



# Physical activity, healthy eating and overweight/obesity

2003

## Department of Human Services North and West Metropolitan Region

### Victorian Population Health Survey

The Victorian Population Health Survey is an annual statewide survey that the Department of Human Services (Health Surveillance and Evaluation Section, Public Health Group) undertakes in the second half of each calendar year to collect a wide range of information on the health of the adult Victorian population and the determinants of that health.

This fact sheet presents major findings from the Victorian Population Health Survey 2003 relating to physical activity, healthy eating and body mass index for persons aged 18 years or over in the department's North and West Metropolitan Region.

### North and West Metropolitan Region

In February 2004, the department's Northern Metropolitan Region and Western Metropolitan Region were combined to form the North and West Metropolitan Region. Almost 20 per cent (18.5 per cent) of the respondents who completed the Victorian Population Health Survey in 2003 were from this region. The total sample of 7500 households included 709 respondents from the former Western Metropolitan Region and 676 respondents from the former Northern Metropolitan Region.

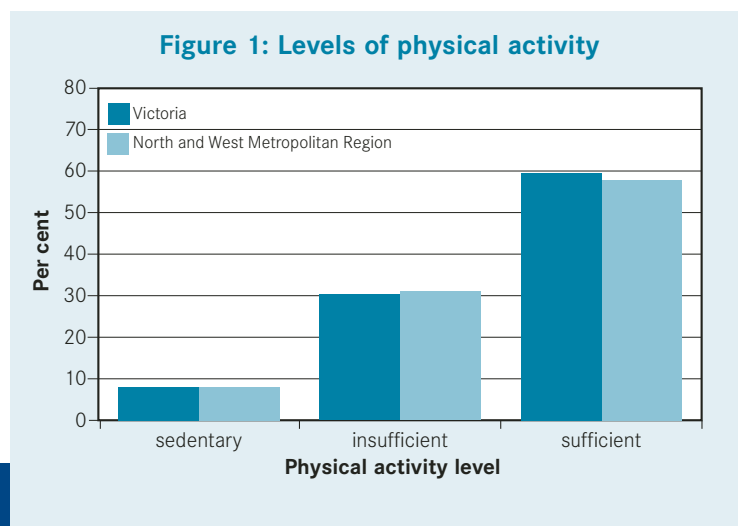
### Levels of sufficient physical activity (time and sessions)

Physical inactivity is a modifiable risk factor for a range of diseases and conditions. Physical activity can provide a range of health benefits, including reducing the risk of coronary heart disease, stroke, hypertension, type 2 diabetes, colon cancer and osteoporosis. Participation in regular physical activity can also improve mental health, help to manage arthritis and prevent injury from falls by improving strength and balance, especially in older people. The *National physical activity guidelines for Australians*<sup>1</sup> recommend that individuals undertake at least 30 minutes of moderate intensity activity on most days of the week.

<sup>1</sup> Australian Department of Health and Aged Care 1999, *National physical activity guidelines for Australians*, Canberra.

Figure 1 presents the proportion of adults from the North and West Metropolitan Region who were:

- **sufficiently active** for health benefits (150 minutes or more of at least moderate intensity activity over five or more days per week)
  - **insufficiently active** for health benefits – some physical activity but less than sufficient (that is, did less than 150 minutes and/or participated in activity fewer than five times per week)
  - **sedentary** (physically inactive).
- Approximately 57.8 per cent of adults in the North and West Metropolitan Region undertook sufficient physical activity to achieve health benefits (figure 1).
- More than 30 per cent (31.0 per cent) of persons aged 18 years or over in the region participated in some physical activity but did less than the level recommended to obtain health benefits.
  - Almost 9 per cent (8.5 per cent) of adults in the region were physically inactive or sedentary.
  - The proportions of the adult population in the region who were sufficiently active, insufficiently active or sedentary were similar to the proportions for the Victorian population as a whole.





### Levels of sufficient physical activity (time and sessions), by sex, age and education

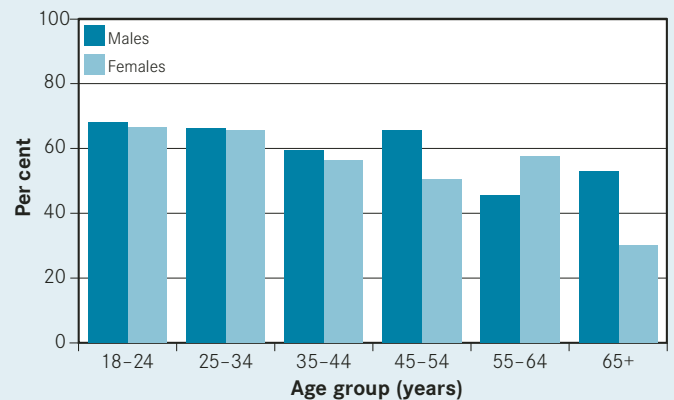
Table 1 presents the proportion of adults in the North and West Metropolitan Region who were sufficiently active to achieve health benefits, by selected characteristics.

**Table 1: Participation in sufficient physical activity (time and sessions)**

	North and West Metropolitan Region		Victoria	
	%	95% confidence interval	%	95% confidence interval
<b>Sex</b>				
Male	60.8	56.4–65.1	61.4	59.1–63.7
Female	54.9	50.9–58.7	57.6	55.7–59.6
<b>Age group</b>				
18–24 years	67.2	58.7–74.6	66.9	62.2–71.4
25–34 years	66.0	59.6–71.8	64.8	61.1–68.3
35–44 years	57.9	51.7–63.7	63.0	59.9–66.1
45–54 years	57.8	50.5–64.8	57.6	54.0–61.1
55–64 years	51.3	43.2–59.4	57.6	53.6–61.4
65+ years	40.0	32.4–48.1	46.6	43.2–50.1
<b>Education level</b>				
Primary	46.8	34.5–59.6	40.6	32.9–48.8
Secondary	55.2	51.0–59.3	57.3	55.2–59.3
Tertiary	62.1	57.8–66.4	63.6	61.2–65.9

- There were no significant differences by sex, age or education in the proportion of adults in the North and West Metropolitan Region and the proportion of Victorian adults who undertook a sufficient level of regular physical activity (table 1).
- Similar proportions of males and females in the region undertook sufficient regular physical activity.
- The proportion of females in the region who undertook sufficient moderate intensity physical activity on all or most days of the week to gain health benefits decreased with increasing age (except for females aged 55–64 years) (figure 2).
- The proportion of males in the region who did sufficient regular physical activity to achieve health benefits was similar in all age groups.

**Figure 2: Sufficient physical activity (time and sessions) – North and West Metropolitan Region**



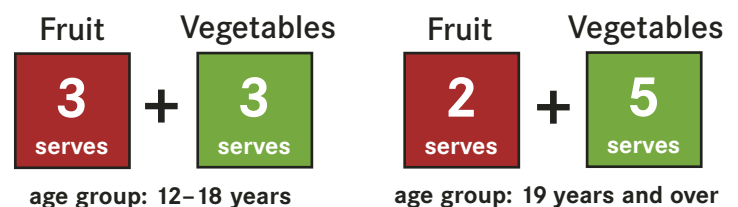
Note: Persons who participate in sufficient regular physical activity are sometimes referred to as undertaking 'adequate' physical activity.

### Healthy eating

Adults often need to balance their eating and physical activity to prevent weight gain. The *Dietary guidelines for Australian adults* and those for adolescents and children<sup>2</sup> highlight the groups of foods and lifestyle patterns that promote good nutrition and health. Adults should include plenty of wholegrain foods, vegetables and fruit, and eat according to their energy needs. The dietary guidelines for vegetables recommend a daily intake of three serves for persons aged 12–18 years and five serves for persons aged 19 years or over. The recommended daily intake of fruit is three serves for persons aged 12–18 years and two serves for persons aged 19 years or over. The recommended number of fruit and vegetable servings is higher for pregnant and breastfeeding women.

**Figure 3: National Health and Medical Research Council's recommended daily intake of fruit and vegetables**

Note: Excluding pregnant and breastfeeding women.



<sup>2</sup> National Health and Medical Research Council 2003a, *Dietary guidelines for Australian adults*, Canberra; National Health and Medical Research Council 2003b, *Dietary guidelines for children and adolescents in Australia incorporating the infant feeding guidelines for health workers*, Canberra.





**Table 2: Proportion who usually eat recommended serves of fruit each day**

	North and West Metropolitan Region		Victoria	
	%	95% confidence interval	%	95% confidence interval
<b>Males</b>				
18*-24 years	36.9	26.0-49.2	36.0	29.7-43.0
25-34 years	47.6	37.6-57.8	40.7	34.9-46.7
35-44 years	42.7	33.5-52.5	38.9	33.8-44.3
45-54 years	50.4	39.9-60.7	45.6	40.2-51.1
55-64 years	50.4	38.6-62.0	46.2	40.3-52.2
65+ years	60.6	48.7-71.3	50.7	45.4-56.1
Total	47.5	43.0-52.0	42.8	40.5-45.2
<b>Females</b>				
18*-24 years	53.5	41.3-65.3	49.9	43.0-56.8
25-34 years	50.2	42.5-57.9	50.0	45.5-54.5
35-44 years	58.3	50.8-65.4	56.3	52.3-60.1
45-54 years	66.1	56.3-74.8	58.0	53.4-62.5
55-64 years	69.9	59.4-78.6	67.7	62.6-72.4
65+ years	63.6	52.1-73.8	63.9	59.2-68.3
Total	59.1	55.2-62.9	57.3	55.4-59.3

\* Please note: Refer to Figure 3 for recommended intake of fruit for 18 year olds.

- Only 47.5 per cent of males in the North and West Metropolitan Region consumed the recommended amount of fruit each day, compared with almost six in 10 females (table 2).
- More than 50 per cent of males in the region aged 45 years or over ate the minimum recommended number of serves of fruit each day.

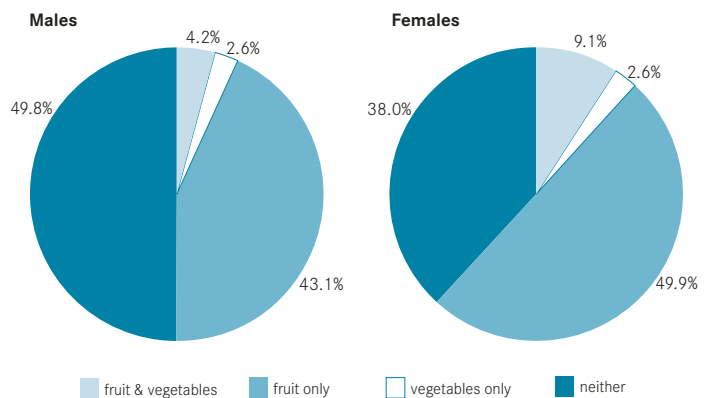
- The proportion of females in the region who met the healthy eating guidelines for fruit consumption ranged from 50.2 per cent of those aged 25-34 years to 69.9 per cent of those aged 55-64 years.
- In the North and West Metropolitan Region, 6.7 per cent of males and 11.7 per cent of females consumed the minimum recommended number of serves of vegetables each day (table 3).
- The proportion of females in the region who satisfied the dietary guidelines for vegetables ranged from a low of 4.9 per cent of those aged 18-24 years to 21.4 per cent of those aged 55-64 years.
- The proportion of males in the region who met the dietary guidelines for vegetables ranged from 3.1 per cent of those aged 55-64 years to 10.4 per cent of those aged 45-54 years.
- For both the North and West Metropolitan Region and the whole of Victoria, the proportion of adults who ate the recommended minimum number of serves of vegetables each day was significantly lower than that for fruit for each age group, for both males and females.
- In the North and West Metropolitan Region, 38.0 per cent of females and almost half of all males (49.8 per cent) met neither the fruit nor the vegetable guidelines for healthy eating (figure 4).
- A significantly smaller proportion of males than females (4.2 per cent compared with 9.1 per cent) met the dietary guidelines for fruit and vegetables.

**Table 3: Proportion who usually eat recommended serves of vegetables each day**

	North and West Metropolitan Region		Victoria	
	%	95% confidence interval	%	95% confidence interval
<b>Males</b>				
18*-24 years	6.3	2.4-15.3	10.4	7.1-15.0
25-34 years	8.1	4.2-15.2	10.2	7.0-14.6
35-44 years	4.6	1.9-10.5	7.5	5.1-10.9
45-54 years	10.4	5.7-18.2	8.7	6.3-11.9
55-64 years	3.1	0.9-9.8	12.6	9.3-16.8
65+ years	6.6	2.8-14.8	11.6	8.5-15.5
Total	6.7	4.9-9.3	9.9	8.6-11.4
<b>Females</b>				
18*-24 years	4.9	1.9-11.9	9.2	6.0-13.8
25-34 years	10.0	6.2-15.7	10.7	8.1-13.9
35-44 years	11.4	7.0-18.0	14.0	11.4-17.1
45-54 years	12.1	7.0-20.0	14.9	12.0-18.2
55-64 years	21.4	13.7-31.9	21.3	17.3-25.8
65+ years	14.1	8.1-23.5	14.6	11.8-17.9
Total	11.7	9.5-14.5	13.9	12.6-15.3

\* Please note: Refer to Figure 3 for recommended intake of vegetables for 18 year olds.

**Figure 4: Adherence to dietary guidelines for fruit and vegetable consumption – North and West Metropolitan Region**





## Overweight and obesity

The health risks of being overweight or obese include an increased risk of developing type 2 diabetes, cardiovascular disease, high blood pressure, certain cancers, sleep apnoea and osteoarthritis. Physical activity, along with a healthy diet, plays an important role in the prevention of overweight and obesity. To maintain a current healthy weight, the amount of kilojoules/calories used should equal the amount of kilojoules/calories consumed. Individuals who eat more (that is, consume more kilojoules/calories) than they expend gain weight; individuals who eat less than they expend lose weight.

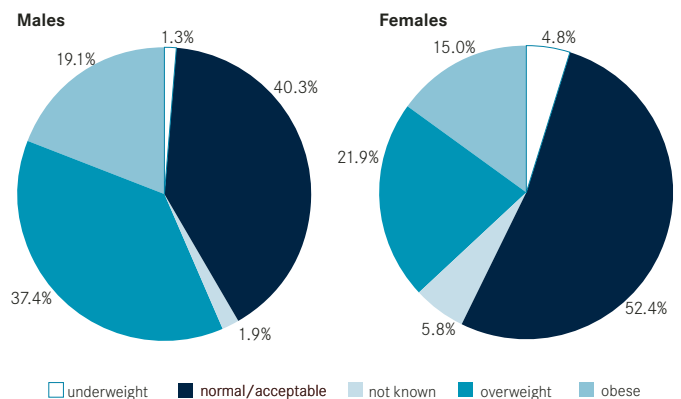
The most common population-level measure of weight status is the body mass index (BMI). Self-reported height and weight data were used to determine the BMI for each survey respondent (weight in kilograms divided by height in metres squared). Being overweight refers to increased body weight in relation to height, compared with a standard of acceptable or desirable weight. BMI data were classified into the following categories using the standard cut-offs recommended by the World Health Organisation<sup>3</sup>:

- less than 18.5 (underweight)
- 18.5 to less than 25.0 (normal)
- 25.0 to less than 30.0 (overweight)
- greater than 30.0 (obese).

Being overweight may be due to increases in body fat or increases in lean tissue. Individuals who are overweight due to lean tissue mass are not necessarily overweight, regardless of BMI.

Figure 5 presents the prevalence of each BMI category for males and females aged 18 years or over in the North and West Metropolitan Region.

**Figure 5: BMI categories – North and West Metropolitan Region**



- A higher proportion of males than females (37.4 per cent compared with 21.9 per cent) in the North and West Region were overweight (figure 5). Similar proportions of males and females (19.1 per cent and 15.0 per cent respectively) were classified as obese.
- The 'not known' category includes persons who did not provide weight and/or height data. A higher proportion of females than males (5.8 per cent compared with 1.9 per cent) were classified as not known.
- A significantly smaller proportion of males than females (40.3 per cent and 52.4 per cent respectively) were of normal or acceptable weight for their height.

<sup>3</sup> World Health Organisation 2001, *Obesity: preventing and managing the global epidemic*, WHO Technical Series no. 894, Geneva.





**Table 4: Prevalence of overweight/obesity**

	North and West Metropolitan Region		Victoria	
	%	95% confidence interval	%	95% confidence interval
<b>Males</b>				
18–24 years	32.1	21.8–44.4	30.0	24.1–36.6
25–34 years	51.9	41.7–61.9	50.6	44.7–56.6
35–44 years	57.1	47.4–66.3	59.0	53.7–64.1
45–54 years	68.4	58.2–77.2	65.2	59.9–70.2
55–64 years	67.1	55.0–77.3	65.4	59.6–70.8
65+ years	65.6	53.8–75.8	51.8	46.5–57.1
Total	56.4	51.9–60.8	54.3	52.0–56.7
<b>Females</b>				
18–24 years	18.5	11.0–29.4	19.7	14.8–25.6
25–34 years	27.0	20.6–34.4	36.1	31.9–40.6
35–44 years	37.4	30.4–45.0	37.0	33.2–40.9
45–54 years	48.3	38.6–58.1	44.7	40.2–49.3
55–64 years	54.6	43.5–65.3	50.8	45.5–56.0
65+ years	43.5	33.0–54.6	38.5	34.2–43.1
Total	37.0	33.2–40.8	38.0	36.1–39.9

- The proportion of males in the North and West Metropolitan Region who were overweight or obese exceeded 50 per cent in all age groups except 18–24 years (table 4). More than 65 per cent of males aged 45 years or over were classified as overweight or obese.
- The proportion of females in the region who were overweight or obese ranged from 54.6 per cent of those aged 55–64 years to 18.5 per cent of those aged 18–24 years.

### Rates

The 2001 Victorian population<sup>4</sup> has been used when specifying population weights to ensure that the adjusted sample distribution is representative of the population by age group, gender and region. Differences between regions in the age and sex distribution of their populations may account, in part, for differences in overall region-specific rates.

### Confidence intervals

The rates reported in this publication are based on information collected from a sample of adults, selected at random by household telephone number. As a result, they are subject to sampling variability. This means that the rates are estimates and may differ from those that would result if all adults in Victoria had been included in the survey.

One measure of the amount of variation associated with an estimate is the confidence interval. Estimates with wider confidence intervals reflect a higher degree of unreliability in the estimate and should be used with caution. Confidence intervals that do not overlap are interpreted as representing significant differences.

### Additional information

The method of the Victorian Population Health Survey 2003 and other results may be found in the report *Victorian Population Health Survey 2003: selected findings*. This report and other useful resources may be viewed or downloaded from the website [www.health.vic.gov.au/healthstatus](http://www.health.vic.gov.au/healthstatus)

VicHealth provided support for the Victorian Population Health Survey data analysis. Information about VicHealth initiatives to increase levels of physical activity and promote the health of Victorians is available at the website [www.vichealth.vic.gov.au](http://www.vichealth.vic.gov.au)

<sup>4</sup> Department of Infrastructure 2001, *Population projections 2001*, Government of Victoria, Melbourne.



### Source:

Victorian Population Health Survey 2003  
Public Health Group  
Rural and Regional Health and Aged Care Services Division  
Department of Human Services Victoria