

"A community-based study of urinary incontinence in women. Prevalence, help seeking and risk related to family history and lifestyle factors"

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List of papers

I. Hannestad YS, Rortveit G, Sandvik H, Hunskaar S. A community-based epidemiological survey of female urinary incontinence: the Norwegian EPINCONT study. *J Clin Epidemiol* 2000;53:1150-7.

II. Hannestad YS, Rortveit G, Hunskaar S. Help-seeking and associated factors in female urinary incontinence. The Norwegian EPINCONT Study. *Scand J Prim Health Care* 2002;20:102-7.

III. Hannestad YS, Rortveit G, Daltveit AK, Hunskaar S. Are smoking and other lifestyle factors associated with female urinary incontinence? The Norwegian EPINCONT Study. *BJOG* 2003;110:247-54.

IV. Hannestad YS, Lie RT, Rortveit G, Hunskaar S. Familial risk of urinary incontinence in women. *Submitted 2003*

Summary

The thesis is based on data from the The Norwegian EPINCONT Study (Epidemiology of Incontinence in the County of Nord-Trøndelag). EPINCONT is a substudy of the Nord-Trøndelag Health Survey 2 (HUNT 2), a large population-based survey performed in one county in Norway during the years 1995-97. Urinary incontinence was one of several topics covered by the complete HUNT 2 survey and data were gathered by means of questionnaires and measurements of some clinical parameters. All residents in the county 20 years or older were invited to the survey and the questions about urinary incontinence were answered by 27936 women, giving an overall response rate for the EPINCONT study of 80%. Based on questions regarding frequency and amount of leakage the incontinence was categorized as slight, moderate or severe. Based on answers regarding typical situations of leakage, the symptoms were categorized as urge or stress symptoms. For the study of familial risk of incontinence, the data were linked to the kinship registry from Statistics Norway to identify relatives within the study population.

25% of the participating women had urinary leakage.. The prevalence of incontinence and the severity of the symptoms increased with increasing age. However, most of the incontinent women had slight to moderate symptoms and two out of three did not consider the incontinence to be bothersome. 7% of the participating women had significant incontinence (moderate/severe incontinence experienced as bothersome) and they may be regarded as potential patients. According to the epidemiological classification of incontinence types, which is based on reported symptoms, half of the incontinent women had stress incontinence, 11% urge and 36% mixed incontinence.

One out of four women with any incontinence and half of the women with significant incontinence had consulted a doctor because of the leakage symptoms.

Older age, increasing severity and impact of symptoms were associated with help seeking. An interesting scope for future studies should be the degree of wish for treatment among women with incontinence.

Several life style factors appeared to be related to incontinence. Former and current heavy smoking, high body mass index, and tea drinking were associated with incontinence. Increasing levels of low intensity physical activity seemed to be related to a lower risk of incontinence. No clear effects were found for intake of coffee and alcohol. Further studies are needed for potential causal relationships to be established and for the investigation of potential preventive effects and efficacy of life style changes.

Women with incontinent mothers or older sisters were more likely to be incontinent than the women with continent relatives. A familial risk was found for all the incontinence types. A granddaughter had a clearly increased risk for incontinence if both her mother and grandmother were incontinent.