How many South Australians are severely obese?

FINDINGS IN BRIEF

- In 2000, 35% of adults living in the western and northern regions of Adelaide were classified as overweight, and a further 28% were classified as obese, according to clinical measurement of body mass index (BMI). In this sample, approximately 10% were severely obese (i.e. had a BMI of 35 or over).
- Based on these clinical measures and extrapolated to the overall state population, it is estimated that almost 118,000 South Australians adults are severely obese.

INTRODUCTION

Obesity is now widely being considered as a pandemic, due to its increasing prevalence in developed and developing countries. This issue is of concern to health professionals as obesity is a recognised risk factor for a number of chronic conditions including diabetes, coronary heart disease, stroke, arthritis and some forms of cancer.

The most widely used measure of obesity is body mass index (BMI), a score which is calculated using a person’s weight in kilograms divided by the square of their height in metres (kg/m²). This score is independent of age or sex.

The World Health Organisation has adopted the following cut-off points for adults, based on associations between BMI, chronic disease and mortality:

<table>
<thead>
<tr>
<th>Classification</th>
<th>BMI</th>
<th>Risk of co-morbidities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>&lt;18.5</td>
<td>Low*</td>
</tr>
<tr>
<td>Normal range</td>
<td>18.5 - 24.9</td>
<td>Average</td>
</tr>
<tr>
<td>Pre-Obese (Overweight)</td>
<td>25.0 - 29.9</td>
<td>Increased</td>
</tr>
<tr>
<td>Obese Class I</td>
<td>30.0 - 34.9</td>
<td>Moderate</td>
</tr>
<tr>
<td>Obese Class II</td>
<td>35.0 - 39.9</td>
<td>Severe</td>
</tr>
<tr>
<td>Obese Class III</td>
<td>40.0+</td>
<td>Very severe</td>
</tr>
</tbody>
</table>

* but increased risk of other clinical problems

People with severe obesity are more likely to develop high blood pressure, respiratory dysfunction, infertility, gout, gall bladder disease and bladder incontinence. It is also a risk factor for premature death, particularly from heart attack. From a quality of life perspective, severely obese people often have lowered self-esteem and may be less active because of difficulties with transport and public venue seating. They may experience difficulty finding and maintaining employment and may be socially ostracised, leading to poorer mental health.

The prevalence of self-reported severe obesity among South Australians was 3.6% (adults 18+ years, 2000 SA Health and Well-being telephone survey, n=2398) and 5.7% (adults 15+ years, 2001 Health Omnibus face-to-face survey, n=2750). It is noted that people generally tend to under-report their weight and over-report their height in surveys.

METHODS

The information on obesity presented in this brief report is drawn from biomedical measurements from the North West Adelaide Health Study (NWAHS), a longitudinal cohort study of people living in the western and northern regions of Adelaide. Phase 1 of the study, which was conducted in 2000, had an overall response rate of 68.4%. In all, 2523 people participated in the study. Study participants had their height and weight measured in the clinic, using standard instruments and procedures, providing an accurate indication of their BMI. The data are weighted to be representative of the South Australian population.

RESULTS

Figure 1 shows the prevalence of the six categories of BMI among participants of the NWAHS. From this pie chart, it can be seen that 10% of participants are severely obese (Obese Classes II and III) with a subsequent increased risk of co-morbidities.

Figure 2 shows the prevalence of obese BMI categories by sex. Although males are statistically significantly more likely to be pre-obese (overweight) than females, females are statistically significantly more likely to be severely obese (BMI 35+) than males.
Figure 3 shows the prevalence of each BMI obese category for NWAHS participants by age group. The graph shows that the prevalence of Obese Class I (BMI 30-34.99) was statistically significantly higher among those to be aged 50 years and over.

**Figure 3: Obese BMI by age group (NWAHS)**

![Graph showing prevalence of BMI categories by age group with statistically significant differences marked with asterisks.]

* statistically significant difference between this age group and overall figures (p<0.05)

**IMPLICATIONS**

In this study, whilst a higher proportion of men were more likely to be pre-obese (overweight), women were more likely to be obese. This data shows that those people in the pre-obese (overweight) BMI category aged 40 years and over should be targeted for future health promotion interventions aimed at halting or slowing their progression along the obesity continuum and reduce their risk of co-morbidities. Similarly, there is a need for strategies to assist severely obese people, particularly those aged between 40 and 59 years, who may already be suffering from reduced physical and mental health.

**REFERENCES**


**INFORMATION**

For further information about this brief report, please visit the Population Research and Outcome Studies web site at: http://www.dh.sa.gov.au/pehs/PROS/NWhealth.html or contact Janet Grant on 08 8226 6054 or email Janet.Grant@health.sa.gov.au