S, Nguyen T, Ahmed LA, Center JR, Morseth B, Nguyen ND, Eisman JA, Sogaard AJ, Emaus N. **Important risk factors and attributable risk of vertebral fractures in the population-based Tromsø Study.** *BMC Musculoskeletal Disorders* 2012, Aug 31; 13:163.
3. Waterloo S, Sogaard AJ, Damsgard E, Ahmed LA, Morseth B, Emaus N. **Vertebral fracture and self-perceived health in elderly women and men: The Tromsø Study, a population-based cross-sectional study.** *BMC Geriatrics*, submitted.

## Abbreviations

ANOVA	analysis of variance
BMD	bone mineral density (g/cm <sup>2</sup> )
BMI	body mass index
CI	confidence interval
DXA	dual-energy X-ray absorptiometry
EQ-5D-3L	an instrument for measuring health-related quality of life
EQ VAS	an instrument for measuring health-related quality of life
HRQL	health-related quality of life
LVA	lateral vertebral assessment
OR	odds ratio
PAR	population attributable risk fraction
SD	standard deviation
SPSS	Statistical Package for Social Sciences
SXA	single X-ray absorptiometry
VFA	vertebral fracture assessment
WHO	World Health Organisation
QALY	quality-adjusted life-years

# 1. Background

## 1.1 What is bone?

Bone and cartilage are the forming agents of the skeletal system. The skeleton's primary functions are a) mechanical; allows locomotion by providing support and sites for muscle action, b) protective; provides a shield for internal organs and bone marrow, and c) metabolic; serves as a reservoir of ions, particularly calcium and phosphate [1]. There are two major types of bone, flat bone as in the skull and the ribs, and long bone, as in the femur and humerus. In addition, the skeleton comprises short (wrist, foot) and irregular bone (vertebra). The surface of bone is a thick and dense layer of calcified tissue, called cortical bone. In the long bones and the vertebra, this layer surrounds the trabecular bone which is a sponge like network of calcified rods (trabeculae). Trabecular bone is found throughout the skeleton, and relatively most common in the lumbar spine, where trabecular bone comprises more than 65 % of the total bone.

Despite the difference in structure, all bone types comprise the same kind of bone cells, osteoblasts and osteoclasts. The osteoblasts are the cells involved in bone formation, while the osteoclasts are responsible for bone resorption. These two cell types work together balancing formation and reformation of bone. In adult individuals and before ageing, the amount of new bone formed equals the amount of bone resorbed, but the capacity of the osteoblasts to form new bone decrease with ageing. When bone formation is less than prior bone resorption, each remodeling event removes a small moiety of bone from the skeleton, resulting in bone loss and structural damage [2]. The rate of bone loss is an important determinant for the eventual development of osteopenia (i.e. a condition where bone mineral density is lower than normal, a possible precursor of osteoporosis) and subsequent osteoporosis.

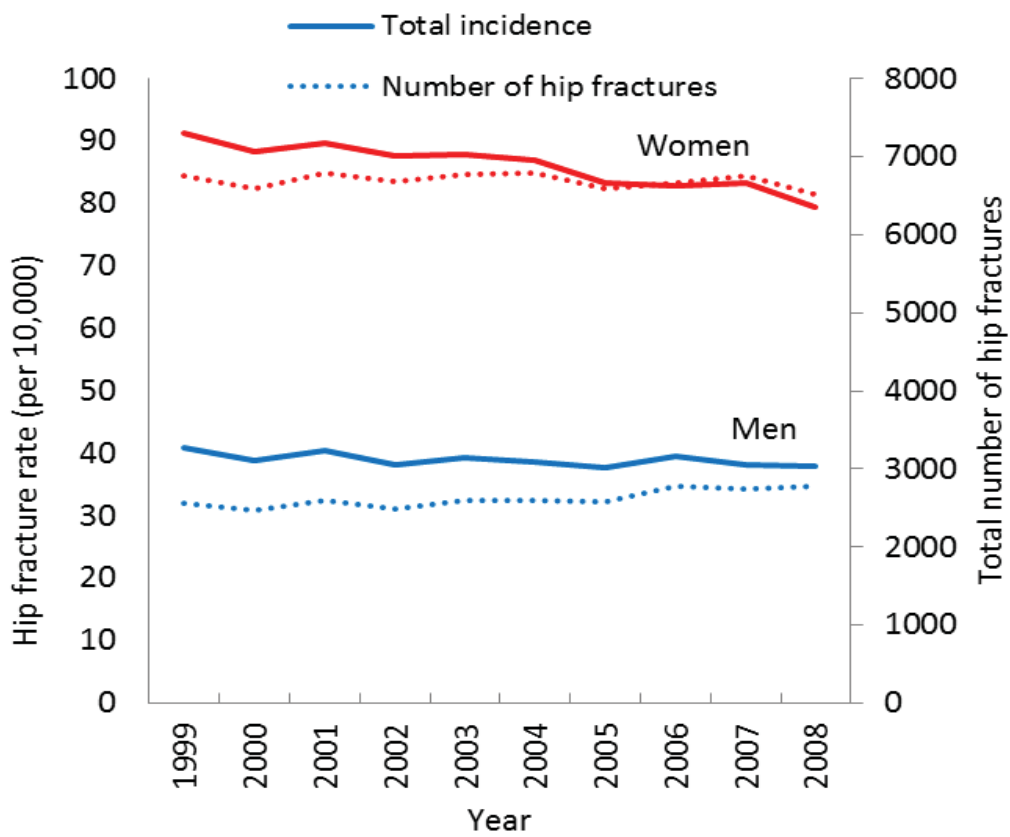
## **1.2 Definition of osteoporosis**

Osteoporosis is defined as a systemic skeletal disease characterized by low bone mass and microarchitectural deterioration of bone tissue, with a consequent increase in bone fragility and susceptibility to fracture [3, 4]. Osteoporosis can be subdivided into three types: a) primary; no underlying cause can be identified, b) secondary; the underlying cause (e.g. steroid use) is known, and c); rare forms such as juvenile or pregnancy-related. In the present study, the focus is on the primary osteoporosis, as we have little information on probable underlying causes.

## **1.3 Epidemiology of osteoporosis and fractures**

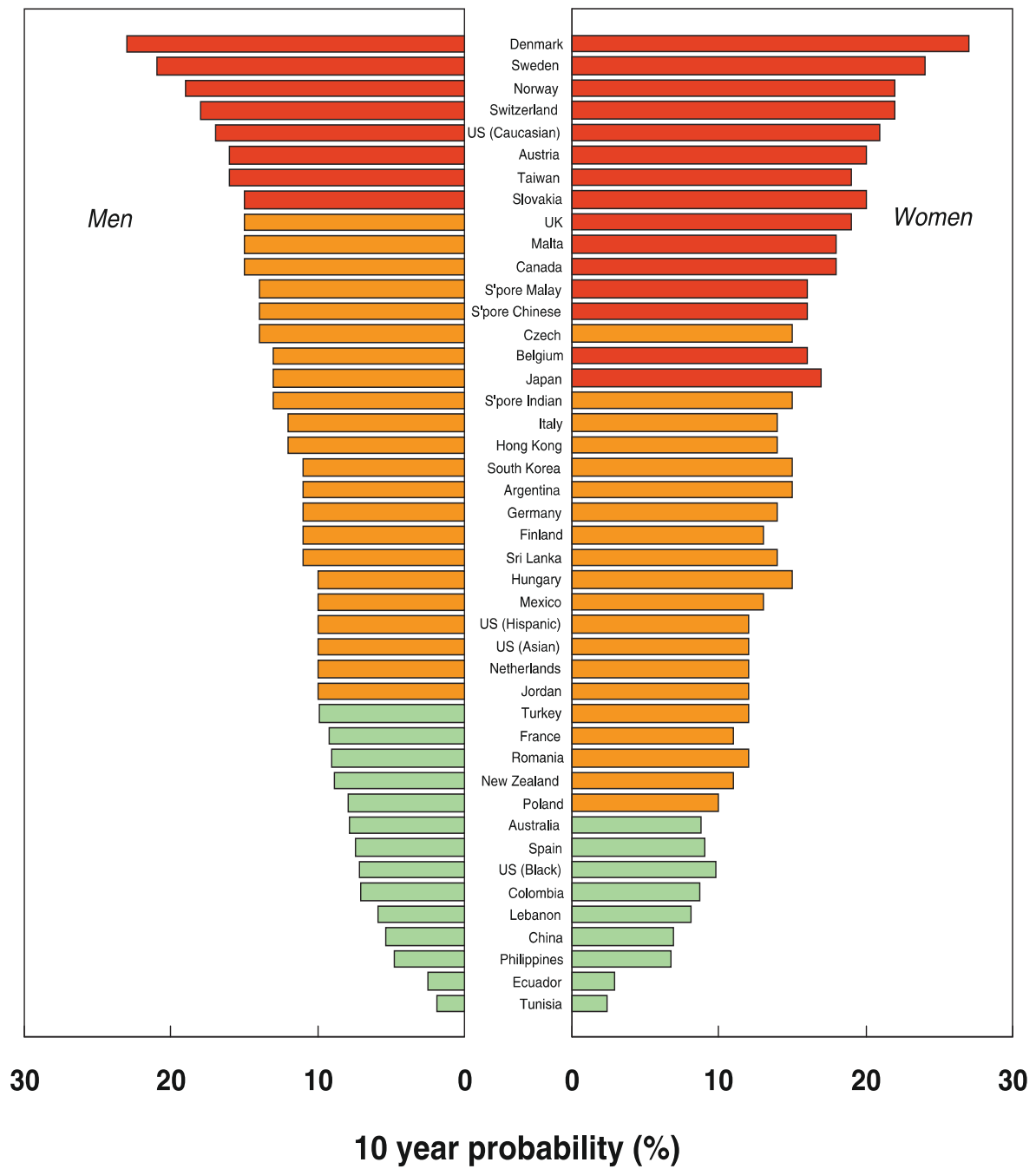
Osteoporosis, which is the most common metabolic bone disorder, is becoming more pervasive with the aging of populations worldwide [5], and elderly people are the fastest growing population in the world [4, 6, 7]. Osteoporosis must be seen as a serious and important public health issue because of the potentially devastating results [7, 8] and high cumulative rate of fractures. Data from the Tromsø study [9] and the Hordaland Health Study (HUSK) [10] indicate that a prevalence of osteoporosis of approximately 13% in men older than 70 years is comparable to population estimates from Spain [11], France [12], Sweden [13], Canada [14], and the US [15]. In women, the Tromsø data estimate a prevalence of approximately 20% in women above 70 years. This estimate is lower than those reported from France [16], England [17], Vietnam [18], Turkey [19], and Korea [20]. To compare prevalence of osteoporosis between populations is an uncertain enterprise, connected to the difficulties with measurements [18]. Dual x-ray absorptiometry (DXA) is a common and precise way of measuring bone mineral density (BMD). Numerous types of DXA devices are available. Clinically relevant differences may however occur between densitometers from different manufacturers, and even among devices from the same manufacturer [21, 22]. The hip region is considered especially problematic because the region of interest varies between manufacturers [23]. For real comparison between countries, cross-calibration between devices must be applied, preferably in vivo [22]. As osteoporosis/low BMD score reflect an increased risk of

fracture rather than being a serious illness in itself, its clinical and public health importance is mainly due to these fractures [4]. It is therefore important to study fracture incidence, consequences of fractures, and risk factors [8, 24].



**Fig. 1** Hip fracture rates in Norway 1999 – 2008. With permission from Tone K. Omsland.

An estimated one in two women over the age of 50 and one in four men will experience an osteoporosis-related fracture during their lifetime. These indices of fracture risk compare to a lifetime risk in women at the age of 50 of about 10 % for breast cancer and 30 % for cardiovascular disease [25]. Among the osteoporotic fractures, the hip fractures are the most serious because of their association with subsequent fracture risk [26], increased morbidity [27], mortality [28-31], and health-related and economic burden [32-37]. Most hip fractures take place after a fall; 80 % occur in women and 90 % in people older than 50 years [7]. The incidence of hip fractures increases exponentially with age. There is substantial variation in hip fracture incidence between populations, and hip fracture has been used as an international index of the frequency of osteoporosis [7]. Scandinavia and north-western Europe is at the top of these statistics [24, 38, 39]. The incidence of hip fractures in Norway increased from the 1950'ies to the last millennium [40]. Recent studies indicate that the hip fracture rates are declining in women and men in Norway [41, 42] (Fig.1), as in other western countries [43-49]. However, the total number of hip fractures is constant or increasing , due to an increasing ageing population [50]. An increase in absolute fracture numbers is anticipated in Europe due to demographic changes [39]. In the UK, the burden of hip fractures is expected to increase by almost 20% between 2010 and 2020 [51]. Despite the declining prevalence, Norway has still one of the highest reported incidences of hip fractures in the world [24], and as shown by Lofthus et. al [52] the highest incidence of reported forearm fractures. As the number of residents in Norway 70 years and above will double during the next 30 years (Statistics Norway), hip fractures will continue to pose a national public health challenge.



**Fig. 2** A systematic review of hip fracture incidence and probability of fracture worldwide. Reproduced from Kanis, JA et al., Osteoporosis International 2012.

#### **1.4 The economic burden of osteoporotic fractures**

A recent Danish study estimated the total cost of osteoporotic fractures in Denmark to EUR 1.563 billion in 2011, at EUR 628 million and EUR 936 million for men and women, respectively [53]. The most expensive fracture for both genders was first hip fracture, and importantly, the municipalities carried the majority of the costs, with 55-57 % of the estimated lifetime cost [53]. Although the medical costs of the osteoporotic fractures were substantial for the health care sector, this was by far exceeded by the cost for the municipality in terms of social services and rehabilitation [53]. A Swedish study also estimated the total annual burden of osteoporosis from a societal perspective including medical care costs, non-medical care costs, informal care and indirect costs [54]. The value of quality-adjusted life-years (QALYs) lost because of fractures was included in the total burden estimations. The total annual fracture cost was estimated to about 3.2 % of the total health care costs in Sweden. According to this study, the societal burden of osteoporosis in Sweden was higher than previously perceived. Assuming no changes in the age-differentiated fracture risk, the annual burden of osteoporosis was projected to increase to approximately EUR 3.2 billion (MSEK 26301) in the year 2050. An Austrian study from 2008 also examined costs resulting from osteoporotic fractures in a societal perspective which included medical costs such as expenses for pharmaceuticals, inpatient and outpatient medical care costs, as well as other medical services (e.g., occupational therapies), non-medical direct costs (transportation costs and medical devices) as well as indirect costs referred to costs of productivity losses due to absence of work. Moreover, they included costs for early retirement and opportunity costs of informal care provided by family members. The total annual financial burden incurred by osteoporotic fractures in Austria amounted to approximately EUR 685 million, the largest fraction of which was due to the opportunity cost of family care (30 %), followed by costs for hospitalization (27 %) [55]. Importantly, these studies illustrate how osteoporosis-related fractures not only lead to high medical care costs but also to high community care costs [54]. To our knowledge, the economic burden of osteoporosis and osteoporotic fractures has not yet been estimated for Norway. Given the high fracture rates, the Norwegian cost will most probably match the Scandinavian estimates.

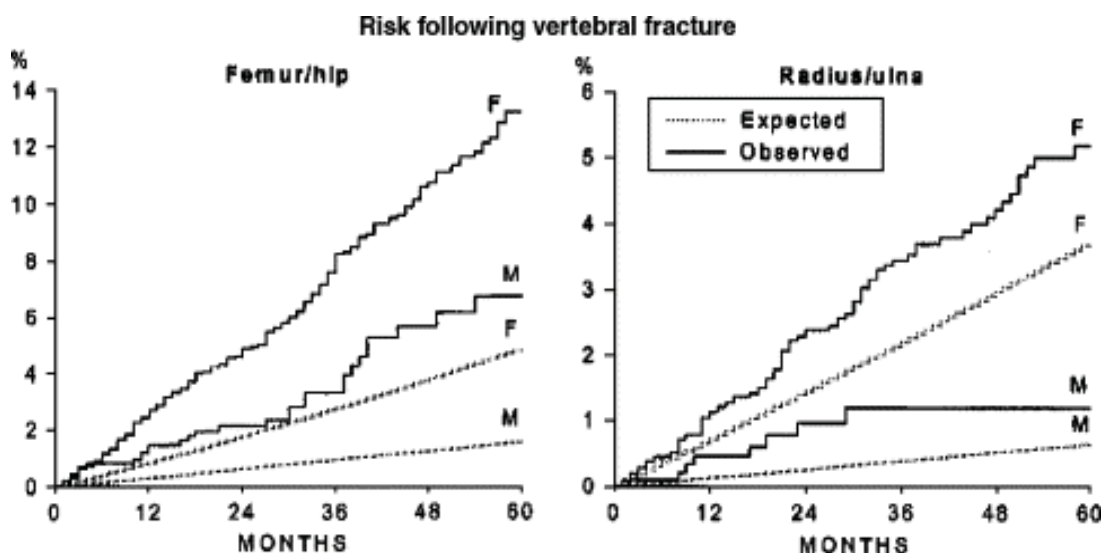


## 1.5 Epidemiology of vertebral fractures

As hip fractures have been recognized as the most serious osteoporotic fracture, vertebral fractures have been thought to be benign, self-limited entities [5]. More recent studies have, however, described an ever-increasing list of sequelae to vertebral fractures. Today they are considered among the serious osteoporotic fractures [56], partly because they are the most common osteoporotic fracture [57, 58], and partly because of their association with subsequent fracture risk. A history of prior fracture is a significant risk factor for future fractures at any site, and this effect is over and above that which can be explained by variations in BMD [59]. Once an initial vertebral fracture is sustained, the risk of subsequent vertebral fracture rises sharply compared with individuals with osteoporosis and no history of vertebral fracture [60, 61]. This phenomenon has been called the “vertebral fracture cascade”. One in five postmenopausal women with prior vertebral fracture will experience another vertebral fracture within one year [27, 62, 63].

Subsequent vertebral fracture risk is in several studies reported to increase by five- to sevenfold after an initial fracture [64-66], and then exponentially with greater numbers of prior vertebral fractures [60, 67]. After a vertebral fracture, there is a two- to threefold increased risk of a subsequent fracture of a different type [59, 63, 68-70], with potentially more serious consequences in terms of other diseases [71] including cardiovascular diseases and stroke [72].

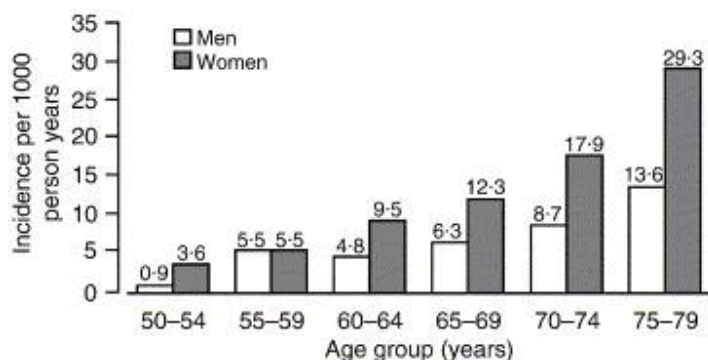
Mortality after vertebral fracture is higher than in the normal population at the same age. A recent South Korean study, covering 97% of the population, showed a standardized mortality ratio after two years of 2.5 for men older than 50 years, and 1.9 for women [73]. Mortality seems to be highest immediately after the fracture event, remains high for up to one year after the event, and then falling steadily. Similar findings are reported from Australia [74], Sweden [75-77], and Canada [78], and was confirmed in a literature review on osteoporosis and mortality [79].



**Fig. 3** Observed and expected incidence of fracture in patients aged 65 years or older stratified by sex. Reproduced from TP Van Staa, Osteoporosis International 2002

### 1.6 Prevalence of vertebral fracture

Some 65 % of vertebral fractures cause no symptoms [80, 81] and will therefore never come to clinical attention. The factors and activities that cause vertebral fractures are therefore still not well defined. Until recent years, little data have existed on worldwide prevalence and incidence of vertebral fracture due to problems of identification of these fractures. The gold standard for the diagnosis of vertebral fractures is considered the x-ray of the spine. With its high radiation dose, spinal x-rays have only to a limited degree been performed in population-based samples. The vertebral morphometry techniques that are now available, provide an opportunity to study prevalence, and with follow-up studies, incidence of vertebral fractures and risk factors that are associated with these fractures. The existing prevalence figures are therefore based on a huge variation of techniques and differences in samples, and figures vary from 35 % to 50 % among women older than 50 years [82].



**Fig. 4** Incidence of vertebral fracture in women and men from Europe by age group. Reproduced from SR Cummings, Lancet 2002

### 1.7 Risk factors for osteoporotic fractures

As mentioned, the clinical significance of osteoporosis lies in the fractures that arise. Skeletal strength depends on the amount of bone and its structural arrangement, whereas traumatic load on the bones is dictated by the orientation of fall and other factors [83]. The complex interplay between BMD and multiple risk factors was demonstrated in a study by Cummings from 1995 where women with multiple risk factors and low bone density had an especially high risk of hip fracture [84]. Although the diagnosis of osteoporosis is based on the measurement of BMD there are a number of clinical risk factors that provide information on fracture risk over and above that given by BMD [85]. These include age, prior fragility fracture, parental history of hip fracture, smoking, use of systemic corticosteroids, excess alcohol intake and rheumatoid arthritis [85]. The independent contribution of these risk factors has been included in the FRAX calculation of fracture probability [86].

Unlike other osteoporotic fractures, vertebral fractures are not considered fall-related [56]. It is therefore reasonable to assume that the risk factors for osteoporotic vertebral fractures are similar to osteoporotic fractures in general, but that low BMD scores may even be a stronger

predictor for vertebral fractures than for other osteoporotic fractures. 50 – 80 % of the variation in BMD levels are explained by genetic factors [87]. Age and BMD are shown in numerous studies to be the main risk factors for vertebral fractures, with age as the most important and an independent predictor [85, 88]. The risk factors for osteoporotic vertebral fractures may be divided into two main groups, non-modifiable and modifiable, as shown below:

Non-modifiable risk factors [67, 82, 85, 89-92]

Age  
Sex (female)  
Ethnicity (Asian or Caucasian)  
Family history of osteoporosis and fractures  
Small body frame  
Early menopause (<45 years)  
Medical disorders like gastrointestinal malabsorption, renal failure, rheumatoid arthritis  
Eating disorders/anorexia nervosa (potentially modifiable)  
Chronic corticosteroid therapy  
Previous vertebral fracture

Modifiable risk factors [85, 93-96]

Low weight /low body mass index ( $BMI < 18.5 \text{ kg/m}^2$ )  
Weight loss  
Smoking  
Excessive alcohol intake  
Sedentary lifestyle  
Vit D deficiency (lack of sunshine)

In the present study we have included age, sex, height, weight, BMI, smoking status, alcohol use and physical activity in our analyses of associated risk factors for vertebral fractures (papers 1 and 2).

## **1.8 Rationale for the thesis**

- Norway occupies top position in almost all statistics of osteoporotic fractures of the hip and distal forearm
- Until now, we have had very limited knowledge about the prevalence of vertebral fractures

This is the background for the present study.

For the first time in Norway, it has been possible to conduct a population-based study of a certain size with the intent to identify the occurrence and consequences of vertebral fractures.

## **2. Aims**

In the planning of this study, focus was on the occurrence of vertebral fracture (one paper) and the possible consequences of such fractures on somatic health, exemplified by lung function and lung capacity, and mental health, exemplified by self-reported health related quality of life (one paper each). In the course of time, and work, it became clear that risk factors for vertebral fracture were too important just to be included in a paper on prevalence.

The specific aims were therefore changed into examining

1. Prevalence of vertebral fracture in women and men in a general population
2. Important risk factors for vertebral fracture in women and men in a general population
3. Associations between vertebral fractures and self-reported pain and self-reported health-related quality of life in women and men

## **3. Methods**

### **3.1 Population**

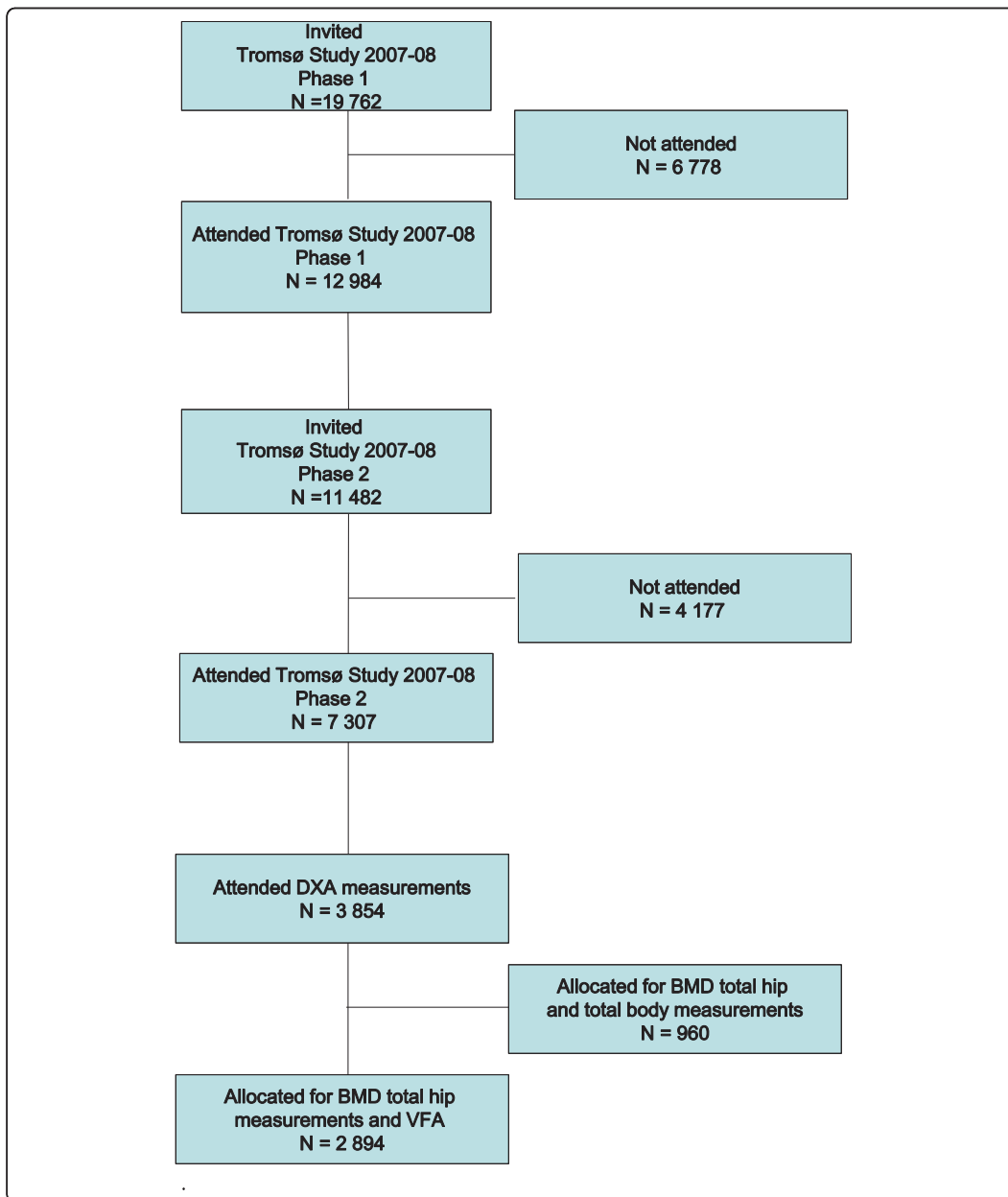
#### **3.1.1 The Tromsø Study**

The Tromsø Study is a single-centered, population-based health study conducted in the municipality of Tromsø, the largest city in northern Norway with approximately 70.000 inhabitants [97]. It consists of six surveys, from 1974 (Tromsø 1) to 2008 (Tromsø 6). The study population includes subjects who have attended at least one of the six surveys, more than 40.000 subjects in total. More than 15.000 have participated on three or more occasions. The participation level is considered to be high, over 75 % in Tromsø 1-5, and 66 % in Tromsø 6. The first survey was initiated in an attempt to help combat the high mortality due to cardiovascular diseases in Norway. The primary aim was to determine causes of, and develop ways of preventing, heart attacks and strokes. The study was gradually expanded to include many other diseases. Osteoporosis studies have been included in the programme since Tromsø 4 (1994-95).

#### **3.1.2 Tromsø 6**

Tromsø 6 (2007-08), which is the basis for our study [98], included men and women aged 30-87 years. The participants were invited from four different groups: those who had participated in the second visit of Tromsø 4, a 10 % random sample of the population aged 30-39 years, all of the population aged 40-42 years and 60-87 years, and a 40 % random sample of the population aged 43-59 years. Information about the study was mailed to the invited subjects together with a questionnaire (please see Appendix A), which they were asked to complete and return at the screening station at their first visit. In total, 12,984 (65.7 %) of the 19,762 invited responded and participated in a brief medical examination including bone mineral densitometry of the forearm by single-energy X-ray absorptiometry (SXA) (phase one). These measurements are not used in the present study. A random sample of the participants in phase one were invited to a

more comprehensive examination (phase two) comprising (among others) DXA, spirometry, echocardiography, ultrasound of carotid artery, blood and urine samples, along with a more extensive questionnaire (please see Appendix B). Basis for the present study was bone densitometry of the total hip and lateral vertebral assessments performed by dual-energy X-ray absorptiometry (DXA) in those who had attended the bone mineral density assessments in Tromsø 5.



**Fig. 5** A flow chart on the study population (also presented as fig. 1 in paper one (please see *Prevalence of vertebral fractures in women and men in the population-based Tromsø Study*)).



## **3.2 Measurements**

### **3.2.1 Dual-energy X-ray absorptiometry**

Dual-energy X-ray absorptiometry (DXA) is based on the principle that passage of x-ray photons through an individual is inhibited to a greater degree by the mineral component of bone than by soft tissue adjacent to bone. DXA employs x-ray photon absorption by soft tissue to be factored out, which allows determination of the amount of hard tissue (i.e. bone) present [99]. The radiation exposure for a person undergoing a DXA test is low, and the test is fast and causes very little inconvenience. It is also a benefit to the subjects involved that both radiographs of the vertebra and BMD measurements are performed at the same time. All measurements were performed with DXA – GE Lunar Prodigy, Lunar Corporation, Madison, WI, USA.

### **3.2.2 Bone mineral density (BMD)**

When measuring BMD by DXA it is important to recognize that DXA determines areal bone density ( $\text{g}/\text{cm}^2$ ), not volumetric bone density. The result of dividing grams by area is necessary for deriving the standardized score, T-score or Z-score. The T-score is the number of standard deviations (SD) above or below the average BMD value of a young adult reference population. Normal BMD is defined as a T-score  $\geq -1$ . Osteopenia is between  $-1$  and  $-2.5$ , and osteoporosis T-score is  $\leq -2.5$ . The Z-score compares an individual's BMD with that of an average age-matched reference population [99]. BMD measured with DXA at the hip is considered the gold standard for the diagnosis of osteoporosis [99-101] and has been used by the WHO to define osteoporosis [102]. The test is also accurate, it exceeds 90 % at the hip [103].

In our study, we included BMD measurements of the left hip when possible, right hip only if the subject had a left side hip replacement.

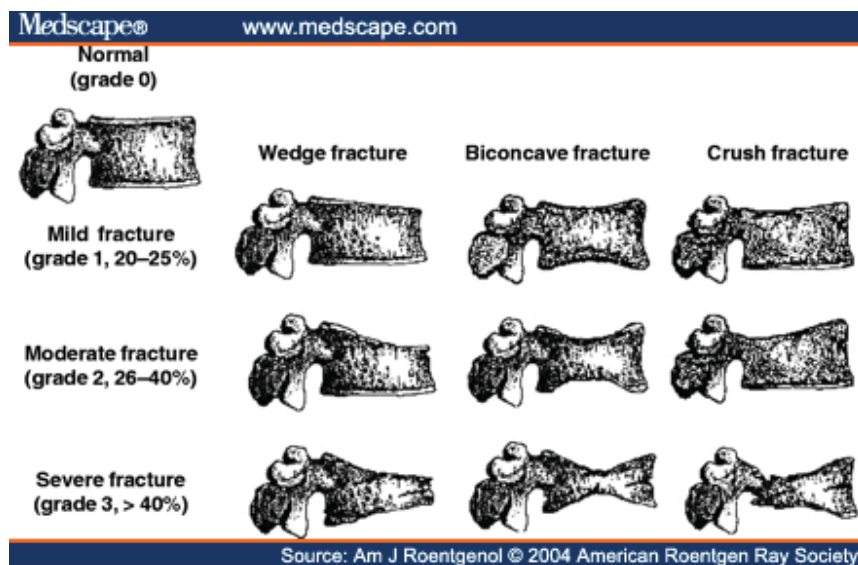
### 3.2.3 Vertebral fracture assessment

Until DXA technology got into the market some 25 years ago, traditional x-ray examination was the only option to detect fractures and deformities, and due to the amount of resources spent, it was mainly a tool for clinicians. With the DXA technology, we have today an instrument fit for examinations in a big scale, and this is why vertebral fracture assessment was performed, for the first time, in Tromsø 6. Although they are often missed in clinical practice, vertebral fractures are reported to be the most common type of fragility fracture [56, 104].

Vertebral fracture assessment (VFA) by DXA provides an image of the thoracic and lumbar spine for the purpose of detecting vertebral fractures. Depending on their relative relations according to a given reference (for further details, please see the next section), the software identifies three types of fracture: wedge, biconcave, and compression, according to three degrees of severity: mild, moderate, and severe [105] (please see illustration below). In comparison with standard radiographs of the spine, the correlation for detecting moderate and severe vertebral fractures is good [106]. Validation of our data through traditional x-rays on a sub-group would have strengthened our study. This was, regrettably, not possible within the scope of the survey.

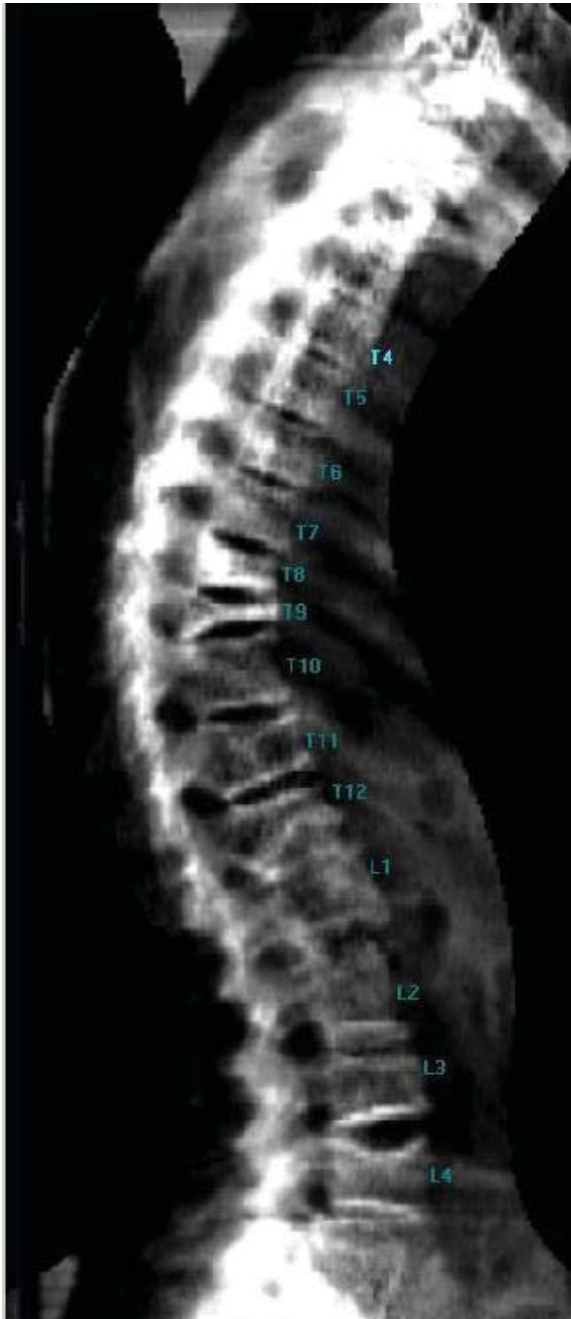
The Lunar morphometry is based on evaluation of the expected vertebral heights of the spine from T4 to L4. Vertebral heights are related to each other in a highly predictable and constant manner. A study from 1988 used this constant relationship to calculate expected vertebral heights based on a comparison of the height of a person's T4 vertebra to a reference T4 height [107]. T4 was chosen in part because this vertebra seldom fractures. By comparing expected heights with actual heights, indices can be calculated that quantify the extent of vertebral deformity as compared with reference values. GE Lunar has taken a similar approach for determining expected normal vertebral heights, but uses the height of the L2 – L4 vertebrae, rather than T4, to calculate expected vertebral heights. T4 is small and often difficult to visualize and measure in a morphometry image of the lateral spine. The relationship of T4 – L1 vertebrae heights relative to the L2 – L4 height was used to ascertain a correction factor for

each vertebral level relative to the mean height for the L2 – L4 sequence (ref 95 - 103 in [108]). In simpler words, if an individual's L2 – L4 anterior height is 95 % of expected, then his or her vertebral anterior heights for other vertebrae are compared to 95 % of the reference height at each vertebral level [109].



**Fig. 6** Schematic diagram of the grading scale for vertebral fractures.

In our study, we used the lateral vertebral assessment (LVA) technique. The participants lay on their left side on the DXA bench, arms stretched forward and upward to keep them away from the scan. All thick clothes and all clothing with metal parts were removed, all pockets emptied, and those who wanted it, got a small pillow under their head. The scanning itself took about ten minutes to perform. As many elderly people tend to have a kyphosis, it may be easier for them to have a lateral scan done than a traditional spine scan. In fact, some of our participants were unable to lie down on their back due to kyphosis and back pain. Fig. 7 shows one of the participants who defied the pain and was measured.



**Fig. 7** LVA scan of a female participant in the Tromsø 6 with clearly visible vertebral fractures

### **3.2.4 EQ-5D-3L and EQ VAS**

Both instruments, EQ-5D-3L and EQ VAS, are constructed to make measurements of health-related quality of life from self-reported data. They were both included in the second, most extensive questionnaire (phase two), please see Appendix B.

EQ-5D-3L is a generic measure of health status developed by an international research group, the EuroQol Group [110]. The principal aims were the development of a standardized, non-disease-specific instrument for describing and valuing health-related quality of life. EQ-5D-3L provides a simple descriptive profile and a single index value that can be used in clinical and economic evaluation of health as well as in population health surveys. It is relatively undemanding – taking only a few minutes to complete, and it is relevant to all respondents in a survey; healthy or ill and of any age [111, 112].

The EQ-5D-3L descriptive system comprises the following five dimensions (5D): mobility, self-care, usual activities (e.g. work, study, housework, family, leisure time activities), pain/discomfort, and anxiety/depression. Each dimension has three levels (3L): no problems, some problems, extreme problems.

The EQ VAS (Visual Analogue Scale) records the respondent's self-rated health on a vertical, visual, thermometer-like analogue scale where the endpoints are labeled "Best imaginable health state" at the top and "Worst imaginable health state" at the bottom [113].

### **3.2.5 Other variables**

In the Tromsø Study, information about age and gender was obtained from the National Population Register. A whole series of variables were obtained from the two questionnaires, including education, leisure time physical activity, smoking, health status (good/poor), neck

pain, back pain, and diagnosed osteoporosis (yes/no). Both questionnaires used in Tromsø 6 are found in Appendix A and B.

Height and weight were measured using a Jenix DS-102 stadiometer (Dong Sanh Jenix Co., Ltd., Seoul, Korea) to the nearest centimeter and half kilogram. Body mass index (BMI = kg/m<sup>2</sup>) was calculated.

### **3.2.6 Statistical analyses**

Statistical analyses were performed using SPSS (Statistical Package for Social Sciences, Chicago, USA), versions 18 (paper 1) and 19. All tests were two-sided. A p-value below 0.05 was considered significant.

#### *Paper 1:*

Baseline characteristics in participants with and without fractures were compared by univariate analyses, using Independent sample T-test for continuous variables and chi-square testing for categorical variables. Prevalence of vertebral fractures in women and men was compared by chi-square testing, and so was distribution and types of deformities. The mean BMD difference between the different types of deformities was tested using Analysis of variance (ANOVA), adjusting for age.

#### *Paper 2:*

Logistic regression was used to assess the association between each risk factor and vertebral fracture risk, adjusting for age. Odds ratio (OR) of fracture (95 % confidence interval (CI)) was estimated per standard deviation (SD) of continuous risk factors. Multivariable logistic regression analysis was used to assess the association between each significant or combined risk factors and vertebral fracture risk. Testing for interaction was done by including the product of sex and BMD and sex and age in the model. The final and most optimal model was found using backward selection procedures. The population attributable risk fraction (PAR) for combined

risk factors in the “final” multivariable model was estimated for assessment of the impact of the risk factors on vertebral fracture.

*Paper 3:*

Each individual was classified as having a vertebral fracture if there was a presence of at least one fracture. All variables measuring pain or quality of life (neck pain, back pain, EQ-5D-3L, EQ VAS) were compared in those with and without fractures adjusting for age, using logistic linear regression analyses. For examination of the impact of severity of fractures, we first examined if EQ-5D-3L and EQ VAS differed between types of fractures (wedge, biconcave, and compression) and numbers of fractures using ANOVA, applying Bonferroni correction. Numbers of fractures were categorized into 0, 1, 2, 3 or more. We also categorized participants into three groups: no or mild fractures, moderate, and severe fractures (please see Fig. 6), without consideration of type of fracture, and ANOVA was also applied to examine if EQ-5D-3L and EQ VAS differed between these groups.

### **3.3 Ethics**

All the participants in the Tromsø 6 provided a written informed consent prior to the examinations. The Tromsø Study is approved by the Norwegian Data Inspectorate and recommended by the Regional Committee for Medical and Health Research Ethics, North Norway.

## **4. Results. Summary of papers**

### **Paper 1**

Background: Osteoporotic vertebral fractures are, like hip fractures, associated with increased morbidity and mortality. Norway has one of the highest reported incidences of hip fractures in the world. Till now, vertebral fractures have not been extensively studied due to methodological challenges. The aim of this population based study was to describe, for the first time, the age- and sex specific occurrence of osteoporotic vertebral fractures in Norway.

We found the prevalence of vertebral fractures varying in women from about 3 % in the age group below 60 to about 19 % in the 70+ group, and in men from 7.5 % to about 20 %, with an overall prevalence of 11.8 % in women and 13.8 % in men. Among those with fractures, having only one fracture was the most common; two and more fractures were present in approximately 30 % of the cases. Fractures were seen from the fourth lumbar to the fifth thoracic vertebrae, most common between first lumbar and sixth thoracic vertebrae. In both sexes, the most common type of fracture was the wedge type. Bone mineral density at the hip differed significantly according to type of fracture, being highest in those with wedge fractures and lowest in those with compression fractures.

Conclusions: The prevalence of vertebral fractures increased by age in women and men, but the overall prevalence was lower than expected, considering the high prevalence of hip and forearm fractures in Norway. In both sexes, the wedge type was the fracture type most frequently observed and most common in the thoracic region.

### **Paper 2**

Background: Vertebral fractures, the most common type of osteoporotic fractures, are associated with increased risk of subsequent fracture, morbidity, and mortality. The aim of this study was to examine the contribution of important risk factors to the variability in vertebral fracture risk.



In both sexes combined, age (odds ratio [OR] per 5 year 1.69; 95% CI 1.46-1.95) and BMD (OR per SD: 1.59; 95% CI 1.37-11.85) were independent risk factors for vertebral fracture. After adjusting for age and BMD, men had a greater risk of fracture than women (OR 1.87; 95% CI 1.4-2.5). Approximately 41% of vertebral fracture risk was attributable to advancing age (more than 70 years) and low BMD (less than 0.85g/cm<sup>2</sup>), with the latter having a greater effect than the former.

Conclusions: Our data show that age and BMD are major risk factors for vertebral fracture risk. However, the two factors account for less than half of the fracture risk. The identification of individuals with a high risk of vertebral fracture is still a challenge.

### **Paper 3**

Background: Vertebral fractures may be asymptomatic and the effect of prevalent vertebral fractures on quality of life in elderly women and men is still unknown. The purposes of this study were to determine whether back pain and impaired health related quality of life were more pronounced in those with vertebral fractures compared to those without, and to study possible gender differences in self-reported pain and HRQL in those with vertebral fractures compared to those without.

Women with vertebral fractures reported significantly more back pain ( $p=0.006$ ) and had lower EQ-5D-3L score ( $p<0.001$ ) than women without vertebral fractures, also after adjustments for age, height, weight, and BMD. No such association was present in men. Type of fracture was not associated with HRQL, but in women, increasing numbers and severity of fractures were associated with decreasing EQ-5D-3L score. A similar pattern was found in the analyses including the EQ-VAS score.

Conclusions: Prevalent vertebral fractures are associated with reduced HRQL in postmenopausal women, but not in men.

## **5. Discussion of methodology**

### **5.1 Design**

#### **5.1.1 Cross-sectional survey**

The Tromsø Study is a longitudinal study, consisting of six surveys so far. Our data are derived from the last survey only, which means that we are dealing with a cross-sectional study design. A cross-section is the shape that results from cutting an object lengthwise, and in doing so, it is possible to study a part of it. A cross-sectional study exposes and studies disease and risk factor patterns in a representative part of the population, in a narrowly defined time period [114]. Being simply descriptive and observational, the study design is very good for measuring the population burden of a disease using prevalence rates, the most reliable summary measures obtained from such surveys. The design is suitable for analyzing associations between disease and related factors, but a cross-sectional study cannot measure disease incidence, because rate and/or risk calculations require information across a time period. Since both the outcome and the other variables are measured at the one time, this study design is not strong at showing cause–effect relationships [115].

#### **5.1.2 Size of the survey**

The Tromsø Study population includes subjects who have attended at least one of the six surveys, 40 051 subjects in total [116]. 19 763 women and men were invited to participate in Tromsø 6, and 12 984 attended, i.e. 65.7 %. The attendance rate is somewhat lower than in the previous surveys, mostly due to lower attendance rate among the younger people invited, but must still be considered good. Tromsø is a city of approximately 70 000 inhabitants; a large part of the population has been involved in the survey over the years. As the sample size (i.e. the eligible population for DXA scans) was predetermined by the Tromsø Study, we did no particular

sample size calculation, but with almost 3000 DXA scans from a representative part of the study population, we consider the power as good.

## **5.2 Validity**

### **5.2.1 Internal validity**

Internal validity is the degree to which the results of a study are correct for the sample of subjects being studied, i.e. whether the results are “true” for the studied population. The internal validity of clinical research is determined by how well the design, data collection, and analyses are carried out, and is threatened by various kinds of random variations and biases [117].

#### **Random error**

Random error, as the name suggests, is random in nature and therefore difficult to predict. It adds variability to the data, but does not necessarily affect the average result. Random error is actually nothing more than variability in the data that we cannot readily explain [118]. As random error has no preferred direction, we expect the averaging over a large number of observations will yield a net effect of zero. The impact of random error, imprecision, can be minimized with large sample sizes [119]. Our sample is one of the largest population-based samples assessing the prevalence of vertebral fractures ever analyzed and published. An overall vertebral fracture prevalence of 11.8 % in women and 13.8 % in men, gave us a lower proportion than we anticipated, since a prevalence of 19.2 % and 15.7 % was found in women and men, respectively, in a smaller study from Oslo in 1998 [120].

#### **Bias**

Bias, or systematic error, are not affected by increasing the size of the study [118]. Common conceptions of bias:

- error that affects population or study groups unequally (internal validity)

- error that results from inappropriate generalization of study data to another population which differs from the population actually studied (external validity)

Bias leads to differential errors, i.e. errors that differ between groups. This kind of error is usually far more serious than non-differential error, which is error that affects all comparison groups equally [114]. The most common types of bias are selection bias, information bias, and confounding.

#### *Selection bias*

is a systematic error in a study that stems from the procedures used to select subjects and from factors that influence study participation. It comes about when the association between exposure and disease differs for those who participate and those who do not participate in the study [118]. Selection bias arising from non-response is almost inevitable in cross-sectional surveys. In our study, the disease being osteoporosis and often painful osteoporotic vertebral fractures, we cannot ignore the possibility that some of the oldest and most frail people chose not to attend, leading to a possible underestimation of our prevalence estimates. The effect of the most severe variants of disease missing out is also called “survivor bias” [114]. Analyses of the Tromsø data indicate that attendance among old and frail persons are lower than among the middle aged and healthy [98] which would lead to an underestimation of our vertebral fracture prevalence. On the other hand, those who volunteer for screening may do so because they are especially worried. These biases would tend to counteract one another, but because neither one is easy to quantify, the net bias would be unknown [118]. Still, with these considerations in mind, and analyses presented in paper 1 and 2, we dare assume that selection bias did not have an important impact on our results.

#### *Information bias*

in an epidemiologic study results from either imperfect definition of study variables or flawed data collection procedures [121].

#### Methods of measurements:

Our main source of data information was the DXA equipment. Three specially trained technicians, the author being one, did the DXA scanning of the participants according to a standardized protocol, and the quality assessment of the total material was performed by the author afterwards. For precision analysis of the VFA, a random sample of 50 participants was reanalyzed. At the vertebrae with the highest frequency of present deformity, exemplified by 7<sup>th</sup> and 12<sup>th</sup> thoracic vertebrae, the intra-class correlation coefficient varied between 0.77 and 0.92, with 0.86 as a mean [122]. BMD measurements at the total hip and femoral neck were done at the same occasion as the VFA. DXA measurements of BMD are recognized as having excellent precision [123]. In a Norwegian study from 2008, the short term *in vivo* precision error was 1.2 % for total hip and 1.7 % for femoral neck [22]. Daily phantom measurements were performed throughout our study. No drift in densitometer performance was observed during the study.

#### Questionnaire

Data on demographics and lifestyle variables were collected through questionnaires. Information on smoking habits, leisure time physical activity, self-perceived health, and educational level was included in all three papers. Paper 3 also include information on neck pain, back pain, and HRQL (EQ-5D-3L and EQ VAS).

It is a well-known fact that people, and thereby study participants, tend to underreport on smoking habits [124]. There is also a known tendency that physical activity is over-reported in questionnaires, which was shown in a sub-study of Tromsø VI [125]. This may be a result of recall bias or a tendency to give more socially acceptable answers. Inaccurate recall of past exposure is perhaps the most often cited type of exposure identification bias. Errors in recall of these past exposures result in misclassification of exposure status, thus biasing the results of the study [121]. In our study (papers 1 and 3), these variables were treated as confounding factors (defined by JM Elwood as “distortion of an exposure – outcome association brought about by

the association of another factor with both outcome and exposure” [126]) and used for adjustments in our models.

### **5.2.2 External validity**

External validity is the degree to which the results of an observation hold true in other settings. Another term for this is generalizability. Generalizability expresses the validity of assuming that participants in a study are similar to, or representative of, a general population.

Generalizability can rarely be dealt with satisfactorily in any one study. Even a defined, geographically based population is a biased sample of larger populations [117]. However, as the population of Tromsø is regarded not substantially different from the Norwegian population with respect to age and sex distribution [127] and the Tromsø Study is regarded representative of the Tromsø population [116], it is justifiable to assume the external validity of our study to be acceptable.

## 6. Discussion of results

### 6.1 Prevalence of vertebral fractures and sex differences

We found, as reported by others, an increasing prevalence of vertebral fractures by age in both sexes. Given the high incidence of forearm and hip fractures, we were surprised to find an overall prevalence of only 11.8 % in women and 13.8 % in men, which was lower than earlier reports from Norway [120]. This finding is intriguing and deserves further studies. With the prevalence of vertebral fractures varying from about 3 % in the age group below 60 to about 19 % in the 70+ group in women, and from 7.5 % to about 20 % in men, and an overall prevalence of 11.8 % in women and 13.8 % in men, there were no, if any, difference in prevalence between the two sexes. In both sexes, age (odds ratio [OR] per 5 year 1.69; 95 % CI 1.46-1.95) and BMD (OR per SD: 1.59; 95 % CI 1.37-11.85) were independent risk factors for vertebral fracture, and after adjusting for age and BMD, men had an even greater risk of fracture than women (OR 1.87; 95 % CI 1.4-2.5). This was also a surprising finding for us, as we expected a higher prevalence in women compared to men, as indicated by others [82]. Unfortunately there are not many studies including both women and men in their samples, but our finding definitely deserves to be followed. Because of the cross-sectional design, we do not know when these fractures occurred. We may assume that in men, some of the fractures may be of mechanical origin (high impact/high load) and could have occurred many years ago. Only a follow up study will reveal the incidence of vertebral fractures, which may be higher in women in the age groups studied. This will be an important topic in the up-coming Tromsø VII study (2015-16).

### 6.2 Associated risk factors of vertebral fractures

Because of the cross-sectional design we were only able to study factors associated with the prevalence of vertebral fractures. Fracture risk estimation has been an area of priority within

the field of osteoporosis research over many years. In a study published in New England Journal of Medicine in 1995 Cummings et al. illustrated how BMD, age and sex only partially describe the individual fracture risk [84]. After this publication, several models of fracture risk calculation have been launched. The model most used at the present, the FRAX model [86] includes several risk factors, among others history of previous fracture and smoking. Among the variables we had access to, only BMD and age were independently associated with vertebral fractures. This finding is in line with the reports from the Dubbo Osteoporosis Study and the Garvan nomogram of fracture [128, 129], although their nomograms also include BMI as an independent risk factor of osteoporotic fractures. With follow-up data between Tromsø VI and VII, we will be in a position to examine which models will predict future risk of vertebral fractures. This will be important because, as our findings indicated, although BMD and age were independently and significantly associated with vertebral fractures, they accounted for less than half of fracture risk (approximately 41 % was attributable to advancing age (more than 70 years) and low BMD (less than 0.85g/cm<sup>2</sup>), with the latter having a greater effect than the former)(paper 2 [88]).

### **6.3 Vertebral fractures and health related quality of life**

The impact of vertebral fractures on health related quality of life has not been much studied and we were expecting to find a strong association between the two. Women with vertebral fractures reported significantly more back pain and had lower EQ-5D-3L score than those without, also after adjustments for age, height, weight, and BMD. We could not demonstrate these associations in men. To our knowledge, these associations have not been studied in cohorts including both women and men before, and we cannot explain these findings with the information we have today. It is an interesting finding that deserves further studies on possible sex differences in the comprehension of pain, but it is a huge limitation to our study that we have no information of when the prevalent vertebral fractures occurred. If they occurred in early life in men, it may explain their non-symptomatic nature [130].



## 7 Conclusions

The overall prevalence of vertebral fractures was lower than expected, both compared with the prevalence found in a small Norwegian sample (Oslo 1996) and considering the high prevalence of hip- and other non-vertebral fractures in Norway.

Age and BMD are the strongest risk factors for vertebral fracture. This is in line with results reported from all over the world.

Prevalent vertebral fractures are associated with back pain and reduced health-related quality of life in women, but not in men.

## 8 Further research

Cross-sectional studies are said to be hypothesis-generating. As discussed above, several findings from this cross-sectional study surprised us. A Tromsø VII study will be due in 2015-16, and the following topics should be included in the follow-up study:

- The incidence of vertebral fractures by age and sex
- The risk of subsequent fractures after vertebral fractures
- Risk prediction models of vertebral fractures
- The impact of health - related quality of life after incident vertebral fracture

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## **PAPER I**

Waterloo S, Ahmed LA, Center JR, Eisman JA, Morseth B, Nguyen ND, Sjøgaard AJ, Nguyen T, Sjøgaard AJ, Emaus N

**Prevalence of vertebral fractures in women and men in the population-based Tromsø Study**

*BMC Musculoskeletal Disorders* 2012, **13**:3



## **PAPER II**

Waterloo S, Nguyen T, Ahmed LA, Center JR, Morseth B, Nguyen ND, Eisman JA, Sogaard AJ, Emaus N.

**Important risk factors and attributable risk of vertebral fractures in the population-based Tromsø Study**

*BMC Musculoskeletal Disorders* 2012, **13**:163



## **PAPER III**

Waterloo S, Søgaard AJ, Ahmed LA, Damsgård E, Morseth B, Emaus N

**Vertebral fractures and self-perceived health in elderly women and men: The Tromsø Study, a population-based cross-sectional study**

*Submitted*





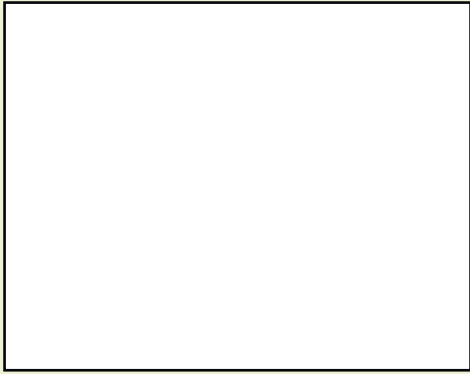
## **APPENDIX A**



# Tromsø-undersøkelsen

Skjemaet skal leses optisk. Vennligst bruk blå eller sort penn. Du kan ikke bruke komma, bruk blokkbokstaver.

2007 – 2008 KONFIDENSIELT



## HELSE OG SYKDOMMER

1 Hvordan vurderer du din egen helse sånn i alminnelighet?

- Meget god
- God
- Verken god eller dårlig
- Dårlig
- Meget dårlig

+

2 Hvordan synes du at helsen din er sammenlignet med andre på din alder?

- Mye bedre
- Litt bedre
- Omtrent lik
- Litt dårligere
- Mye dårligere

3 Har du eller har du hatt?

	Alder første gang	
	Ja	Nei
Hjerteinfarkt.....	<input type="checkbox"/>	<input type="checkbox"/>
Angina pectoris ( <i>hjerterampe</i> ).....	<input type="checkbox"/>	<input type="checkbox"/>
Hjerneslag/hjerneblødning.....	<input type="checkbox"/>	<input type="checkbox"/>
Hjerteflimmer ( <i>atrieflimmer</i> ).....	<input type="checkbox"/>	<input type="checkbox"/>
Høyt blodtrykk.....	<input type="checkbox"/>	<input type="checkbox"/>
Beinskjørhet ( <i>osteoporose</i> ).....	<input type="checkbox"/>	<input type="checkbox"/>
Astma.....	<input type="checkbox"/>	<input type="checkbox"/>
Kronisk bronkitt/emfysem/KOLS.....	<input type="checkbox"/>	<input type="checkbox"/>
Diabetes.....	<input type="checkbox"/>	<input type="checkbox"/>
Psykiske plager ( <i>som du har søkt hjelp for</i> ).....	<input type="checkbox"/>	<input type="checkbox"/>
Lavt stoffskifte.....	<input type="checkbox"/>	<input type="checkbox"/>
Nyresykdom, unntatt urinveisinfeksjon.....	<input type="checkbox"/>	<input type="checkbox"/>
Migrene.....	<input type="checkbox"/>	<input type="checkbox"/>

4 Har du langvarige eller stadig tilbakevendende smerter som har vart i 3 måneder eller mer?

- Ja
- Nei

5 Hvor ofte har du vært plaget av søvnløshet de siste 12 måneder?

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

+

6 Under finner du en liste over ulike problemer. Har du opplevd noe av dette den siste uken (til og med i dag)? (Sett ett kryss for hver plage)

	Ikke plaget	Litt plaget	Ganske mye	Veldig mye
Plutselig frykt uten grunn.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Føler deg redd eller engstelig.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Matthet eller svimmelhet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Føler deg anspent eller oppjaget.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lett for å klandre deg selv....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Søvnproblemer.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nedtrykt, tungsindig.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Følelse av å være unyttig, lite verd.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Følelse av at alt er et slit.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Følelse av håpløshet mht. framtida.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## BRUK AV HELSETJENESTER

7 Har du i løpet av de siste 12 måneder vært hos: Hvis JA; Hvor mange ganger?

	Ja	Nei	Ant ggr
Fastlege/allmennlege.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Psykiater/psykolog.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Legespesialist utenfor sykehus ( <i>utenom fastlege/allmennlege/psykiater</i> ).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Fysioterapeut.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Kiropraktor.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Annen behandler ( <i>homøopat, akupunktør, fotsoneterapeut, naturmedisiner, håndspålegger, healer, synsk el.l.</i> ).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Tannlege/tannpleier.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>

8 Har du i løpet av de siste 12 måneder vært på sykehus?

	Ja	Nei	Ant ggr
Innlagt på sykehus.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Konsultasjon ved sykehus uten innleggelse;			
Ved psykiatrisk poliklinikk.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Ved annen sykehuspoliklinikk.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>

9 Har du gjennomgått noen form for operasjon i løpet av de siste 3 årene?

- Ja
- Nei

+

## BRUK AV MEDISINER

- 10 Bruker du, eller har du brukt, noen av følgende medisiner? (Sett ett kryss for hver linje)

+	Aldri brukt			Alder første gang
	Nå	Før		
Medisin mot høyt blodtrykk...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Kolesterolsenkende medisin...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Medisin mot hjertesykdom...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Vann drivende medisin.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Medisin mot beinskjørhet (osteoporose).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Insulin.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Diabetesmedisin (tabletter).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Stoffskiftemedisinene				
Thyroxin/levaxin.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>

- 11 Hvor ofte har du i løpet av de siste 4 ukene brukt følgende medisiner? (Sett ett kryss pr linje)

	Ikke brukt siste 4 uker	Sjeldnere enn hver uke	Hver uke, men ikke daglig	Daglig
Smertestillende på resept.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smertestillende reseptfrie.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sovemidler.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beroligende medisiner.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medisin mot depresjon.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 12 Skriv ned alle medisiner – både de med og uten resept – som du har brukt regelmessig i siste 4 ukers periode. (Ikke regn med vitaminer, mineraler, urter, naturmedisin, andre kosttilskudd etc.)

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Får du ikke plass til alle medisiner, bruk eget ark.

**VED FRAMMØTE** vil du bli spurt om du har brukt antibiotika eller smertestillende medisiner de siste 24 timene. Om du har det, vil vi be om at du oppgir preparat, styrke, dose og tidspunkt

## FAMILIE OG VENNER

- 13 Hvem bor du sammen med? (Sett kryss for hvert spørsmål og angi antall)

	+	Ja	Nei	Antall
Ektefelle/samboer.....	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>
Andre personer over 18 år.....	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>
Personer under 18 år.....	<input type="checkbox"/>	<input type="checkbox"/>		<input type="text"/>

- 14 Kryss av for de slektninger som har eller har hatt

	Foreldre	Barn	Søsken
Hjerteinfarkt.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hjerteinfarkt før fylte 60 år.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Angina pectoris (hjertekrampe).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hjerneslag/hjerneblødning.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Beinskjørhet (osteoporose).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Magesår/tolvfingertarmsår.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Astma.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diabetes.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Demens.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Psykiske plager.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rusproblemer.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 15 Har du nok venner som kan gi deg hjelp når du trenger det?

Ja  Nei

- 16 Har du nok venner som du kan snakke fortrolig med?

Ja  Nei

- 17 Hvor ofte tar du vanligvis del i foreningsvirksomhet som for eksempel syklubb, idrettslag, politiske lag, religiøse eller andre foreninger?

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

## ARBEID, TRYGD OG INNTEKT

- 18 Hva er din høyeste fullførte utdanning? (Sett ett kryss)

- Grunnskole, framhaldsskole eller folkehøyskole  
 Yrkesfaglig videregående, yrkesskole eller realskole  
 Allmennfaglig videregående skole eller gymnas  
 Høyskole eller universitet, mindre enn 4 år  
 Høyskole eller universitet, 4 år eller mer

- 19 Hva er din hovedaktivitet? (Sett ett kryss)

- Yrkesaktiv heltid  Hjemmевærende  
 Yrkesaktiv deltid  Pensjonist/trygdet  
 Arbeidsledig  Student/militærtjeneste

- 20 **Mottar du noen av følgende ytelser?**
- Alderstrygd, førtidspensjon (AFP) eller etterlattepensjon
  - Sykepenger (er sykemeldt)
  - Rehabiliterings-/attføringspenger
  - Uføreytelse/pensjon, hel +
  - Uføreytelse/pensjon, delvis
  - Dagpenger under arbeidsledighet
  - Overgangstønad
  - Sosialhjelp/-stønad

- 21 **Hvor høy var husholdningens samlede bruttoinntekt siste år?** Ta med alle inntekter fra arbeid, trygder, sosialhjelp og lignende.
- |   |  |
|---|--|
| <input type="checkbox"/> Under 125 000 kr   | <input type="checkbox"/> 401 000-550 000 kr  |
| <input type="checkbox"/> 125 000-200 000 kr | <input type="checkbox"/> 551 000-700 000 kr  |
| <input type="checkbox"/> 201 000-300 000 kr | <input type="checkbox"/> 701 000 -850 000 kr |
| <input type="checkbox"/> 301 000-400 000 kr | <input type="checkbox"/> Over 850 000 kr     |

- 22 **Arbeider du utendørs minst 25 % av tiden, eller i lokaler med lav temperatur, som for eksempel lager-/industrihaller?**
- Ja  Nei

## FYSISK AKTIVITET

- 23 **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 der du går og løfter mye  
*(f.eks. postbud, pleier, bygningsarbeider)*
  - Tungt kroppsarbeid
- 24 **Angi bevegelse og kroppslig anstrengelse i din fritid. Hvis aktiviteten varierer meget f.eks mellom sommer og vinter, så ta et gjennomsnitt. Spørsmålet gjelder bare det siste året.** (Sett kryss i den ruta som passer best)
- Leser, ser på fjernsyn eller annen stillesittende beskjeftigelse
  - Spaserer, sykler eller beveger deg på annen måte minst 4 timer i uken *(her skal du også regne med gang eller sykling til arbeidsstedet, søndagsturer med mer)*
  - Driver mosjonsidrett, tyngre hagearbeid, snømåking e.l. *(merk at aktiviteten skal vare minst 4 timer i uka)*
  - Trener hardt eller driver konkurranseidrett regelmessig og flere ganger i uka
- 25 **Hvor ofte driver du mosjon?** (Med mosjon mener vi at du f.eks går en tur, går på ski, svømmer eller driver trening/idrett)
- Aldri
  - Sjeldnere enn en gang i uken
  - En gang i uken
  - 2-3 ganger i uken +
  - omtrent hver dag

- 26 **Hvor hardt mosjonerer du da i gjennomsnitt?**
- Tar det rolig uten å bli andpusten eller svett.
  - Tar det så hardt at jeg blir andpusten og svett
  - Tar meg nesten helt ut +
- 27 **Hvor lenge holder du på hver gang i gjennomsnitt ?**
- Mindre enn 15 minutter  30 minutter – 1 time
  - 15-29 minutter  Mer enn 1 time

## ALKOHOL OG TOBAKK

- 28 **Hvor ofte drikker du alkohol?**
- Aldri
  - Månedlig eller sjeldnere
  - 2-4 ganger hver måned
  - 2-3 ganger pr. uke
  - 4 eller flere ganger pr.uke
- 29 **Hvor mange enheter alkohol (en øl, et glass vin, eller en drink) tar du vanligvis når du drikker?**
- |                              |                              |   |
|------------------------------|------------------------------|---|
| <input type="checkbox"/> 1-2 | <input type="checkbox"/> 5-6 | <input type="checkbox"/> 10 eller flere |
| <input type="checkbox"/> 3-4 | <input type="checkbox"/> 7-9 |   |
- 30 **Hvor ofte drikker du 6 eller flere enheter alkohol ved en anledning?**
- aldri
  - sjeldnere enn månedlig
  - månedlig
  - ukentlig
  - daglig eller nesten daglig
- 31 **Røyker du av og til, men ikke daglig?**
- Ja  Nei
- 32 **Har du røykt/røyker du daglig?**
- Ja, nå  Ja, tidligere  Aldri
- 33 **Hvis du har røykt daglig tidligere, hvor lenge er det siden du sluttet?**
- Antall år
- 34 **Hvis du røyker daglig nå eller har røykt tidligere: Hvor mange sigaretter røyker eller røykte du vanligvis daglig?**
- Antall sigaretter
- 35 **Hvor gammel var du da du begynte å røyke daglig?**
- Antall år
- 36 **Hvor mange år til sammen har du røykt daglig?**
- Antall år
- 37 **Bruker du, eller har du brukt, snus eller skrå?**
- Nei, aldri  Ja, av og til +
  - Ja, men jeg har sluttet  Ja, daglig

## KOSTHOLD

38 Spiser du vanligvis frokost hver dag?

Ja  Nei

39 Hvor mange enheter frukt og grønnsaker spiser du i gjennomsnitt per dag? (Med enhet menes f.eks. en frukt, glass juice, potet, porsjon grønnsaker)

Antall enheter   +

40 Hvor mange ganger i uken spiser du varm middag?

Antall

41 Hvor ofte spiser du vanligvis disse matvarene? (Sett ett kryss pr linje)

	0-1 g pr. mnd	2-3 g pr.mnd	1-3 g pr.uke	4-6 g pr.uke	1-2 g pr. dag
Poteter.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pasta/ris.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kjøtt (ikke kvernet).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kvernet kjøtt (pølser, hamburger o.l).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grønnsaker, frukt, bær..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mager fisk.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feit fisk..... (f.eks.laks, ørret, makrell, sild, kveite,uer)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

42 Hvor mye drikker du vanligvis av følgende? (Sett ett kryss pr. linje)

	Sjelden/ aldri	1-6 glass pr. uke	1 glass pr. dag	2-3 glass pr. dag	4 glass el. mer pr. dag
Melk, kefir, yoghurt.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fruktjuice.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brus/leskedrikker med sukker.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

43 Hvor mange kopper kaffe og te drikker du daglig? (sett 0 for de typene du ikke drikker daglig)

	Antall kopper
Filterkaffe.....	<input type="text"/> <input type="text"/>
Kokekaffe/presskanne.....	<input type="text"/> <input type="text"/>
Annen kaffe.....	<input type="text"/> <input type="text"/>
Te.....	<input type="text"/> <input type="text"/>

44 Hvor ofte spiser du vanligvis fiskelever? (For eksempel i mølje)

Sjelden/aldri  1-3 g i året  4-6 g i året  
 7-12 g i året  Oftere

45 Bruker du følgende kosttilskudd?

	Daglig	Iblant	Nei
Tran, trankapsler.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Omega 3 kapsler (fiskeolje, selolje).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kalktabletter.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## SPØRSMÅL TIL KVINNER

46 Er du gravid nå?

Ja  Nei  Usikker

47 Hvor mange barn har du født?

Antall   +

48 Hvis du har født, fyll ut for hvert barn: fødselsår og vekt samt hvor mange måneder du ammet. (Angi så godt som du kan)

Barn	Fødselsår	Fødselsvekt i gram	Ammet ant.mnd
1	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
2	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
3	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
4	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
5	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
6	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>

49 Har du i forbindelse med svangerskap hatt for høyt blodtrykk?

Ja  Nei

50 Hvis Ja, i hvilket svangerskap?

Første  Senere

51 Har du i forbindelse med svangerskap hatt protein (eggehvite) i urinen?

Ja  Nei

52 Hvis Ja, i hvilket svangerskap?

Første  Senere

53 Ble noen av disse barna født mer enn en måned for tidlig (før termin) pga. svangerskapsforgiftning?

Ja  Nei

54 Hvis Ja, hvilke(t) barn

Barn 1  Barn 2  Barn 3  Barn 4  Barn 5  Barn 6

55 Hvor gammel var du da du fikk menstruasjon første gang?

Antall år   +

56 Bruker du for tiden reseptpliktige legemidler som påvirker menstruasjonen?

P-pille, hormonspiral eller lignende..... Ja  Nei  
 Hormonpreparat for overgangs-  
 alderen..... Ja  Nei

**VED FRAMMØTE** vil du få utfyllende spørsmål om menstruasjon og eventuell bruk av hormoner. Skriv gjerne ned på et papir navn på hormonpreparater du har brukt, og ta det med deg. Du vil også bli spurt om din menstruasjon har opphørt og eventuelt når og hvorfor.

## **APPENDIX B**



# Tromsø

- en del av Tromsøundersøkelsen





## SLIK FYLLER DU UT SKJEMAET:

Skjemaet vil bli lest maskinelt, det er derfor viktig at du krysser av riktig:

Riktig

Galt

Galt

Om du krysser feil, retter du ved å fylle boksen slik

Skriv tydelige tall 1 2 3 4 5 6 7 8 9 0

7	4
---	---

 Riktig

7	4
---	---

 Galt

Bruk kun sort eller blå penn, bruk ikke blyant eller tusj

## 1. BESKRIVELSE AV DIN HELSETILSTAND

Vis hvilke utsagn som passer best på din helsetilstand i dag ved å sette ett kryss i en av rutene utenfor hver av de fem gruppene nedenfor:

1.6 For at du skal kunne vise oss hvor god eller dårlig din helsetilstand er, har vi laget en skala (nesten som et termometer), hvor den beste helsetilstanden du kan tenke deg er markert med 100 og den dårligste med 0. Vi ber om at du viser din helsetilstand ved å trekke ei linje fra boksen nedenfor til det punkt på skalaen som passer best med din helsetilstand.

### 1.01 Gange

- Jeg har ingen problemer med å gå omkring
- Jeg har litt problemer med å gå omkring
- Jeg er sengeliggende

### 1.02 Personlig stell

- Jeg har ingen problemer med personlig stell
- Jeg har litt problemer med å vaske meg eller kle meg
- Jeg er ute av stand til å vaske meg eller kle meg

### 1.03 Vanlige gjøremål (f.eks. arbeid, studier, husarbeid, familie- eller fritidsaktiviteter)

- Jeg har ingen problemer med å utføre mine vanlige gjøremål
- Jeg har litt problemer med å utføre mine vanlige gjøremål
- Jeg er ute av stand til å utføre mine vanlige gjøremål

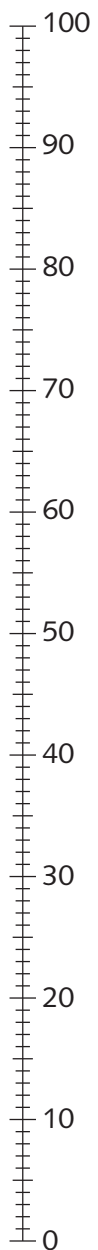
### 1.04 Smerte og ubehag

- Jeg har verken smerte eller ubehag
- Jeg har moderat smerte eller ubehag
- Jeg har sterk smerte eller ubehag

### 1.05 Angst og depresjon

- Jeg er verken engstelig eller deprimert
- Jeg er noe engstelig eller deprimert
- Jeg er svært engstelig eller deprimert

Best tenkelige  
helsetilstand



Nåværende  
helsetilstand

Verst tenkelige  
helsetilstand

## 2. OPPVEKST OG TILHØRIGHET

### 2.01 Hvor bodde du da du fylte 1 år?

- I Tromsø (med dagens kommunegrenser)
- I Troms, men ikke i Tromsø
- I Finnmark fylke
- I Nordland fylke
- Annet sted i Norge
- I utlandet

### 2.02 Hvordan var de økonomiske forhold i familien under din oppvekst?

- Meget gode
- Gode
- Vanskelige
- Meget vanskelige

### 2.03 Hvilken betydning har religion i ditt liv?

- Stor betydning
- En viss betydning
- Ingen betydning

### 2.07 Hva var/er den høyeste fullførte utdanning til dine foreldre og din ektefelle/samboer? (sett ett kryss i hver kolonne)

	Mor	Far	Ektefelle/ samboer
Grunnskole 7-10 år, framhaldsskole eller folkehøyskole.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Yrkesfaglig videregående, yrkesskole eller realskole .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Allmennfaglig videregående skole eller gymnas.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Høyskole eller universitet (mindre enn 4 år).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Høyskole eller universitet (4 år eller mer).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 2.04 Hva regner du deg selv som? (Kryss av for ett eller flere alternativ)

- Norsk
- Samisk
- Kvensk/Finsk
- Annet

### 2.05 Hvor mange søsken og barn har du/har du hatt?

Antall søsken.....

Antall barn.....

### 2.06 Lever din mor?

- Ja
- Nei

Hvis NEI: hennes alder ved død.....

### Lever din far?

- Ja
- Nei

Hvis NEI: hans alder ved død.....

### 3. TRIVSEL OG LIVSFORHOLD

3.01 Nedenfor står tre utsagn om tilfredshet med livet som et hele. Deretter står to utsagn om syn på din egen helse. Vis hvor enig eller uenig du er i hver av påstandene ved å sette et kryss i rubrikken for det tallet du synes stemmer best for deg. (sett ett kryss for hvert utsagn)

	Helt uenig	1	2	3	4	5	6	7	Helt enig
På de fleste måter er livet mitt nær idealet mitt.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mine livsforhold er utmerkede.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg er tilfreds med livet mitt.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg ser lyst på min framtidige helse.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ved å leve sunt kan jeg forhindre alvorlige sykdommer.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.02 Nedenfor står fire utsagn om syn på forhold ved din nåværende jobb, eller hvis du ikke er i arbeid nå, den jobben du hadde sist (sett ett kryss for hvert utsagn)

	Helt uenig	1	2	3	4	5	6	7	Helt enig
Arbeidet mitt er for belastende, fysisk eller følelsesmessig.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg har tilstrekkelig innflytelse på når og hvordan arbeidet mitt skal utføres.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg blir mobbet eller trakassert på arbeidsplassen min.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Jeg blir rettferdig behandlet på arbeidsplassen min.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.03 Jeg opplever at yrket mitt har følgende sosiale status i samfunnet: (dersom du ikke er i arbeid nå, tenk på det yrket du hadde sist)

- Meget høy status
- Ganske høy status
- Middels status
- Ganske lav status
- Meget lav status

3.04 Har du over lengre tid opplevd noe av det følgende? (sett ett eller flere kryss for hver linje)

	Nei	Ja, som barn	Ja, som voksen	Ja, siste år
Blitt plaget psykisk, eller truet med vold.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blitt slått, sparket eller utsatt for annen type vold.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Noen i nær familie har brukt rusmidler på en slik måte at dette har vært til bekymring for deg.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Dersom du har opplevd noen av disse forholdene, hvor mye plages du av dette nå?

- Ingen plager
- Noen plager
- Store plager

## 4. SYKDOMMER OG PLAGER

4.01 Har du i løpet av den siste måneden følt deg syk eller hatt en skade?

Ja  Nei

Hvis JA: har du i den samme perioden?  
(sett ett kryss for hver linje)

Vært hos allmennlege/fastlege.....  Ja  Nei

Vært hos spesialist.....  Ja  Nei

Vært på legevakt.....  Ja  Nei

Vært innlagt i sykehus.....  Ja  Nei

Vært hos alternativ behandler  
(kiropraktor, homøopat eller lignende).....  Ja  Nei

4.02 Har du merket anfall med plutselig endring i pulsen eller hjerterytmen siste året?

Ja  Nei

4.03 Blir du tungpustet i følgende situasjoner?  
(sett ett kryss for hvert spørsmål)

Når du går hurtig på flatmark eller svak oppoverbakke.....  Ja  Nei

Når du spaserer i rolig tempo på flatmark.....  Ja  Nei

Når du vasker deg eller kler på deg.....  Ja  Nei

Når du er i hvile.....  Ja  Nei

4.04 Hoster du omtrent daglig i perioder av året?

Ja  Nei

Hvis JA: Er hosten vanligvis ledsaget av oppspytt?

Ja  Nei

Har du hatt slik hoste så lenge som i en 3 måneders periode i begge de to siste årene?

Ja  Nei

4.05 Hvor ofte er du plaget av søvnløshet?  
(sett ett kryss)

Aldri, eller noen få ganger i året

1-3 ganger i måneden

Omtrent 1 gang i uka

Mer enn 1 gang i uka

Hvis du er plaget av søvnløshet månedlig eller oftere, når på året er du mest plaget?  
(sett ett eller flere kryss)

Ingen spesiell tid

Mørketida

Midnattsoltida

Vår og høst

4.06 Har du i de siste par ukene hatt vansker med å sove?

Ikke i det hele tatt

Ikke mer enn vanlig

Heller mer enn vanlig

Mye mer enn vanlig

4.07 Har du de siste par ukene følt deg ulykkelig og nedtrykt (deprimert)?

Ikke i det hele tatt

Ikke mer enn vanlig

Heller mer enn vanlig

Mye mer enn vanlig

4.08 Har du i de siste par ukene følt deg ute av stand til å mestre dine vanskeligheter?

Ikke i det hele tatt

Ikke mer enn vanlig

Heller mer enn vanlig

Mye mer enn vanlig

4.09 Nedenfor ber vi deg besvare noen spørsmål om din hukommelse: (sett ett kryss for hvert spørsmål)

Synes du at din hukommelse har blitt dårligere?.....  Ja  Nei

Glemmer du ofte hvor du har lagt tingene dine?.....  Ja  Nei

Har du problemer med å finne vanlige ord i en samtale?.....  Ja  Nei

Har du fått problemer med daglige gjøremål som du mestret tidligere?.....  Ja  Nei

Har du vært undersøkt for sviktende hukommelse?.....  Ja  Nei

Hvis JA på minst ett av de fire første spørsmålene ovenfor: Er det et problem i hverdagen?

Ja  Nei

4.10 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? (sett ett kryss i hver linje)

	Ikke plaget	En del plaget	Sterkt plaget
Nakke, skuldre.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Armer, hender.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Øvre del av ryggen....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Korsryggen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hofter, ben, føtter.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andre steder.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.11 Har du vært plaget med smerter og/eller stivhet i muskler og ledd i løpet av de siste 4 ukene? (sett ett kryss i hver linje)

	Ikke plaget	En del plaget	Sterkt plaget
Nakke, skuldre.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Armer, hender.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Øvre del av ryggen....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Korsryggen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hofter, ben, føtter.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andre steder.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.12 Har du noen gang hatt:

	Ja	Nei	Alder siste gang
Brudd i håndledd/underarm?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Lårhalsbrudd?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>

4.13 Har du fått stilt diagnosen slitasjegikt av lege?

Ja  Nei

4.14 Har eller har du hatt noen av følgende:

	Aldri	Litt	Mye
Nikkelallergi.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pollenallergi.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andre allergier.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.15 Har du opplevd ufrivillig barnløshet i mer enn 1 år?

Ja  Nei

Hvis JA, skyldtes dette:

	Ja	Nei	Vet ikke
Forhold hos deg selv?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forhold hos partneren?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.16 I hvilken grad har du hatt følgende plager i de siste 12 måneder?

	Aldri	Litt	Mye
Kvalme.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Halsbrann/sure oppstøt.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Diare.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Treg mage.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vekslende treg mage og diare.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oppblåsthet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smerter i magen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.17 Hvis du har hatt smerter i eller ubehag fra magen siste året:

	Ja	Nei
Er disse lokalisert øverst i magen?.....	<input type="checkbox"/>	<input type="checkbox"/>
Har du hatt plagene så ofte som 1 dag i uka eller mer de siste 3 måneder?.....	<input type="checkbox"/>	<input type="checkbox"/>
Blir plagene bedre etter avføring?.....	<input type="checkbox"/>	<input type="checkbox"/>
Har plagene sammenheng med hyppigere eller sjeldnere avføring enn vanlig?.....	<input type="checkbox"/>	<input type="checkbox"/>
Har plagene noen sammenheng med løsere eller fastere avføring enn vanlig?.....	<input type="checkbox"/>	<input type="checkbox"/>
Kommer plagene etter måltid?.....	<input type="checkbox"/>	<input type="checkbox"/>

4.18 Har du noen gang hatt:

	Ja	Nei	Alder siste gang
Sår på magesekken.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Sår på tolvfingertarmen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>
Magesår-operasjon.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>

4.19 Til kvinnen: Har du spontanabortert?

Ja  Nei  Vet ikke  
Hvis JA, antall ganger.....

4.20 Til mannen: Har din partner noen gang spontanabortert?

Ja  Nei  Vet ikke  
Hvis JA, antall ganger.....

4.21 Bruker du glutenfri diett?

Ja  Nei  Vet ikke

4.22 Har du fått stilt diagnosen Dermatitis Herpetiformis (DH)?

Ja  Nei  Vet ikke

4.23 Har du fått stilt diagnosen cøliaki på bakgrunn av en vevsprøve fra tynntarmen tatt under en undersøkelse der du svelget en slange (gastroskopi)?  
 Ja       Nei       Vet ikke

4.24 Har du egne tenner?  
 Ja       Nei

4.25 Hvor mange amalgamfyllinger har du/har du hatt?  
 0       1-5       6-10       10+

4.26 Har du vært plaget av hodepine det siste året?  
 Ja       Nei

**Hvis NEI, gå til del 5, kosthold**

4.27 Hva slags hodepine er du plaget av?  
 Migrene       Annen hodepine

4.28 Omtrent hvor mange dager per måned har du hodepine?  
 Mindre enn 1 dag  
 1-6 dager  
 7-14 dager  
 Mer enn 14 dager

4.29 Er hodepinen vanligvis:  
(sett et kryss for hver linje)

	Ja	Nei
Bankende/dunkende smerte.....	<input type="checkbox"/>	<input type="checkbox"/>
Pressende smerte.....	<input type="checkbox"/>	<input type="checkbox"/>
Ensidig smerte (høyre eller venstre).....	<input type="checkbox"/>	<input type="checkbox"/>

4.30 Hvor sterk er hodepinen vanligvis?  
 Mild (hemmer ikke aktivitet)  
 Moderat (hemmer aktivitet)  
 Sterk (forhindrer aktivitet)

4.31 Hvor lenge varer hodepinen vanligvis?  
 Mindre enn 4 timer  
 4 timer – 1 døgn  
 1-3 døgn  
 Mer enn 3 døgn

4.32 Dersom du er plaget av hodepine, når på året er du plaget mest? (sett ett eller flere kryss)  
 Ingen spesiell tid  
 Mørketida  
 Midnattsoltida  
 Vår og/eller høst

4.33 Før eller under hodepinen, kan du da ha forbigående:  
Ja    Nei

Synsforstyrrelse? (takkede linjer, flimring, tåkesyn, lysglimt).....	<input type="checkbox"/>	<input type="checkbox"/>
Nummenhet i halve ansiktet eller i hånden?.....	<input type="checkbox"/>	<input type="checkbox"/>
Forverring ved moderat fysisk aktivitet.....	<input type="checkbox"/>	<input type="checkbox"/>
Kvalme og /eller oppkast.....	<input type="checkbox"/>	<input type="checkbox"/>

4.34 Angi hvor mange dager du har vært borte fra arbeid eller skole siste måned på grunn av hodepine:  
Antall dager.....

## 5. KOSTHOLD

5.01 **Hvor ofte spiser du vanligvis følgende?** (sett ett kryss i hver linje)

	0-1 g per mnd	2-3 g per mnd	1-3 g per uke	Mer enn 3 g per uke
Ferskvannsfisk ( <i>ikke oppdrett</i> ) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Saltvannsfisk ( <i>ikke oppdrett</i> ) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oppdrettsfisk ( <i>laks, røye, ørret</i> ) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tunfisk ( <i>fersk eller hermetisert</i> ) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fiskepållegg .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Skjell .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Den brune innmaten i krabbe .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hvalkjøtt/sel/kobbekjøtt .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innmat fra rein eller elg .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Innmat fra rype .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.02 **Hvor mange ganger i året spiser du/spiste du vanligvis følgende?** (antall ganger)

	Som voksen	I din barndom
Mølje ( <i>Antall ganger i året</i> ) .....	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>
Måsegg ( <i>Antall egg i året</i> ) .....	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>
Reinsdyrkjøtt ( <i>Antall ganger i året</i> ) .....	<input style="width: 40px; height: 20px;" type="text"/>	<input style="width: 40px; height: 20px;" type="text"/>
Selvplukket sopp og bær ( <i>blåbær/tyttebær/multe</i> ) ( <i>Antall ganger i året</i> ) .....	<input style="width: 60px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>

5.03 **Hvor mange ganger i måneden spiser du hermetiske matvarer (fra metallbokser)?**

Antall

5.04 **Bruker du vitaminer og/eller mineraltilskudd?**

Ja, daglig       Ibland       Aldri

5.05 **Hvor ofte spiser du?**

	Aldri	1-3 g per mnd	1-3 g per uke	4-6 g. per uke	1-2 g. per dag	3 g. per dag eller mer
Mørk sjokolade .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lys sjokolade/melkesjokolade .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sjokoladecake .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Andre søtsaker .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.06 **Hvis du spiser sjokolade, hvor mye pleier du vanligvis å spise hver gang?**

Tenk deg størrelsen på en Kvikk-Lunsj sjokolade, og oppgi hvor mye du spiser i forhold til den.

	¼	½	1	1 ½	2	Mer enn 2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.07 **Hvor ofte drikker du kakao/varm sjokolade**

	Aldri	1-3 g per mnd	1-3 g per uke	4-6 g. per uke	1-2 g. per dag	3 g. per dag eller mer
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



## 6. ALKOHOL

- 6.01 **Hvor ofte har du det siste året:**
- |  | Aldri                    | Sjeldnere enn månedlig   | Månedlig                 | Ukentlig                 | Daglig, eller nesten daglig |
|--|--------------------------|--------------------------|--------------------------|--------------------------|-----------------------------|
| Ikke klart å stoppe og drikke alkohol når du først har begynt?.....                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>    |
| Ikke klart å gjøre det som normalt forventes av deg fordi du har drukket?.....       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>    |
| Trengt en drink om morgenen for å få komme i gang etter en range?.....               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>    |
| Følt skyld eller anger etter at du har drukket?.....                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>    |
| Ikke klart å huske hva som skjedde kvelden før på grunn av at du hadde drukket?..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>    |
- 6.02 **Har du eller andre noen gang blitt skadet på grunn av at du har drukket?.....**
- |   | Aldri                    | Ja, men ikke det siste året | Ja, det siste året       |
|---|--------------------------|-----------------------------|--------------------------|
| Har en slektning, venn, lege, eller annet helsepersonell vært bekymret for din drikking, eller foreslått at du reduserer inntaket?... | <input type="checkbox"/> | <input type="checkbox"/>    | <input type="checkbox"/> |

## 7. VEKT

- 7.01 **Har du ufrivillig gått ned i vekt siste 6 måneder?**
- Ja       Nei
- Hvis JA: Hvor mange kilo?.....
- 7.02 **Anslå din vekt da du var 25 år gammel:**
- Antall hele kg .....
- 7.03 **Er du fornøyd med vekta di nå?**
- Ja       Nei
- 7.04 **Hvilken vekt ville du være tilfreds med (din trivselsvekt):**
- Antall kg .....

## 8. LØSEMIDLER

- 8.01 **Hvor mange timer i uka driver du med følgende fritids- eller yrkesaktiviteter:**  
 Bilreparasjoner/lakkering, keramikkarbeid, maling/lakkering/løsemidler, frisør, glassmester, elektriker (Sett 0 om du ikke driver med slike fritids eller yrkesaktiviteter)
- Antall timer per uke i gjennomsnitt.....
- 8.02 **Bruker du hårfargemidler?**
- Ja       Nei
- Hvis JA, hvor mange ganger per år?..

## 9. BRUK AV HELSETJENESTER

9.01 Har du noen gang opplevd at sykdom er blitt mangelfullt undersøkt eller behandlet, og at dette har gitt alvorlige følger?

- Ja, det har rammet meg selv  
 Ja, det har rammet en nær pårørende  
(barn, foreldre, ektefelle/samboer)  
 Nei

Hvis JA, hvor mener du årsaken ligger?  
(sett ett eller flere kryss):

- hos fastlege/allmennlege  
 hos legevaktslege  
 hos privatpraktiserende spesialist  
 hos sykehuslege  
 hos annet helsepersonell  
 hos alternativ behandler  
 hos flere på grunn av svikt i rutiner og samarbeid

9.02 Har du noen gang følt deg overtalt til å godta undersøkelse eller behandling som du selv ikke ønsket?

- Ja  Nei

Hvis JA, mener du dette har hatt uheldige helsemessige følger?

- Ja  Nei

9.03 Har du noen gang klaget på behandling du har fått?

- Har aldri vært aktuelt  
 Har vurdert å klage, men ikke gjort det  
 Har klaget muntlig  
 Har klaget skriftlig

9.04 Hvor lenge har du hatt din nåværende fastlege/annen lege?

- Mindre enn 6 måneder  
 6 til 12 måneder  
 12 til 24 måneder  
 Mer enn 2 år

9.05 Ved siste legebesøk hos fastlegen, snakket legen(e) til deg slik at du forsto dem? Svar på en skala fra 0 til 10, hvor 0=de var vanskelige å forstå og 10=de var alltid enkle å forstå

- 0 1 2 3 4 5 6 7 8 9 10

9.06 Hvordan vil du karakterisere behandlingen eller rådgivingen du fikk siste gang du var hos lege? Svar på en skala fra 0 til 10, hvor 0= meget dårlig behandling og 10 = meget god behandling

- 0 1 2 3 4 5 6 7 8 9 10

9.07 Har du i løpet av de siste 12 måneder opplevd at det har vært vanskelig å bli henvist til spesielle undersøkelser (som røntgen eller liknende) eller til spesialisthelsetjenesten (privatpraktiserende spesialist eller ved sykehus)?

- Ikke aktuelt  
 Intet problem  
 Noe problem  
 Stort problem

9.08 Har du i løpet av de siste 12 måneder opplevd at det er vanskelig å bli henvist til fysioterapeut, kiropraktor eller liknende?

- Ikke aktuelt  
 Intet problem  
 Noe problem  
 Stort problem

9.09 Alt i alt, har du opplevd at det er vanskelig eller enkelt å bli henvist til spesialisthelsetjenesten?

- Ikke aktuelt  
 Meget vanskelig  
 Noe vanskelig  
 Rimelig enkelt  
 Meget enkelt

9.10 Har du i løpet av de siste 12 måneder vært til undersøkelse eller behandling i spesialisthelsetjenesten?

Ja  Nei

Hvis JA, snakket legen(e) til deg slik at du forstod dem? Svar på en skala fra 0 til 10, hvor 0=de var vanskelige å forstå og 10=de var alltid enkle å forstå

0 1 2 3 4 5 6 7 8 9 10

9.11 Hvordan vil du karakterisere behandlingen eller rådgivningen du fikk siste gang du var hos spesialist? Svar på en skala fra 0 til 10, hvor 0=meget dårlig og 10=meget god

0 1 2 3 4 5 6 7 8 9 10

9.12 Har du noen gang før 2002 gjennomgått en operasjon på sykehus eller spesialistklinikk?

Ja  Nei

9.13 Har du i løpet av de siste 12 måneder brukt urtemedisin , naturmidler eller naturlegemidler?

Ja  Nei

9.14 Har du i løpet av de siste 12 måneder brukt meditasjon, yoga, qi gong eller thai chi som egenbehandling?

Ja  Nei

## 10. BRUK AV ANTIBIOTIKA

10.01 **Har du brukt antibiotika i løpet av de siste 12 måneder?** (all penicillinliknende medisin i form av tabletter, mikstur eller sprøyter)

- Ja       Nei       Husker ikke

Hvis JA, hva fikk du behandling mot? Har du tatt flere antibiotikakurer, sett ett kryss for hver kur.

	Kur 1	Kur 2	Kur 3	Kur 4	Kur 5	Kur 6
· Urinveisinfeksjon ( <i>blærebetennelse, blærekatarr</i> ).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
· Luftveisinfeksjon ( <i>øre-, bihule- hals- eller lungebetennelse, bronkitt</i> ).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
· Annet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Antall dagers antibiotika kur.....

Hvordan skaffet du deg antibiotikakuren? Har du tatt flere kurer, sett ett kryss for hver kur.

Etter resept fra lege/tannlege.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uten kontakt med lege/uten resept:						
· Kjøp direkte fra apotek i utlandet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
· Kjøp gjennom Internett.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
· Rest fra tidligere kur tilgjengelig hjemme.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
· Fått av familie/venner.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
· Andre måter.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10.02 **Har du antibiotika hjemme?**

- Ja       Nei

Hvis JA, er dette etter avtale med lege for å behandle kronisk eller hyppig tilbakevendende sykdom?

- Ja       Nei

Hvis Nei, hvordan skaffet du deg dette legemiddelet? (Flere kryss er mulig)

- Kjøpt direkte fra apotek i utlandet.....
- Kjøpt over Internett.....
- Rest fra tidligere kur.....
- Fått av familie/venner.....
- Andre måter.....

10.03 **Kan du tenke deg å bruke antibiotika uten å kontakte lege først?**

- Ja       Nei

Hvis JA, hvilke tilstander vil du i så fall behandle? (Flere kryss mulig)

- Forkjølelse.....
- Hoste.....
- Bronkitt.....
- Halsbetennelse.....
- Bihulebetennelse.....
- Feber.....
- Influensa.....
- Ørebetennelse.....
- Diaré.....
- Blærebetennelse.....
- Andre infeksjoner.....

## 11. DIN DØGNRYTME

Vi vil stille deg noen spørsmål som handler om dine søvnvaner.

11.01 Har du hatt skiftarbeid de tre siste månedene?

Ja  Nei

11.02 Antall dager i løpet av uken hvor du ikke kan velge fritt når du vil sove (f.eks arbeidsdager)?

0 1 2 3 4 5 6 7

Da går jeg til sengs klokken.....

Jeg gjør meg klar til å sove klokken.....

Antall minutter jeg trenger på å sovne.....

Jeg våkner klokken.....

Ved hjelp av:  Vekkeklokke  annen ytre påvirkning (*støy, familie etc*)  av meg selv

Antall minutter jeg trenger på å stå opp.....

11.03 Antall dager i løpet av uken hvor du fritt kan velge når du vil sove (f.eks helger eller fridager)

0 1 2 3 4 5 6 7

Da går jeg til sengs klokken.....

Jeg gjør meg klar til å sove klokken.....

Antall minutter jeg trenger på å sovne.....

Jeg våkner klokken.....

Ved hjelp av:  Vekkeklokke  annen ytre påvirkning (*støy, familie etc*)  av meg selv

Antall minutter jeg trenger på å stå opp.....

## 12. HUD OG HUDSYKDOMMER

12.01 **Hvor ofte dusjer eller bader du vanligvis?**  
(sett ett kryss)

- 2 eller flere ganger daglig  
 1 gang daglig  
 4-6 ganger per uke  
 2-3 ganger per uke  
 1 gang per uke  
 sjeldnere enn 1 gang per uke

12.02 **Hvor ofte vasker du vanligvis hendene med såpe i løpet av en dag?** (sett ett kryss)

- 0 ganger  
 1-5 ganger  
 6-10 ganger  
 11-20 ganger  
 Mer enn 20 ganger

12.03 **Har du noen gang fått antibiotikakur (penicillin og liknende medisin) på grunn av en hudlidelse, for eksempel betent eksem, kviser, leggsår som ikke vil gro, tilbakevendende verkebyll?**

- Ja       Nei

Hvis JA, hvor mange ganger i gjennomsnitt per år fikk du antibiotika i den perioden du var mest plaget (sett ett kryss)

- 1-2     3-4     Mer enn 4 ganger

12.04 **Har du eller har du noen gang hatt følgende hudlidelser?** (sett ett kryss for hver linje)

- |  | Ja                       | Nei                      |
|--|--------------------------|--------------------------|
| Psoriasis.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| Atopisk eksem (barneeksem).....                                | <input type="checkbox"/> | <input type="checkbox"/> |
| Tilbakevendende håndeksem.....                                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Tilbakevendende kviser over flere måneder.....                 | <input type="checkbox"/> | <input type="checkbox"/> |
| Legg- eller fotsår som ikke ville gro i løpet av 3-4 uker..... | <input type="checkbox"/> | <input type="checkbox"/> |

Hvis JA på spørsmål om legg-og/eller fotsår, har du leggsår i dag?

- Ja       Nei

12.05 **Har du ofte eller bestandig noen av følgende plager?** (sett ett kryss for hver linje)

- |  | Ja                       | Nei                      |
|--|--------------------------|--------------------------|
| Hevelse i anklær og legger, særlig om kvelden.....                     | <input type="checkbox"/> | <input type="checkbox"/> |
| Åreknuter.....   | <input type="checkbox"/> | <input type="checkbox"/> |
| Eksem (rødt, kløende utslett) på leggene.....                          | <input type="checkbox"/> | <input type="checkbox"/> |
| Smerter i beina når du går, men som forsvinner når du står stille..... | <input type="checkbox"/> | <input type="checkbox"/> |

12.06 **Har du noen gang fått følgende diagnoser av lege?** (sett ett kryss for hver linje)

- |                    | Ja                       | Nei                      |
|--------------------|--------------------------|--------------------------|
| Psoriasis.....     | <input type="checkbox"/> | <input type="checkbox"/> |
| Atopisk eksem..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Rosacea.....       | <input type="checkbox"/> | <input type="checkbox"/> |

12.07 **Har du tilbakevendende store kviser/ verkebyll som er ømme/smertefulle og som ofte tilheler med arr på følgende steder?** (sett ett kryss for hver linje)

- |                              | Ja                       | Nei                      |
|------------------------------|--------------------------|--------------------------|
| Armhulene.....               | <input type="checkbox"/> | <input type="checkbox"/> |
| Under brystene.....          | <input type="checkbox"/> | <input type="checkbox"/> |
| Magefolden/navlen.....       | <input type="checkbox"/> | <input type="checkbox"/> |
| Rundt kjønnsorganet.....     | <input type="checkbox"/> | <input type="checkbox"/> |
| Rundt endetarmsåpningen..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Lyskene.....                 | <input type="checkbox"/> | <input type="checkbox"/> |

Hvis JA, har du noen gang oppsøkt lege på grunn av verkebyll?

- Ja       Nei

Hvis JA, fikk du da noen av følgende behandlinger? (sett ett kryss for hver linje)

- |   | Ja                       | Nei                      |
|---|--------------------------|--------------------------|
| Antibiotika salve/krem.....                       | <input type="checkbox"/> | <input type="checkbox"/> |
| Antibiotika tabletter.....                        | <input type="checkbox"/> | <input type="checkbox"/> |
| Kirurgisk åpning/tømming.....                     | <input type="checkbox"/> | <input type="checkbox"/> |
| Større kirurgisk inngrep med fjerning av hud..... | <input type="checkbox"/> | <input type="checkbox"/> |
| Kirurgisk laserbehandling.....                    | <input type="checkbox"/> | <input type="checkbox"/> |



# Oppfølgingsspørsmål





## INFORMASJON TIL OPPFØLGINGSSPØRSMÅL

De neste sidene med spørsmål skal ikke besvares av alle. Dersom du har svart ja på ett eller flere av spørsmålene under, ber vi deg om å gå videre til oppfølgingsspørsmål om emnet eller emnene du har svart ja på. De fire første emnene er fra det første spørreskjemaet og det siste spørsmålet er fra dette skjemaet.

Vi har for enkelthetskyld markert emnene med ulike farger slik at du lett skal finne frem til de spørsmålene som gjelder for deg.

Dersom du svarte JA på at du har: langvarige eller stadig tilbakevendende smerter som har vart i 3 måneder eller mer, ber vi deg svare på spørsmålene på side 19 og 20. Margen er markert med grønn.

Dersom du svarte JA på at du har gjennomgått noen form for operasjon i løpet av de siste 3 årene, ber vi deg svare på spørsmålene på side 21 og 22. Margen er markert med lilla.

Dersom du svarte JA på at du arbeider utendørs minst 25% av tiden, eller i lokaler med lav temperatur, som for eksempel lager/industrihaller, ber vi deg svare på spørsmålene på side 23. Margen er markert med rød.

Dersom du svarte JA på at du har brukt reseptfrie smertestillende medisiner, ber vi deg svare på spørsmålene på side 24. Margen er markert med orange.

Dersom du svarte JA på at du har eller noen gang har hatt plager med hud (som psoriasis, atopisk eksem, legg- eller fotsår som ikke vil gro, tilbakevendende håndeksem, kviser eller verkebyll), ber vi deg svare på spørsmålene på side 25. Margen er markert med gul.

Har du svart **NEI** på disse fem spørsmålene, er du ferdig med besvarelsen din. Spørreskjemaet returneres i svarkonvolutten du fikk utlevert på undersøkelsen. Portoen er allerede betalt.

Skulle du ønske å gi oss en skriftlig tilbakemelding om enten spørreskjema eller Tromsøundersøkelsen generelt, er du hjertelig velkommen til det på side 26.

Har du noen spørsmål, kan du ta kontakt med oss på telefon eller på e-post. Du finner kontaktinformasjon på baksiden av skjemaet. **TUSEN TAKK** for at du tok deg tid til undersøkelsen og til å svare på spørsmålene fra oss.

## 13. OPPFØLGINGSPØRSMÅL OM SMERTE

Du svarte i det første spørreskjemaet at du har langvarige eller stadig tilbakevendende smerter som har vart i 3 måneder eller mer. Her ber vi deg beskrive de smertene litt nærmere.

### 13.01 Hvor lenge har du hatt disse smertene?

Antall år.....   måneder.....

### 13.02 Hvor ofte har du vanligvis disse smertene?

- |   |  |
|---|--|
| <input type="checkbox"/> Hver dag                     | <input type="checkbox"/> En eller flere ganger i måneden |
| <input type="checkbox"/> En eller flere ganger i uken | <input type="checkbox"/> Sjeldnere enn 1 gang i måneden  |

### 13.03 Hvor er det vondt? (Kryss av for alle steder der du har langvarige eller stadig tilbakevendende smerter)

- |  |   |
|--|---|
| <input type="checkbox"/> Hode/ansikt     | <input type="checkbox"/> Lår/kne/legg           |
| <input type="checkbox"/> Kjeve/kjeveledd | <input type="checkbox"/> Ankel/fot              |
| <input type="checkbox"/> Nakke           | <input type="checkbox"/> Bryst                  |
| <input type="checkbox"/> Rygg            | <input type="checkbox"/> Mage                   |
| <input type="checkbox"/> Skulder         | <input type="checkbox"/> Underliv/kjønnsorganer |
| <input type="checkbox"/> Arm/albue       | <input type="checkbox"/> Hud                    |
| <input type="checkbox"/> Hånd            | <input type="checkbox"/> Annet sted             |
| <input type="checkbox"/> Hofte           |   |

### 13.04 Hva mener du er årsaken til smertene? (Kryss av for alle kjente årsaker)

- |   |  |
|---|--|
| <input type="checkbox"/> Ulykke/akutt skade                         | <input type="checkbox"/> Fibromyalgi                             |
| <input type="checkbox"/> Langvarig belastning                       | <input type="checkbox"/> Angina pectoris ( <i>hjertekrampe</i> ) |
| <input type="checkbox"/> Kirurgisk inngrep/operasjon                | <input type="checkbox"/> Dårlig blodsirkulasjon                  |
| <input type="checkbox"/> Skiveutglidning ( <i>prolaps</i> )/lumbago | <input type="checkbox"/> Kreft                                   |
| <input type="checkbox"/> Nakkesleng ( <i>whiplash</i> )             | <input type="checkbox"/> Nerveskade/nevropati                    |
| <input type="checkbox"/> Migrene/hodepine                           | <input type="checkbox"/> Infeksjon                               |
| <input type="checkbox"/> Slitasjegikt ( <i>artrose</i> )            | <input type="checkbox"/> Helvetesild                             |
| <input type="checkbox"/> Leddgikt                                   | <input type="checkbox"/> Annen årsak ( <i>beskriv under</i> )    |
| <input type="checkbox"/> Bechterews sykdom                          | <input type="checkbox"/> Vet ikke                                |

Beskriv annen årsak:

.....

### 13.05 Hvilke former for behandling har du fått for smertene? (Kryss av for alle typer smertebehandling du har mottatt)

- |   |   |
|---|---|
| <input type="checkbox"/> Ingen behandling             | <input type="checkbox"/> Smerteskole/avspenning/psykoterapi                                     |
| <input type="checkbox"/> Smertestillende medisiner    | <input type="checkbox"/> Akupunktur   |
| <input type="checkbox"/> Fysioterapi/kiropraktikk     | <input type="checkbox"/> Alternativ behandling ( <i>homøopati, healing, aromaterapi, m.m.</i> ) |
| <input type="checkbox"/> Behandling ved smerteklinikk |   |
| <input type="checkbox"/> Operasjon                    | <input type="checkbox"/> Annen behandling   |

13.06 På en skala fra 0 til 10, der 0 tilsvarer ingen smerte og 10 tilsvarer den verst tenkelige smerten du kan forestille deg:

Hvor sterke vil du si at smertene vanligvis er?.....

Ingen smerte	0	1	2	3	4	5	6	7	8	9	10	Verst tenkelige smerte
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Hvor sterke er smertene når de er på sitt sterkeste?.....

Ingen smerte	0	1	2	3	4	5	6	7	8	9	10	Verst tenkelige smerte
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

I hvor stor grad påvirker smertene søvnen din?.....

Påvirker ikke	0	1	2	3	4	5	6	7	8	9	10	Umulig å få sove
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

I hvor stor grad hindrer smertene deg i å utføre vanlige aktiviteter hjemme og i arbeid?.....

Påvirker ikke	0	1	2	3	4	5	6	7	8	9	10	Kan ikke gjøre noe
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

## 14. OPPFØLGINGSPØRSMÅL OM OPERASJON

I det første spørreskjemaet svarte du at du har gjennomgått en operasjon i løpet av de siste 3 årene.

### 14.01 Hvor mange operasjoner har du totalt gjennomgått de siste 3 årene?

Antall.....

Nedenfor ber vi deg beskrive operasjonen. Dersom du har gjennomgått flere operasjoner i løpet av de siste 3 årene gjelder disse spørsmålene den siste operasjonen du gjennomgikk.

### 14.02 Hvor i kroppen ble du operert? (Dersom du samtidig ble operert flere steder i kroppen, settes flere kryss)

Operasjon i hode/nakke/rygg

- Hode/ansikt.....
- Nakke/hals.....
- Rygg.....

Operasjon i brystregionen

- Hjerter.....
- Lunger.....
- Bryster.....
- Annen operasjon i brystregionen.....

Operasjon i mage/underliv

- Mage/tarm.....
- Lyskebrokk.....
- Urinveier/kjønnsorganer.....
- Galleblære/galleveier.....
- Annen operasjon i mage/underliv.....

Operasjon i hofte/ben

- Hofte/lår.....
- Kne/legg.....
- Ankel/fot.....
- Amputasjon.....

Operasjon i skulder og arm

- Skulder/overarm.....
- Albue/underarm.....
- Hånd.....
- Amputasjon.....

### 14.03 Bakgrunn for operasjonen:

- Akutt sykdom/skade.....
- Planlagt ikke-kosmetisk operasjon.....
- Planlagt kosmetisk operasjon.....

### 14.04 Hvor ble du operert?

- Sykehuset i Tromsø.....
- Sykehuset i Harstad.....
- Annet offentlig sykehus.....
- Privat klinikk.....

### 14.05 Hvor lenge er det siden du gjennomgikk operasjonen?

Antall år.....  måneder.....

### 14.06 Har du nedsatt følsomhet i et område nær operasjonsarret?

Ja  Nei

### 14.07 Er du overfølsom for berøring, varme eller kulde i et område nær operasjonsarret?

Ja  Nei

### 14.08 Kan lett berøring av klær, dusj og lignende fremkalle ubehag/smerte?

Ja  Nei

### 14.09 Hvis du hadde smerter på operasjonsstedet før du ble operert, har du samme type smerte nå?

Ja  Nei



14.10 **Smerte fra operasjonsstedet:** Svar på en skala fra 0 til 10, hvor 0=ingen smerte og 10=verst tenkelige smerte

	Ingen smerte	0	1	2	3	4	5	6	7	8	9	10	Verst tenkelige smerte
Hvor sterke smerter hadde du fra operasjonsstedet <u>før</u> operasjonen.....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	Ingen smerte	0	1	2	3	4	5	6	7	8	9	10	Verst tenkelige smerte
Hvor sterke smerter har du vanligvis fra operasjonsstedet <u>nå</u> .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

	Ingen smerte	0	1	2	3	4	5	6	7	8	9	10	Verst tenkelige smerte
Hvor sterke smerter har du nå fra operasjonsstedet når smertene er på det sterkeste.....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



## 15. OPPFØLGINGSPØRSMÅL OM ARBEID I KALDT KLIMA

I det første spørreskjemaet svarte du ja på at du arbeidet i kaldt klima. Her er noen oppfølgings-spørsmål vi håper du vil svare på.

### 15.01 Fryser du på jobb?

- Ja, ofte  
 Ja, noen ganger  
 Nei, aldri

### 15.02 Hvor lenge har du vært utsatt for kalde omgivelser under 0°C sist vinter?

Fritid/hobby (timer/uke) .....

Arbeid (timer/uke) .....

Utendørs, godt kledd (timer/uke) .....

Utendørs, tynnkledd (timer/uke) .....

Innendørs, uten oppvarming (timer/uke) .....

I kalde omgivelser, med våte klær (timer/uke) .....

Kontakt med kalde gjenstander/ verktøy (timer/uke) .....

### 15.03 Hvilken omgivelsestemperatur forhindrer deg i å:

Under °C

Arbeide utendørs .....

Trene utendørs .....

Utføre andre aktiviteter utendørs .....

### 15.04 Har du hatt forfrysninger siste 12 måneder, med blemmer, sår eller skader i huden?

- Ja       Nei

Hvis JA, hvor mange ganger? .....

### 15.08 Hvordan påvirker kalde omgivelser og kulderelaterte symptomer din yteevne?

	Nedsatt	Uforandret	Forbedret
Konsentrasjon.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hukommelse.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fingerfølsomhet (følelse).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fingerferdighet (motorikk).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Kontroll av bevegelse (for eksempel skjelving).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tungt fysisk arbeid.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Langvarig fysisk arbeid.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### 15.05 Har du opplevd kløe og/eller utslett i forbindelse med kulde?

- Ja       Nei

### 15.06 Har du i løpet av de siste 12 måneder vært involvert i ulykke som krevde medisinsk behandling der kulde var en viktig faktor?

Ja Nei

På arbeid .....

I fritiden .....

### 15.07 Opplever du noen av følgende symptomer mens du oppholder deg i kalde omgivelser? I så fall, ved hvilken temperatur oppstår symptomene?

Ja Nei Under °C

Pusteproblemer .....

Pipende pust .....

Slim fra lungene .....

Brystsmerter .....

Forstyrrelse i hjerterytmen..

Nedsatt blodsirkulasjon i hender/føtter.....

Synsforstyrrelse (kortvarig/ forbigående).....

Migrene (kortvarig/forbigående)

Hvite fingre (kortvarig/ forbigående).....

Blå, blå-røde fingre (kortvarig/forbigående).....

## 16. BRUK AV RESEPTFRIE SMERTESTILLENDENDE LEGEMIDLER

I det første spørreskjemaet svarte du at du hadde brukt reseptfrie smertestillende legemidler de siste 4 ukene. Her er noen oppfølgingsspørsmål vi håper du vil svare på.

### 16.01 Hvilke typer reseptfrie smertestillende legemidler har du brukt?

Paracetamol: (*Pamol, Panodil, Paracet, Paracetamol, Pinex*)

- Ikke brukt
- Sjeldnere enn hver uke
- Hver uke, men ikke daglig
- Daglig

Hvor mye tar du vanligvis daglig når du bruker midlene?

(Antall tabletter, stikkpiller).....

Acetylsalisylsyre: (*Aspirin, Dispril, Globoid*)

- Ikke brukt
- Sjeldnere enn hver uke
- Hver uke, men ikke daglig
- Daglig

Hvor mye tar du vanligvis daglig når du bruker midlene?

(Antall tabletter).....

Ibuprofen: (*Ibuprofen, Ibuprofen, Ibuprofen, Ibuprofen*)

- Ikke brukt
- Sjeldnere enn hver uke
- Hver uke, men ikke daglig
- Daglig

Hvor mye tar du vanligvis daglig når du bruker midlene?

(Antall tabletter, stikkpiller).....

Naproxen: (*Ledox, Naproxen*)

- Ikke brukt
- Sjeldnere enn hver uke
- Hver uke, men ikke daglig
- Daglig

Hvor mye tar du vanligvis daglig når du bruker midlene?

(Antall tabletter).....

Fenazon med koffein: (*Antineuralgica, Fanalgin, Fenazon-koffein, Fenazon-koffein sterke*)

- Ikke brukt
- Sjeldnere enn hver uke
- Hver uke, men ikke daglig
- Daglig

Hvor mye tar du vanligvis daglig når du bruker midlene?

(Antall tabletter).....

### 16.02 Mot hvilke plager bruker du reseptfrie smertestillende midler: (Flere kryss er mulig)

- Hodepine
- Mensmerter
- Migrene
- Ryggsmerter
- Muskelsmerter/leddsmerter
- Tannmerter
- Annet

### 16.03 Mener du å ha opplevd bivirkninger av noen av legemidlene? (sett ett kryss for hver linje)

	Ja	Nei
Paracetamol.....	<input type="checkbox"/>	<input type="checkbox"/>
Acetylsalisylsyre.....	<input type="checkbox"/>	<input type="checkbox"/>
Ibuprofen.....	<input type="checkbox"/>	<input type="checkbox"/>
Naproxen.....	<input type="checkbox"/>	<input type="checkbox"/>
Fenazon med koffein.....	<input type="checkbox"/>	<input type="checkbox"/>

### 16.04 Hvor pleier du å kjøpe slike legemidler?

- Apotek
- Dagligvare
- Bensinstasjon
- Utenlands
- Internett

### 16.05 Kombinerer du behandlingen med bruk av reseptbelagte smertestillende midler?

- Ja
- Nei

## 17. OPPFØLGINGSPØRSMÅL OM HUDSYKDOMMER

På side 15 i dette spørreskjemaet svarte du at du har eller har hatt en hudsykdom. Her er noen oppfølgingsspørsmål vi håper du vil svare på.

Svar på en skala fra 0 til 10, der 0 tilsvarer ingen plager og 10 tilsvarer verst tenkelige plager. Dersom du svarte JA på at du har eller har hatt:

	Ingen plager	0	1	2	3	4	5	6	7	8	9	10	Verst tenkelige plager
<b>17.01 Psoriasis</b>													
· Hvor mye plaget er du av din psoriasis i dag? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
· Hvor mye plaget er du av din psoriasis når den er som verst? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>17.02 Atopisk eksem</b>													
· Hvor mye plaget er du av ditt atopiske eksem i dag? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
· Hvor mye plaget er du av ditt atopiske eksem når det er som verst? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>17.03 Håndeksem</b>													
· Hvor mye plaget er du av ditt håndeksem i dag? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
· Hvor mye plaget er du av ditt håndeksem når det er som verst? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>17.04 Kviser</b>													
· Hvor mye plaget er du av dine kviser i dag? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
· Hvor mye plaget er du av dine kviser når de er som verst? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>17.05 Verkebyller</b>													
· Hvor mye plaget er du av dine verkebyller i dag? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
· Hvor mye plaget er du av dine verkebyller når de er som verst? .....		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<b>17.06 Her er en liste over faktorer som kan tenkes å utløse eller forverre verkebyller, kryss av for hva du synes gjelder for deg:</b>													
	Ja	Nei											
Stress/psykisk påkjenning .....	<input type="checkbox"/>	<input type="checkbox"/>											
Trange/tette klær .....	<input type="checkbox"/>	<input type="checkbox"/>											
Menstruasjonsyklus .....	<input type="checkbox"/>	<input type="checkbox"/>											
Svangerskap .....	<input type="checkbox"/>	<input type="checkbox"/>											
Annet .....	<input type="checkbox"/>	<input type="checkbox"/>											
<b>17.07 Hvor mange utbrudd av verkebyller har du vanligvis i løpet av ett år? (sett ett kryss)</b>													
<input type="checkbox"/> 0-1	<input type="checkbox"/> 4-6												
<input type="checkbox"/> 2-3	<input type="checkbox"/> Mer enn 6												
<b>17.08 Hvor gammel var du da du fikk verkebyller første gang?</b>													
<input type="checkbox"/> 0-12 år	<input type="checkbox"/> 26-35 år												
<input type="checkbox"/> 13-19 år	<input type="checkbox"/> 36-50 år												
<input type="checkbox"/> 20-25 år	<input type="checkbox"/> Over 50 år												
<b>17.09 Dersom du ikke lenger har verkebyller, hvor gammel var du da plagene forsvant?</b>													
<input type="checkbox"/> 0-12 år	<input type="checkbox"/> 26-35 år												
<input type="checkbox"/> 13-19 år	<input type="checkbox"/> 36-50 år												
<input type="checkbox"/> 20-25 år	<input type="checkbox"/> Over 50 år												





Takk for hjelpen!





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