

Submission No. 85
(Inq into Obesity)

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Mr James Catchpole
Committee Secretary
Inquiry into Obesity in Australia
Standing Committee On Health And Ageing
House of Representatives
Parliament of Australia

Dear Mr Catchpole,

I refer to your letter to Brian Pink, Australian Statistician, on 28 March 2008 inviting him to make a submission to the House of Representatives Standing Committee on Health and Ageing Inquiry into Obesity in Australia. I am responding on his behalf. The ABS submission to this inquiry is attached below.

Your sincerely,

A handwritten signature in black ink, appearing to read "Sally Goodspeed".

Sally Goodspeed
Head, Indigenous and Health Statistics branch

☐ June 2008



ABS Submission: House Standing Committee on Health and Ageing Inquiry into Obesity in Australia

The information provided below describes the data available from the ABS that are likely to be relevant to this Inquiry. It provides links to the relevant information currently published on the ABS website, and identifies a contact in the ABS who would be able to provide further information, if needed. There are three sections in this submission:

- 1) Contact information at the ABS
- 2) An overview of key findings about this topic from relevant ABS collections.
- 3) An outline of data availability, including key data sources and known data gaps.

1. Contact information

For further information on the available health information that might further support the work of the Inquiry, or if you have any questions about the information shown below or accessed from our website, please contact:

Sally Goodspeed
Assistant Statistician
Indigenous and Health Statistics Branch
Australian Bureau of Statistics
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2. Key findings about overweight and obesity in Australia

Excess body weight contributes to medical risk for conditions such as diabetes, cardiovascular disease, osteoarthritis, some cancers, high blood pressure and high cholesterol (WHO 2003). High body mass was responsible for 7.5% of the total burden of disease and injury in Australia in 2003 (AIHW 2007), and it has been estimated that overweight and obesity and their associated illnesses cost Australian society and governments a total of \$21 billion in 2005 (Access Economics 2006).

The terms of reference of the inquiry refer to the management of the obesity epidemic in children, youth and adults. A summary of relevant findings about these groups follows.

Adults

Prevalence

According to the 2004-05 National Health Survey (NHS), almost 2.5 million Australian adults were obese, and a further 4.9 million were overweight – together accounting for more than half (54%) of the adult population.

A range of factors influence the body mass outcomes of given individuals and populations. Specific lifestyle behaviours such as exercise and dietary habits impact on weight. The National Health Survey (NHS) conducted by the ABS is a key national data source on this issue. Data on overweight and obesity (based on Body Mass Index or BMI - see Footnote 1) have been collected over the past four NHS surveys (conducted 1989-90, 1995, 2001 and 2004-05) providing information on changes in prevalence over a 15 year time period. Key findings from the publication *Overweight and Obesity in Adults, Australia, 2004-05* (ABS cat.no. 4719.0) released in January 2008 are outlined below:

- The proportion of Australian adults who are obese doubled over the 15 year period between 1989-90 and 2004-05 – from 9% to 18%. This was a faster rate of increase than for people who were overweight (over the same period, the proportion of adults in this category increased from 29% to 35%).
- Men were much more likely to be overweight than women (43% compared with 28% in 2004-05), and they were slightly more likely to be obese – 19% compared with 17%.
- People are most likely to be or overweight or obese if they are middle aged. In 2004-05, 41% of 55-64 year-olds were overweight, compared with 24% of 18-24 year-olds. Similarly, almost a quarter (24%) of 55-64 year-olds were obese, compared with less than 8% of 18-24 year-olds. However, the increase between 1989-90 and 2004-05 in the prevalence of overweight and obesity occurred among all age groups.

The Appendix at the end of this submission provides a table of body mass estimates by age and sex in 2004-05.

While adults with higher BMI scores are more likely to assess themselves as being overweight than those with lower scores, overweight or obese adults (both male and female) are increasingly likely to see themselves as having an acceptable weight. When changes to the age structure of the population over time is taken into account, the proportion of overweight or obese adults who perceived themselves as having an acceptable weight increased from 37% in 1995, to 41% in 2001, and 44% in 2004-05. This change over time was most marked for those in the overweight BMI category (45% in 1995, 53% in 2001 and 57% in 2004-05) although it was also apparent among those in the obese category (13% in 1995, 17% in 2001 and 16% in 2004-05).

Socio-economic characteristics

The proportion of the adult population who are overweight or obese varies for a variety of socio-economic characteristics. This is particularly noticeable in terms of the proportion of people classified as obese. In particular:

- Adults with a Bachelor degree or higher were less likely to be obese (14%) than those with other qualifications (20%) or no qualifications (20%).
- Adults in the lowest income quintile were more likely to be obese (21%) than those in the highest income quintile (16%).
- Adults living in areas of high disadvantage (i.e the first quintile of the SEIFA index of disadvantage – see Footnote 2) were more likely to be obese (22%) than those living in areas with the least disadvantage (i.e the fifth quintile of the SEIFA index of disadvantage – see Footnote 2) – 13%.
- Adults born in areas of Oceania other than Australia (26%) were more likely to be obese than Australian adults in general (18%).
- And while employed adults were less likely to be obese (17%) than those who were unemployed (19%) or not in the labour force (22%) they were more likely to be overweight – 37% compared with 31% for both those who were unemployed and those who were not in the labour force. Further, employed adults working very long hours (ie 49 hours or more per week) were more likely than average to be overweight or obese (65%) than those working fewer hours (53% of those working 25 to 48 hours and 43% of those working less than 25 hours).

Obesity and long-term health conditions

The likelihood of having a long-term condition (one that lasted or was expected to last for six months or more) among adults who were overweight was similar to the general population (around 87%). However, people who were obese were slightly more likely to have a long-term condition (90%). More specifically, in 2004-05:

- 23% of all Australian adults had a disease of the circulatory system compared with 25% of adults who were overweight and 33% of adults who were obese
- 15% of all Australian adults had heart disease compared with 18% of adults who were overweight and 26% of those who were obese
- 14% of all Australian adults had hypertensive disease compared with 16% of adults who were overweight and 24% of those who were obese
- 9% of all Australian adults had high blood cholesterol compared with 11% of adults who were overweight and 13% of adults who were obese, and
- 4.0% of all Australian adults had Type 2 diabetes mellitus compared with 3.8% of adults who were overweight and 9.0% of adults who were obese.

Overall, each adult reported having an average of 3 long-term conditions. Obese adults reported having an average of 4 conditions. Of those with 5 or more long-term conditions, 61% were overweight or obese.

Risk factors

Respondents to the NHS are asked to report on lifestyle risk factors such as current daily smoking, alcohol consumption at a risky to high risk level, insufficient physical activity (sedentary or exercise at a low level), and inadequate fruit or vegetable intake (less than 2 serves and 5 serves respectively per day). The consumption of skim or reduced fat milk was also collected for use as a proxy for fat intake. In 2004-05, the pattern of reporting these risk factors was similar among adults classified as overweight or obese, and those classified as normal weight or underweight. The two most frequently reported lifestyle risk factors among Australian adults are those more readily associated with body mass – that is inadequate fruit or vegetable intake (90%) and insufficient physical activity (70%). The proportion of adults who reported inadequate fruit or vegetable intake did not vary across body weight categories. Adults who were obese were more likely to report insufficient physical activity (77%).

Regular exercise is one factor associated with preventing obesity, diabetes and some mental health problems. The Survey of Participation in Sports and Physical Activities, conducted on a four-yearly basis provides information on the type and frequency of physical activities undertaken by Australian adults. The most recent survey, conducted in 2005-06, showed that 37% of Australians aged 15 years and over participated once a week or more in physical activities for recreation, exercise or sport – with females slightly more likely than males to be involved in regular physical activities.

Indigenous Australians

The 2004-05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) was conducted at the same time as the 2004-05 NHS and was designed to enable comparisons of Indigenous and non-Indigenous key health indicators. The 2004-05 NATSIHS found that:

- 60% of Indigenous adults were overweight or obese. The survey also showed that 75% of Indigenous adults reported insufficient physical activity (compared with 70% of all Australian adults)
- The proportion of adults who were overweight or obese was higher among Indigenous Australians than non-Indigenous Australians in all age groups.

Youth and children

Prevalence

While the NHS has collected information about the body mass of Australians aged 15 years and over since 1989-90, the vast majority of information which has been published about overweight

and obesity relates to adults (that is persons aged 18 years and over). Between 1989-90 and 2004-05, the proportion of 15 to 17 year-olds who were overweight or obese increased from 9% to 16%.

The 1995 National Nutrition Survey collected physical measurements of height and weight for children aged from 2 years old. This survey showed that 5% of children aged 2 to 8 years had high weight for their height. It also showed that 8% of children aged 9 to 15 years were overweight (or obese) and that 16% in this age group were at risk of being overweight. Results from the 2007-08 NHS, due for release in March 2009, will provide updated information on the measured height and weight of 5 to 17 year-olds.

Sports participation

The triennial Survey of Children's Participation in Cultural and Leisure Activities collects information on children's participation in organised sport and physical activities undertaken outside of school hours. The most recent survey found that 34% of children aged 5 to 14 years participated in organised sport outside of school hours on a regular basis (i.e. 53 times or more in a 12-month period).

3. Data availability and gaps

ABS: The National Health Survey (NHS)

Relevant content

The National Health Survey is a key national data source, designed to obtain national benchmarks on a number of health issues including chronic disease, risk factors (including overweight and obesity) and health related actions, and to enable changes in health to be monitored over time. Data on the prevalence of overweight and obesity have been collected over the past four surveys (conducted 1989-90, 1995, 2001 and 2004-05) providing information on changes in prevalence over a 15 year time period. These data have been predominantly based on self reported information about height and weight. In recognition of the concern around the increasing prevalence of obesity in Australia, physical measurements of height, weight and girth of people aged 5 years and over has been collected by the ABS in the 2007-08 NHS (in addition to self-reported height and weight). These data are expected to be released in March 2009.

Other relevant data items regularly collected in the NHS include information on exercise (frequency and intensity), dietary behaviours (in terms of fruit and vegetable consumption and the fat content of milk consumed), health related actions, health conditions, other health risk factors and a range socioeconomic information. For more information see National Health Survey: Summary of Results, 2004-05, ABS cat. no. 4364.0, HYPERLINK "<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4364.02004-05?OpenDocument>." <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4364.02004-05?OpenDocument>.

Defining overweight and obesity

Overweight and obesity are defined in the NHS using the Body Mass Index (BMI), which is based on height and weight information reported by survey respondents (see Footnote 1). Physical measurements of height and weight were also collected as part of the 1995 survey, allowing for a direct comparison of self-reported and measured height and weight. This facilitated analysis of the implications of BMI data derived from self-reported height and weight across a large and representative population. This research showed that people tend to overestimate their height and underestimate their weight. However, these reporting errors are relatively uniform over time and across the population, suggesting the BMI measures obtained from self-reported height and weight are useful when examining trends and patterns. For more information see *How Australians Measure Up, 1995* (ABS cat. no. 4359.0, <http://www.abs.gov.au/ausstats/abs@.nsf/productsbyCatalogue/B66CED7E47B041B5CA2570B50017FFB8?OpenDocument>).

Recent NHS publication on overweight and obesity

In January 2008, the ABS released the publication *Overweight and Obesity in Adults, Australia, 2004-05* (ABS cat.no. 4719.0, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4719.02004-05?OpenDocument>) based predominantly on results from the 2004-05 NHS. This 44 page publication focussed on changes in the prevalence of overweight and obesity among Australian adults since 1989-90 and considered the socioeconomic characteristics, health status, lifestyle risk factors and health management of people who were overweight or obese, compared with people whose BMI was in the normal or underweight range.

ABS: The National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The 2004-05 National Aboriginal and Torres Strait Islander Health Survey was conducted in parallel with the NHS. While the most recent NHS and NATSIHS were separate surveys, they in part shared a common survey instrument, and were designed to produce a common core data set, to enable comparisons of Indigenous and non-Indigenous key health indicators. Previous Aboriginal and Torres Strait Islander health surveys were conducted as components of the NHS rather than separate surveys. For more information see *National Aboriginal and Torres Strait Islander Health Survey, 2004-05* (ABS cat. no. 4715.0, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyCatalogue/C36E019CD56EDE1FCA256C76007A9D36?OpenDocument>).

ABS: The Survey of Participation in Sports and Physical Activities

This survey is currently run every four years as part of the Multi-Purpose Household Survey. The survey obtains data about the characteristics of persons aged 15 years and over who participate in a range of sport and physical recreation activities. It includes details on the number of persons who participated in sport and physical recreation activities in the 12 months prior to interview; the socio-demographic characteristics of participants; the most popular sports and physical recreation activities and the frequency and regularity of participation. Questions about the constraints and motivators to participation were asked in the 2005-06 survey. For more information see *Participation in Sports and Physical Recreation, Australia, 2005-06* (ABS cat. no. 4177.0, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4177.0Explanatory%20Notes12005-06?OpenDocument>)

ABS: The Survey of Children's Participation in Sports and Physical Recreation

This survey is a triennial survey which collects information on children's participation in organised sport and physical activities outside of school hours. For more information see *Children's Participation in Cultural and Leisure Activities, Australia, Apr 2006* (ABS cat. No. 4901.0, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4901.0Main+Features1Apr%202006?OpenDocument>)

ABS: The 1995 National Nutrition Survey

The National Nutrition Survey was conducted on a voluntary basis on a sub-sample of respondents (aged two years or over) in the 1995 National Health Survey (NHS). It provided data on food intake for comparison with dietary guidelines and nutrient intake for comparison with Recommended Daily Intakes — for Australians in general, and for those population groups at risk of health problems related to diet. It was designed to provide benchmark data against which future surveys could be compared to assess changes over time in the dietary status of Australians. For more information see *National Nutrition Survey: Nutrient Intakes and Physical Measurements, Australia, 1995*, ABS cat. no. 4805.0, [HYPERLINK "http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4805.0Main+Features11995?OpenDocument."http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4805.0Main+Features11995?OpenDocument](#).

Key non-ABS data sources

Current non-ABS data sources which provide information about height and weight measurements for children include:

- the Longitudinal Study of Australian Children (LSAC) which provides information on children aged 5 years and under, and
- the NSW Schools Physical Activity and Nutrition Survey (SPANS) which covers children aged 5 to 16 years in that state.

Data gaps

Children and youth

BMI values used for adults do not apply to children under 18 years of age. Currently, limited national information is available from the NHS on the proportion of children who are overweight or obese. In terms of data on the weight of young people, while the NHS has collected information about the body mass of Australians aged 15 years and over since 1989-90, the vast majority of information which has been published about overweight and obesity relates to adults (that is persons aged 18 years and over). This is partly to ensure comparability with data on other risk factors (such as smoking and alcohol consumption) and partly because the method and scope of collection of data for 15 to 17 year-olds has varied across surveys.

The release of the 2005 National Children's Nutrition and Physical Activity Survey focussing on children aged 2 to 16 years conducted in 2005 by DoHA will provide some up to date information on obesity among children in this age group.

Further, the 2007-08 NHS data due for release by the ABS in March 2009 will provide up to date information on a broad range of health issues for 5 to 17 year-olds. The dataset will include information collected on the measured height and weight of 5 to 14 year-olds, as well as key dietary indicators (i.e. fruit and vegetable consumption, and type of milk consumed) for this group. In addition, information on all risk factors (including self-reported and measured height and weight) has been collected for 15 to 17 year-olds.

Nutrition

Poor diet (in the form of inadequate fruit and vegetable intake) is the other most common health risk factor reported by Australians. While the NHS provides some information on dietary habits, detailed information about nutrient intake at a national level has not been collected for over 20 years (when the 1995 National Nutrition Survey was conducted).

More recently, the Department of Health and Ageing conducted and plans to release (later this year) the results of a 2005 National Children's Nutrition and Physical Activity Survey focussing on children aged 2 to 16 years conducted in 2005. DoHA also received funding in the 2007 budget for a program of surveys focussing on particular population groups. The ABS has been involved in early discussions with DoHA about its possible involvement in a national survey on adult nutrition and physical activity.

4. Footnotes

1. About Body Mass Index (BMI)

Calculated from reported height and weight information, using the formula weight (kg) divided by the square of height (m). To produce a measure of the prevalence of overweight or obesity in adults, BMI values are grouped according to the table below which allows categories to be reported against both the World Health Organisation (WHO) and NHMRC guidelines. Not stated categories in height and weight are excluded from the estimates contained in this submission.

BODY MASS INDEX

	2004-05
Underweight	Less than 18.5
Normal range	18.5 to less than 25.0
Overweight	25.0 to less than 30.0
Obese	30.0 and greater

2. SEIFA - *Index of disadvantage*

This is one of four Socio Economic Indexes for Areas (SEIFAs) compiled by the ABS following each Census of Population and Housing. The indexes are compiled from various characteristics of persons resident in particular areas; the index of disadvantage summarises attributes such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations. As shown in this publication Quintile 1 refers to the most disadvantaged group, while Quintile 5 refers to the most advantaged group. For further information on SEIFA 2001 and its use with the 2004-05 NHS see Chapter 6 of the 2004-05 National Health Survey: Users' Guide (cat. no. 4363.0.55.001).

Appendix

2004-05 National Health Survey: BODY MASS INDEX(a)(b), Estimates

Group	AGE GROUP (YEARS)							Total
	18-24	25-34	35-44	45-54	55-64	65-74	75 and over	
MEN ('000)								
Underweight	26.9	7.6	9.0	4.4	2.9	3.0	15.8	69.7
Normal	543.2	533.7	407.4	371.4	287.3	247.3	193.5	2 583.7
<i>Underweight/normal</i>	<i>570.1</i>	<i>541.4</i>	<i>416.5</i>	<i>375.8</i>	<i>290.2</i>	<i>250.2</i>	<i>209.4</i>	<i>2 653.5</i>
Overweight	255.9	568.5	648.2	583.4	488.9	271.4	171.1	2 987.3
Obese	64.3	237.7	310.9	313.8	240.1	110.3	46.5	1 323.5
<i>Overweight/obese</i>	<i>320.1</i>	<i>806.3</i>	<i>959.1</i>	<i>897.2</i>	<i>728.9</i>	<i>381.6</i>	<i>217.6</i>	<i>4 310.9</i>
Total	890.2	1 347.6	1 375.5	1 273.0	1 019.1	631.9	427.0	6 964.4
WOMEN ('000)								
Underweight	84.0	64.3	47.5	24.8	15.1	16.6	35.7	288.0
Normal	521.6	729.1	720.2	584.0	382.6	249.9	265.9	3 453.2
<i>Underweight/normal</i>	<i>605.5</i>	<i>793.4</i>	<i>767.7</i>	<i>608.8</i>	<i>397.7</i>	<i>266.5</i>	<i>301.6</i>	<i>3 741.2</i>
Overweight	163.6	316.0	354.2	374.1	322.5	213.6	156.7	1 900.7
Obese	68.1	186.2	222.2	250.8	229.3	131.8	66.0	1 154.4
<i>Overweight/obese</i>	<i>231.7</i>	<i>502.2</i>	<i>576.4</i>	<i>624.9</i>	<i>551.7</i>	<i>345.4</i>	<i>222.7</i>	<i>3 055.1</i>
Total	837.2	1 295.6	1 344.1	1 233.7	949.4	611.9	524.3	6 796.3
ALL ADULTS ('000)								
Underweight	110.9	71.9	56.6	29.2	18.0	19.5	51.6	357.7
Normal	1 064.7	1 262.8	1 127.6	955.4	669.9	497.2	459.4	6 037.0
<i>Underweight/normal</i>	<i>1 175.6</i>	<i>1 334.7</i>	<i>1 184.2</i>	<i>984.6</i>	<i>687.9</i>	<i>516.7</i>	<i>511.0</i>	<i>6 394.6</i>
Overweight	419.4	884.6	1 002.4	957.5	811.3	485.0	327.8	4 888.0
Obese	132.4	423.9	533.1	564.6	469.3	242.1	112.5	2 478.0
<i>Overweight/obese</i>	<i>551.8</i>	<i>1 308.5</i>	<i>1 535.5</i>	<i>1 522.1</i>	<i>1 280.6</i>	<i>727.1</i>	<i>440.3</i>	<i>7 366.0</i>
Total	1 727.4	2 643.2	2 719.7	2 506.7	1 968.5	1 243.8	951.3	13 760.6

(a) See BMI in footnote 2 above.

(b) Excludes those for whom BMI category was not known.