Osteoporosis in South Australia

This report summarises the findings from surveys conducted by the Population Research and Outcome Studies Unit.

METHODS

The majority of data in this report were obtained from the Health Omnibus Surveys conducted in South Australia between 1995 and 2001. Face to face interviews are conducted with people aged 15 years and over. The minimum number of interviews conducted is 3000.

In the surveys, respondents were asked whether or not a doctor had told them that they have osteoporosis. Thus the data refers to self-reported, doctor-diagnosed osteoporosis.

RESULTS

Prevalence of osteoporosis in SA

- Between 2.9% and 4.8% of the population reported osteoporosis in each of the years between 1995 and 2001 (Table 1).
- The overall prevalence of osteoporosis from 1995 to 2001 was 3.7%.

Table 1: Prevalence of osteoporosis

<table>
<thead>
<tr>
<th>Year</th>
<th>Prevalence (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>3.2 (2.6-3.9)</td>
</tr>
<tr>
<td>1997</td>
<td>3.8 (3.1-4.5)</td>
</tr>
<tr>
<td>1998 (Autumn)</td>
<td>3.2 (2.6-3.9)</td>
</tr>
<tr>
<td>1998 (Spring)</td>
<td>2.9 (2.4-3.6)</td>
</tr>
<tr>
<td>1999</td>
<td>4.2 (3.5-5.0)</td>
</tr>
<tr>
<td>2001</td>
<td>4.8 (4.1-5.6)</td>
</tr>
</tbody>
</table>

- Women were far more likely than men to have been diagnosed with osteoporosis.
- There was a clear relationship between age and prevalence of diagnosed osteoporosis.
- The prevalence of osteoporosis was not associated with area of residence in South Australia.
- In general, there was an inverse relationship between level of education and prevalence of osteoporosis, with lower levels of education associated with higher levels of osteoporosis.

Risk factors for osteoporosis

Commonly reported risk factors for osteoporosis include age, gender, early menopause, changes in hormonal levels, high caffeine intake, smoking, alcohol abuse, drug use, family history, race, calcium and other mineral intake, body size and exercise. In the Health Omnibus surveys questions addressed the following risk factors:

Gender

- In 2001, females were four times more likely to have been told that they have osteoporosis.
- This pattern has been similar for all years of the survey.

Age

- There is a clear relationship between age and prevalence of self reported osteoporosis, with older people more likely to report having osteoporosis.

Family history

- Those under the age of 50 were four times as likely to have been told that they have osteoporosis if they had parents or siblings who had broken a bone.

Smoking

- There was no association between smoking and the prevalence of osteoporosis, regardless of age.

Body mass index

- There was no association between body mass index and osteoporosis, regardless of age.

Exercise

- There was no association between exercise prevalence and prevalence of osteoporosis.

Other chronic conditions

- There was an association between asthma and osteoporosis in the 1997, 1999 and 2001 surveys for people aged over 50 years of age. People with asthma were statistically significantly more likely to have osteoporosis.
- There was no association between chronic bronchitis or diabetes and osteoporosis.
- A statistically significant association between osteoporosis and arthritis was demonstrated in 1998, 1999 and 2001.
Quality of life

In the 1998 Autumn survey, all respondents answered the Short Form 36 (SF-36) which explores a range of mental and physical health dimensions. Eight dimensions of physical and mental health functioning are then calculated: physical functioning (PF), ability to perform physical role (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), ability to perform emotional role (RE) and mental health (MH). Respondents with osteoporosis were compared to the general population norms.

Figure 1 shows the SF-36 scores for people with and without osteoporosis, controlling for gender and age. It can be seen that osteoporosis has a profound impact on functioning across all eight dimensions, and those with osteoporosis are in the worst scoring 25% of the population on four dimensions (PF, BP, GH, VT).

![Figure 1: SF-36 scores for people with and without osteoporosis](image)

Knowledge of osteoporosis

- Almost half (49.8%) of respondents knew that osteoporosis was either thinning or weak bones.
- 26.2% of respondents had not heard of it.
- 24.0% thought it was a stiffness of the joints (perhaps confusing it with arthritis or some other condition).
- Significantly more males than females were unsure of what osteoporosis was.
- There was no association between age and knowledge of osteoporosis.
- Educational attainment was associated with an increasing proportion of respondents who knew what osteoporosis was.

Perceptions of factors that cause osteoporosis

Respondents were asked specifically what factors caused osteoporosis. The responses are summarised in Figure 2. Lack of calcium in the diet was the most common response (86.0%), followed by age (59%).

![Figure 2: Knowledge of factors causing osteoporosis](image)

Beliefs about osteoporosis and risk

- Overall perception of risk was low with around 75% of all respondents in 1997 and 1998 believing that they were at low or moderate risk.
- Women were two to three times more likely than men to perceive themselves at risk of developing osteoporosis.
- People over the age of 50 years were less likely to perceive themselves at risk.
- As educational attainment increases, so does perception of risk.

Conclusion

The reported prevalence is likely to substantially underestimate the true prevalence of osteoporosis, which can only be determined by bone density testing.

INFORMATION

For further information about the report and the surveys please visit the web site at: http://www.dh.sa.gov.au/pehs/cpse/sercis-publications.html or contact Tiffany Gill on 08 8226 0739 or email tiffany.gill@health.sa.gov.au