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Title (type in CAPITAL LETTERS, leave one blank line before the text)
A COMMUNITY-BASED EPIDEMIOLOGICAL SURVEY OF FEMALE URINARY INCONTINENCE. THE NORWEGIAN EPINCONT STUDY.

## Aims of study

The aim of the study was to assess the prevalence of any urinary leakage in an unselected female population in Norway, and to estimate the prevalence of significant incontinence.

## Methods

The EPINCONT Study is part of a large survey (HUNT 2) performed in a county in Norway during 1995-97. All citizens aged 13 years or more appr. 100.000) were invited. The complete survey covered many topics. A mailed questionnaire was part of the invitation. Clinical and laboratory tests were performed at the screening-station, and the participants received a second questionnaire (this time containing questions about urinary leakage), which was to be returned by mail.
$27936(80 \%)$ out of 34755 participating community-dwelling women aged 20 years or more, answered our questions about frequency and severity of urine loss, type of incontinence, the duration of the condition, whether a doctor had been consulted on this matter, and to what extent the urinary leakage was experienced as a problem. A validated severity index was used to assess severity $[1,2]$.

## Results

$25 \%$ of the participating women had urinary leakage ( $\mathrm{n}=6876$ ). Nearly $7 \%$ had significant incontinence, defined as moderate or severe incontinence that was also experienced as bothersome. The prevalence of both any incontinence and significant incontinence increased with increasing age (fig. 1).

Half of the incontinent women were experiencing symptoms of stress type incontinence alone. Symptoms of urge incontinence alone affected 11\%, while maxed incontinence was stated by $36 \%$ of the cases. The fraction of stress incontinence symptoms was highest among the women between 25 and 49

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years of age, and then there was some relative decrease with increasing age.
The severity of incontinence varied between the different types. The fraction of severe incontinence was $17 \%, 28 \%$ and $38 \%$ in the stress, urge and mixed groups, respectively.

Two thirds of the incontinent women stated that their leakage was no problem or just a small nuisance while about $10 \%$ were much bothered or experienced their leakage as a great problem. There was a significant correlation between the severity index and the rating of incontinence as a problem.

The impact of incontinence differed between types. Among women with symptoms of mixed incontinence, $47 \%$ were bothered. The corresponding figures for urge and stress incontinence were $36 \%$ and $24 \%$, respectively.

A total of $26 \%$ of the women had consulted a doctor for their
incontinence.

## Conclusions

Urinary leakage is highly prevalent among adult women, and the prevalence is increasing with increasing age. 7\% have significant incontinence, and this group should be regarded as potential patients.

Fig. 1 Prevalence of any and signıficant incontinence. $\mathrm{n}=6170$ (women with incomplete


## References:

1. Validation of a severity index in female urinary incontinence and its implementation in an epidemiological survey. J Epidemıol Community Health 1993;47(6):497-9.
2. A severity index for epidemiological surveys of female urinary incontinence. Comparision with 48 -hour pad weighing tests. Neurourol Urodyn 2000;19(2):137-145.
