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Lifestyle and Health



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### INQUIRIES

- *for further information about statistics in this publication and the availability of related unpublished statistics* contact Brian Richings on Canberra (06) 252 5786 or any ABS State office.
  - *for further information about other ABS statistics and services* please refer to the back page of this publication.
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## **PREFACE**

This publication contains statistics which describe associations between selected lifestyle characteristics and health status. The statistics are derived from information collected in the 1989-90 National Health Survey conducted by the ABS, and represent a selection of those available from the survey.

The publication is introduced by a chapter which summarises the health status of the adult population through information about self-assessed health status and the numbers and types of illnesses experienced. The following chapters examine how these differ according to people's smoking, alcohol consumption, exercise and body mass characteristics.

Some care should be taken in interpreting the associations between lifestyle factors and health status described in this publication. Data from the survey should not be interpreted as proof of causal relationships; for example, it is not possible from survey results to determine whether the presence of a specific illness is a consequence of a particular behaviour, or whether that behaviour has been adopted as a consequence of the illness. Similarly, very limited information is available from the survey to indicate the presence and/or influence of other medical, hereditary, environmental, etc factors on the onset of illness.

An overview of the definitions and methods used in the survey is provided in Appendixes A and B to this publication. Complete information about the National Health Survey, its objectives, content and the concepts, methods and procedures used in the collection and compilation of data are contained in *1989-90 National Health Survey: User's Guide* (Catalogue No. 4363.0).

**IAN CASTLES**  
**Australian Statistician**

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**Canberra ACT**  
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## HEALTH STATUS

As defined by the World Health Organization, the term "health" encompasses both the absence of illness or infirmity and the positive state of physical, mental and social well-being. Indicators which directly relate to positive well-being are not available from the 1989-90 National Health Survey. The discussion in this publication therefore refers to health status as indicated by the presence or absence of recent and/or long-term conditions, and to people's perception of their overall state of health. The narrowness of these indicators should be borne in mind in interpreting the associations between lifestyle and health status discussed in this publication.

### Self-assessed health status

Results of the survey show that most Australian adults (79.2%) considered themselves to be in good or excellent health. Slightly more males (80.1%) than females (78.3%) rated their health as good or excellent. As might be expected, self-assessed health status varied considerably with age, with greater proportions of people in the older age groups rating their health as fair or poor. For example, 43.4 per cent of persons aged 65 years and over reported their health as fair or poor compared with 11.5 per cent of 18 to 24 year olds.

### Prevalence of illness

The number of illnesses recorded for survey respondents also varied with age and sex. Overall, the prevalence of illness was higher among women than men, with 86.1 per cent of women reporting one or more recent illness and 79.0 per cent reporting one or more long-term conditions. As shown in Table 1.2 proportions for men were 73.2 per cent and 73.1 per cent respectively.

Results also show that the prevalence of both recent and long-term conditions increased with age. For example, recent illness was reported by 75.3 per cent of 18 to 44 year olds, increasing to 86.0 per cent of those aged 45 years and over. Similarly, 65.0 per cent of the 18 to 44 year age group had a long-term condition compared to 91.7 per cent of persons aged 45 years and over. As the proportion of people in older age groups with any illness increased, so too did the number of conditions they experienced. For example, in the 45 years and over age group, 22.0 per cent reported four or more recent illnesses while 28.6 per cent had that number of long-term conditions. The corresponding proportions among 18 to 44 year olds were 7.6 per cent and 6.2 per cent respectively.

Overall, a greater proportion of women (71.3%) reported at least one recent or long-term illness than men (58.9%) and illness was more prevalent among the 45 years and over age group (81.2%) than those aged 18 to 44 years (53.9%) (Table 1.3).

### Types of conditions

Disorders of refraction and accommodation, including far and short sight, were the most commonly reported conditions affecting an estimated 5.1 million Australian adults (or 41.2 per cent of the adult population). Arthritis was the second most prevalent disorder, reported by 18.6 per cent of women and 12.2 per cent of men, with the majority aged 45 years and over. Headache due to unspecified or trivial cause, reported by 14.5 per cent of adults was the third most common illness condition. As shown in Table 1.3 this condition was more prevalent among women (17.3%) than men (11.5%) and more common in the 18 to 44 year age group (16.4%) than among those aged 45 years and over (11.6%).

A number of conditions have been specifically linked with lifestyle factors such as smoking, drinking, poor diet and lack of exercise (see Table 1.4). Survey results indicate that, of these disorders, hypertension is the most prevalent in the adult Australian population, reported by 12.3 per cent of adults. Hypertension was most prevalent among women aged 45 years and over (29.6%).

Neoplasms (cancers of all types) were reported by 3.0 per cent of all adults with identical proportions for males and females. The prevalence of neoplasms increased with age from 1.1 per cent of 18 to 44 year olds to 5.7 per cent of the 45 years and over age group. The prevalence of heart disease also varied with age and sex, being more prevalent among older males (8.9% of males aged 45 years and over). Obesity, often an indication of poor diet and exercise patterns, was consistent between the sexes and across all age groups.

The following chapters discuss health status, as indicated by self-assessed health status and the number and types of conditions experienced, in terms of lifestyle characteristics.



TABLE 1.3. PERSONS AGED 18 AND OVER: MOST COMMONLY REPORTED CONDITIONS(a) BY AGE BY SEX  
AUSTRALIA, 1989-90

Type of condition reported	('000)			Per cent		Total
	Age group (years)		Total	Age group (years)		
	18 - 44	45 and over		18 - 44	45 and over	
Males						
No illness	1,943.5	583.4	2,526.9	52.7	23.7	41.1
Disorders of refraction and accommodation	697.6	1,615.4	2,312.9	18.9	65.7	37.6
Arthritis	170.5	579.4	749.9	4.6	23.6	12.2
Headache — due to unspecified or trivial cause	481.1	224.6	705.7	13.1	9.1	11.5
Hypertension	99.4	547.3	646.7	2.7	22.3	10.5
Back trouble (unspecified)	476.5	336.0	812.5	12.9	13.7	13.2
Hayfever	445.0	208.3	653.3	12.1	8.5	10.6
Common cold	323.5	162.4	485.9	8.8	6.6	7.9
Injuries	373.4	152.3	525.7	10.1	6.2	8.6
Asthma	239.6	130.1	369.7	6.5	5.3	6.0
Eczema, dermatitis	199.5	126.9	326.3	5.4	5.2	5.3
<b>Total</b>	<b>3,686.2</b>	<b>2,458.4</b>	<b>6,144.7</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Females						
No illness	1,424.2	384.2	1,808.4	39.4	14.3	28.7
Disorders of refraction and accommodation	944.9	1,869.7	2,814.6	26.2	69.6	44.7
Arthritis	189.0	984.8	1,173.8	5.2	36.6	18.6
Headache — due to unspecified or trivial cause	718.8	374.2	1,092.9	19.9	13.9	17.3
Hypertension	92.6	795.8	888.4	2.6	29.6	14.1
Back trouble (unspecified)	409.2	283.8	693.0	11.3	10.6	11.0
Hayfever	539.7	273.4	813.1	14.9	10.2	12.9
Common cold	304.9	154.1	459.1	8.4	5.7	7.3
Injuries	233.0	168.9	401.9	6.5	6.3	6.4
Asthma	284.6	168.9	453.5	7.9	6.3	7.2
Eczema, dermatitis	336.8	145.0	481.8	9.3	5.4	7.6
<b>Total</b>	<b>3,612.2</b>	<b>2,687.3</b>	<b>6,299.5</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Persons						
No illness	3,367.7	967.6	4,335.4	46.1	18.8	34.8
Disorders of refraction and accommodation	1,642.5	3,485.0	5,127.5	22.5	67.7	41.2
Arthritis	359.5	1,564.2	1,923.6	4.9	30.4	15.5
Headache — due to unspecified or trivial cause	1,199.9	598.8	1,798.6	16.4	11.6	14.5
Hypertension	192.0	1,343.1	1,535.1	2.6	26.1	12.3
Back trouble (unspecified)	885.7	619.9	1,505.5	12.1	12.0	12.1
Hayfever	984.7	481.7	1,466.5	13.5	9.4	11.8
Common cold	628.4	316.6	945.0	8.6	6.2	7.6
Injuries	606.4	321.3	927.6	8.3	6.2	7.5
Asthma	524.3	298.9	823.2	7.2	5.8	6.6
Eczema, dermatitis	536.3	271.9	808.1	7.3	5.3	6.5
<b>Total(b)</b>	<b>7,298.4</b>	<b>5,145.8</b>	<b>12,444.2</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) The ten most commonly reported recent and/or long-term conditions. (b) Persons may have reported more than one type of condition and therefore components do not add to totals.

TABLE 1.4. PERSONS AGED 18 AND OVER : SELECTED TYPE OF CONDITION REPORTED(a) BY SEX BY AGE  
AUSTRALIA, 1989-90  
(Per cent)

Type of condition reported	Age group (years)								
	18 - 44			45 and over			Males	Females	Persons
	Males	Females	Persons	Males	Females	Persons			
No illness	52.7	39.4	46.1	23.7	14.3	18.8	41.1	28.7	34.8
Neoplasms	0.8	1.4	1.1	6.3	5.2	5.7	3.0	3.0	3.0
Gout	1.1	* 0.1	0.6	6.1	1.3	3.6	3.1	0.7	1.9
Diabetes mellitus	0.4	0.5	0.5	4.2	3.5	3.8	1.9	1.8	1.9
Obesity	* 0.1	0.6	0.3	0.3	0.6	0.4	0.2	0.6	0.4
High cholesterol	1.8	1.0	1.4	5.2	7.4	6.4	3.2	3.8	3.5
Nerves, tension, nervousness, emotional problems	1.6	3.0	2.3	4.0	7.9	6.0	2.6	5.1	3.8
Depression	0.3	0.8	0.6	1.0	1.6	1.3	0.6	1.1	0.9
Hypertension	2.7	2.6	2.6	22.3	29.6	26.1	10.5	14.1	12.3
Heart disease	0.4	0.4	0.4	8.9	7.1	8.0	3.8	3.3	3.5
Bronchitis, emphysema	2.2	3.2	2.7	6.2	5.2	5.6	3.8	4.0	3.9
Asthma	6.5	7.9	7.2	5.3	6.3	5.8	6.0	7.2	6.6
Ulcer	1.7	1.0	1.3	5.1	3.7	4.4	3.0	2.1	2.6
Other diseases of the digestive system	3.5	4.2	3.9	7.7	9.5	8.6	5.2	6.5	5.8
Kidney diseases	0.6	1.2	0.9	2.2	2.0	2.1	1.3	1.5	1.4
Arthritis	4.6	5.2	4.9	23.6	36.6	30.4	12.2	18.6	15.5
Disorders of the intervertebral disc	3.2	2.3	2.8	6.3	4.2	5.2	4.5	3.1	3.8
Backtrouble (unspecified)	12.9	11.3	12.1	13.7	10.6	12.0	13.2	11.0	12.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) The recent and/or long-term conditions in this group have been associated with lifestyle factors. This group of conditions is used throughout the following chapters in this publication.

## SMOKING

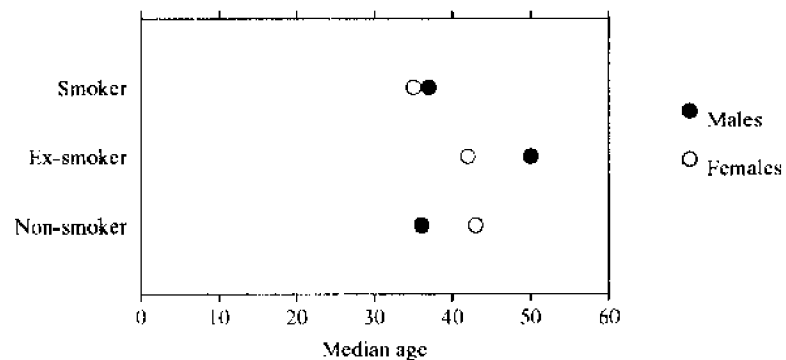
### CHARACTERISTICS OF SMOKERS

Results of the survey showed that in 1989-90, 28.4 per cent of adult Australians were smokers, 23.2 per cent were ex-smokers and 48.4 per cent had never smoked.

These proportions differed by population group, as shown in Table 2.1. A higher proportion of males were smokers (32.1%) than females (24.7%), and smoking was more common among the younger age groups. For example, approximately 36 per cent of both males and females aged 18 to 24 years were smokers compared with 21.4 per cent of persons aged 45 years or more. Among people aged 45 years and over, 30.4 per cent were ex-smokers.

For both male and female smokers the majority were in younger age groups. Two thirds (67.7%) of male and 70.4 per cent of female smokers were aged 18 to 44 years. This pattern differed for ex-smokers and persons who never smoked. For example, whereas the majority of male ex-smokers were aged 45 years and over (59.7%) most female ex-smokers were in younger age groups (54.7%) (see Table 2.2). The median age of smokers and ex-smokers was lower for females than males (Chart 2.1).

CHART 2.1 SMOKER STATUS BY MEDIAN AGE BY SEX  
AUSTRALIA, 1989-90



Smoker status differed by birthplace, with lower than average proportions of smokers and ex-smokers among Asian, African and American born people, but higher proportions among those born in New Zealand and other Oceania and in the Middle East.

Smoking was more common among unemployed persons (43.5%) than the employed (31.2%) and those not in the labour force (27.5%). Although the different age structures of these population groups contributed to the magnitude of these differences, the smoker status pattern was the same for all age groups.

Highest post-school qualifications and smoking were found to be inversely related. Proportionally fewer people with a bachelor degree or higher were smokers (16.4%) than those with trade or apprenticeship qualifications (33.4%) or no post school qualifications (30.2%). The proportion of smokers was highest in low to middle income groups (33.4% of those with an income of \$10,000 to \$30,000 per year) and lowest among those on high incomes (22.6% of those with an annual income of \$50,000 or more).

**Self-assessed health status**

Overall the majority of Australians (79.2%) believed they are in good or excellent health and similar proportions were recorded for both males and females, but differed according to smoker status (see Table 2.3). A higher proportion of people (81.9%) who had never smoked believed they are in good or excellent health than smokers (76.6%). The pattern was the same for both males and females.

This pattern was exhibited across all age groups, with more of the never smoked group assessing their health as good or excellent than both smokers and ex-smokers. Conversely more smokers and ex-smokers for both sexes and in every age group reported having poor or fair health than those who had never smoked (Table 2.3).

**Number of conditions reported**

Table 2.4 shows that the highest percentage of persons with illnesses was recorded for ex-smokers. In total, 82.9 per cent of ex-smokers reported one or more long-term conditions. Among female ex-smokers aged 45 or more, 81.5 per cent recorded having two or more long-term conditions, the highest occurrence of illnesses for any smoker status group. This pattern also varied with age, with the over 44 year age group having a higher percentage of one or more long-term illnesses (91.8 per cent of the never smoked and 89.0 per cent of smokers) than the 18 to 44 age group (63.2 per cent of the never smoked and 64.7 per cent of smokers).

For all characteristics examined (age, sex, country of birth, highest post-school qualifications and personal income) ex-smokers displayed a higher average number of recent and long-term conditions combined (3.9) than both smokers (3.3) and the never smoked group (3.4)(Table 2.5). For both males and females the smoker and never smoked groups had similar average number of conditions, with females having a greater average number of conditions (3.7 for smokers and 3.8 for those who never smoked) than males (2.9 for both smokers and those who have never smoked).

Ex-smokers aged 65 years and over had the highest average number of conditions (5.2) of all age groups. Overall the younger age groups reported a lower average number of conditions for all smoker status groups than the older groups. Of the younger age groups, smokers had a higher average number of conditions (2.8 for the 18 to 24 age group and 3.0 for those aged 25 to 44 years) than those that have never smoked (2.6 for 18 to 24 years and 2.9 for 25 to 44 years). However, among those aged 45 years and over, those who had never smoked had a slightly higher prevalence of conditions than the smokers (Table 2.5). Further, a higher proportion of smokers 45 years and over reported no illness (24.9%) than ex-smokers (15.9%) and those who never smoked (17.9%). This pattern is similar for males and females (Table 2.6).

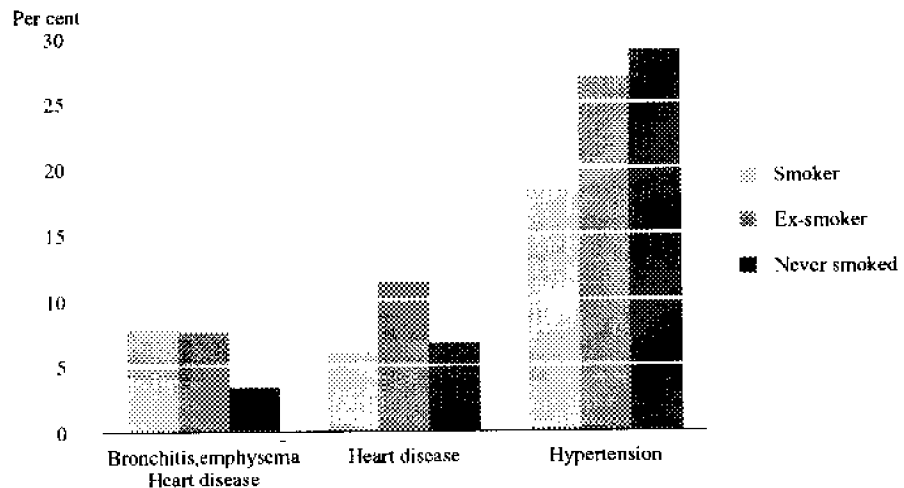
**Types of conditions reported**

There were some differences in the prevalence of certain medical conditions according to smoker status, and as might be expected these differences were most evident in the older age groups.

Chart 2.2 shows that the prevalence of bronchitis and emphysema, which have historically been linked with smoking, is higher among smokers aged 45 years and over (7.8%) than among those who have never smoked (3.4%), but similar for ex-smokers (7.6%). Males in all age and smoker status groups, except for ex-smokers 45 years and over, reported a lower prevalence of bronchitis than females. Overall, a higher prevalence of this condition was reported among smokers (5.3%) and ex-smokers (5.1%) than persons who had never smoked (2.5%) (Table 2.6).

Chart 2.2 also shows differences in the prevalence of heart disease between smoker status groups. For persons aged 45 years and over, the proportion of ex-smokers who reported heart disease (11.4%) was almost double that for smokers (6.0%) and those who have never smoked (6.7%) (see also Table 2.6). This pattern was the same for both males and females, but the prevalence of heart disease was lower among females (9.4%) than males (12.3%) in the ex-smoker group aged 45 years and over.

**CHART 2.2. PERSONS AGED 45 YEARS AND OVER: SMOKER STATUS BY SELECTED CONDITIONS(a), AUSTRALIA, 1989-90**



(a) Reported as recent and/or long-term conditions

The high proportion of ex-smokers who reported heart disease may be due to smokers developing the disease and then giving up smoking as a result. Table 2.7 shows that the main reason for quitting smoking most often reported by ex-smokers of cigarettes over the age of 44 was that it is harmful to their health. Further, the number of ex-smokers of cigarettes with heart disease who reported health reasons as the main reason for quitting smoking (94,900 persons) was over four times the number who reported any other reason for quitting (for example, 20,800 reported they quit smoking because they lost interest).

However, not all related conditions were positively correlated with smoking. For example, lower proportions of smokers aged 45 years or more of both sexes reported obesity and high cholesterol as recent and long-term conditions than ex-smokers or those who never smoked (Tables 2.6 and 2.10).

Proportionally fewer smokers aged 45 years and over reported hypertension (18.3%) than those who have never smoked (29.0%) and ex-smokers (27.0%) (Chart 2.2). This is true of both males and females, although the prevalence of hypertension was higher among females than males in all smoker status groups. This finding may be associated with body mass. Some 38.9 per cent of smokers aged 45 years and over were classified overweight or obese based on self-reported height and weight, compared with 49.5 per cent of ex-smokers and 44.1 per cent of those who had never smoked (Table 2.8).



## Duration of smoking

Results of the survey indicated that the prevalence of recent and long-term conditions is also associated with the length of time a person has smoked.

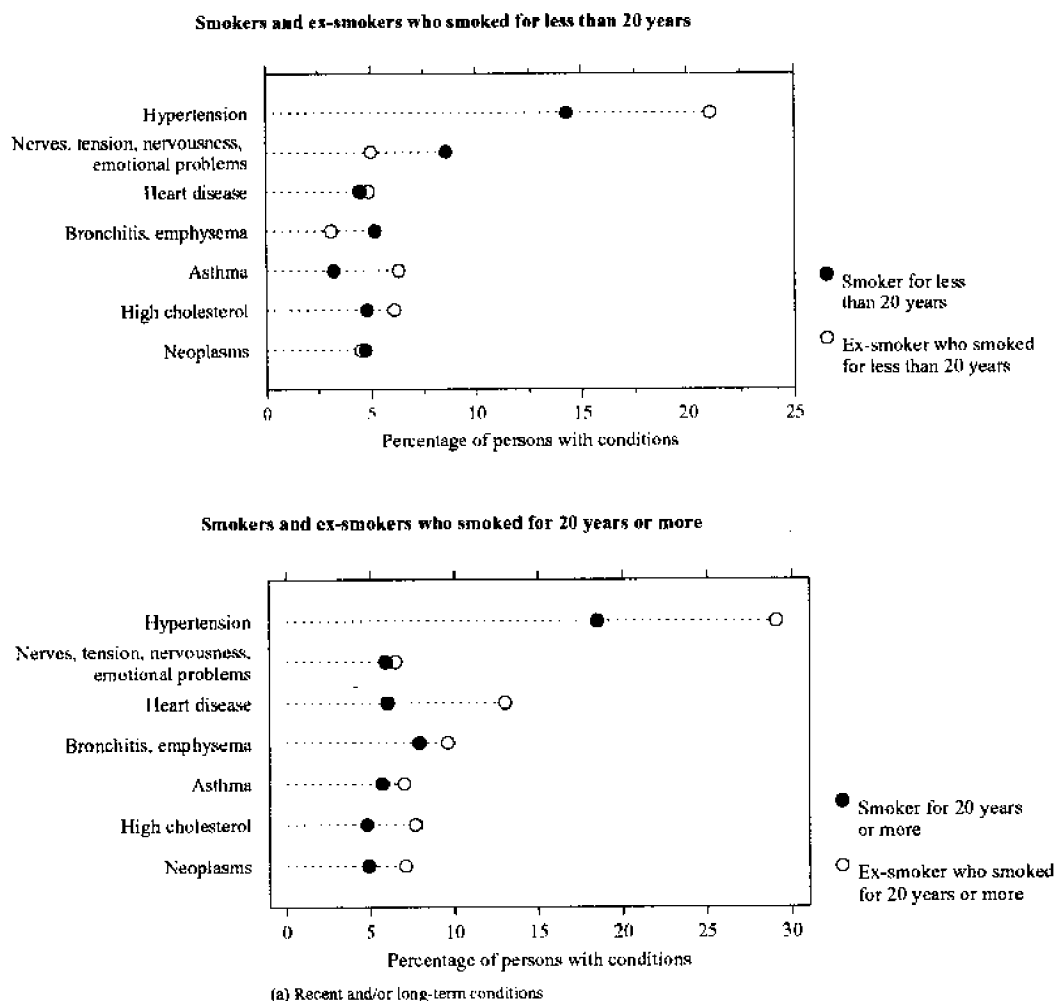
For persons aged 45 and over, the proportion of ex-smokers with illness was higher than for current smokers. Some 94.3 per cent of ex-smokers in this age group who smoked for more than 20 years reported one or more long-term illnesses, while 89.2 per cent of current smokers of the same duration reported long-term illnesses. More smokers and ex-smokers reported having two or more illnesses (recent or long-term) than persons who had never smoked. Unexpectedly a higher percentage of ex-smokers, who had smoked for less than 10 years, than current smokers had one or more recent illnesses (85.8% compared with 78.2%) (Table 2.9).

The prevalence of bronchitis and emphysema among those aged 45 years and over increases markedly as duration of smoking increases. Of current smokers in this age group who have smoked for less than 20 years 5.2 per cent reported bronchitis and emphysema, compared with 7.9 per cent among those who have smoked for 20 years or more and 3.4 per cent for those who have never smoked (Table 2.6).

Among ex-smokers who smoked for 20 years or more, the prevalence of bronchitis and emphysema was greater still (9.6%) (Table 2.10).

As shown in Chart 2.3, there were also differences between current smokers and ex-smokers in the prevalence of other conditions. Those persons aged 45 years and over who stopped smoking, and who had smoked for 20 years or more, had a higher prevalence of hypertension, heart disease, asthma, high cholesterol and neoplasms than those who were still smoking and had done so for 20 years or more. Smokers who had smoked for less than 20 years had the lowest prevalence of the conditions examined when compared with long-term smokers (who had smoked for 20 years or more) and ex-smokers, except for nerves, tension, nervousness, emotional problems, bronchitis, emphysema and neoplasms. Similar results are found when smokers and non-smokers are compared. That is, smokers aged 45 years and over have a lower prevalence of neoplasms, high cholesterol, hypertension, and heart disease than both ex-smokers and those who had never smoked in the same age group. (Table 2.6).

**CHART 2.3 SMOKERS AND EX-SMOKERS AGED 45 YEARS AND OVER: DURATION OF SMOKING BY SELECTED CONDITIONS EXPERIENCED(a), AUSTRALIA, 1989-90**



**Passive smoking**

As well as the effects of smoking for the smoker him/herself, attention has been drawn by researchers to the possible effects of smoking on the health of non-smokers through passive smoking. A particular aspect identified is the effects of passive smoking on the health of infants and children.

The 1989-90 National Health Survey did not directly address the issue of passive smoking and its possible effects on health. However, data from the survey are available describing the health of children in households in which there are one or more adult smokers (Table 2.11). Survey results show only slight differences between children living in households with or without smokers in the likelihood of children experiencing recent and/or long-term conditions. In households with smokers there was a slightly higher prevalence of disorders of refraction and accommodation, influenza, bronchitis, emphysema and asthma among children.

## **SUMMARY**

Of Australians aged 18 years and over, just over half were, or had been smokers. The majority of Australians believed themselves to be in good or excellent health regardless of smoker status, but a higher proportion of those who had never smoked rated their health as good or excellent than did smokers.

The data on reported conditions both supports and contradicts this view. While smokers experienced higher rates of bronchitis and emphysema, they also had the lowest rates of hypertension compared with ex-smokers and the never smoked group, and proportionally fewer smokers reported experiencing any illness conditions. Although age is a factor in this finding, the pattern was similar across age groups. In contrast ex-smokers had the highest rate of heart disease of all three smoker status groups.

An important factor when comparing reported conditions across smoker status groups was the duration of smoking. Smokers and ex-smokers who had smoked for 20 years or more fared far worse in terms of bronchitis and emphysema, as did smokers for heart disease, than those who had never smoked.

TABLE 2.1. PERSONS AGED 18 YEARS AND OVER: SMOKER STATUS BY SELECTED CHARACTERISTICS  
AUSTRALIA, 1989-90

	('000)				Per cent			
	Smoker	Ex-smoker	Never smoked	Total	Smoker	Ex-smoker	Never smoked	Total
<b>Sex —</b>								
Males	1,972.3	1,769.2	2,403.2	6,144.7	32.1	28.8	39.1	100.0
Females	1,558.5	1,122.0	3,619.0	6,299.5	24.7	17.8	57.4	100.0
<b>Age group (years) —</b>								
18 — 24	696.9	200.6	1,039.8	1,937.3	36.0	10.4	53.7	100.0
25 — 44	1,734.3	1,126.3	2,500.5	5,361.1	32.3	21.0	46.6	100.0
45 — 64	844.6	914.0	1,490.1	3,248.7	26.0	28.1	45.9	100.0
65 and over	254.9	650.3	991.9	1,897.1	13.4	34.3	52.3	100.0
<b>Country of birth —</b>								
Australia	2,587.2	2,026.1	4,426.4	9,039.7	28.6	22.4	49.0	100.0
New Zealand and other Oceania	98.3	70.5	108.1	276.9	35.5	25.5	39.1	100.0
United Kingdom and Ireland	344.0	371.3	453.3	1,168.6	29.4	31.8	38.8	100.0
Southern Europe	186.8	148.1	373.6	708.5	26.4	20.9	52.7	100.0
Western Europe	72.9	82.5	96.9	252.3	28.9	32.7	38.4	100.0
Other Europe and U.S.S.R.	55.3	56.6	79.3	191.3	28.9	29.6	41.5	100.0
Middle East	53.5	28.0	69.1	150.6	35.5	18.6	45.9	100.0
Southeast Asia	49.6	27.5	184.8	261.9	19.0	10.5	70.5	100.0
Northeast/ Southern Asia	39.5	35.3	143.3	218.1	18.1	16.2	65.7	100.0
Northern, South and Central America and the Caribbean	27.0	27.7	48.8	103.5	26.1	26.8	47.1	100.0
Africa (incl. North Africa)	16.4	17.6	38.7	72.8	22.6	24.2	53.2	100.0
<b>Total overseas born</b>	<b>943.5</b>	<b>865.1</b>	<b>1,595.9</b>	<b>3,404.5</b>	<b>27.7</b>	<b>25.4</b>	<b>46.9</b>	<b>100.0</b>
<b>Highest post school qualifications —</b>								
Still at school or never went to school	13.7	9.1	65.7	88.5	15.5	10.3	74.2	100.0
Bachelor degree or higher	181.0	253.0	667.5	1,101.5	16.4	23.0	60.6	100.0
Trade/Apprenticeship	603.4	536.4	665.1	1,804.9	33.4	29.7	36.8	100.0
Certificate/Diploma	640.9	601.3	1,290.7	2,532.9	25.3	23.7	51.0	100.0
Other	39.8	28.6	52.4	120.8	32.9	23.7	43.4	100.0
No post-school qualification	2,052.0	1,462.8	3,280.8	6,795.6	30.2	21.5	48.3	100.0
<b>Labour force status(a) —</b>								
Not applicable(b)	254.9	650.3	991.9	1,897.1	13.4	34.3	52.3	100.0
Employed	2,379.3	1,653.7	3,582.3	7,615.3	31.2	21.7	47.0	100.0
Unemployed (looking for work)	246.7	97.4	222.7	566.8	43.5	17.2	39.3	100.0
Not in labour force	649.9	489.8	1,225.4	2,365.1	27.5	20.7	51.8	100.0
<b>Gross personal annual income(c) —</b>								
Not applicable(d)	180.7	111.0	426.2	717.8	25.2	15.5	59.4	100.0
\$0 — 9,999	915.1	933.0	1,971.1	3,819.2	24.0	24.4	51.6	100.0
\$10,000 — 19,999	909.2	553.2	1,255.8	2,718.1	33.4	20.4	46.2	100.0
\$20,000 — 29,999	818.7	546.5	1,089.7	2,454.9	33.3	22.3	44.4	100.0
\$30,000 — 39,999	360.9	329.8	605.7	1,296.4	27.8	25.4	46.7	100.0
\$40,000 — 49,999	128.2	144.4	220.2	492.8	26.0	29.3	44.7	100.0
\$50,000 or more	218.0	273.3	453.6	944.9	23.1	28.9	48.0	100.0
<b>Total</b>	<b>3,530.7</b>	<b>2,891.2</b>	<b>6,022.2</b>	<b>12,444.2</b>	<b>28.4</b>	<b>23.2</b>	<b>48.4</b>	<b>100.0</b>

(a) Persons 18 to 64 years only. (b) Persons aged 65 years and over. (c) Persons 18 years and over who reported a source of income. (d) Persons 18 years and over still at school and persons who did not report a source of income.

TABLE 2.2. PERSONS AGED 18 YEARS AND OVER: SMOKER STATUS BY AGE BY SEX  
AUSTRALIA, 1989-90

Smoker status	('000)					Per cent				
	Age group (years)					Age group (years)				
	18 - 24	25 - 44	45 - 64	65 and over	Total	18 - 24	25 - 44	45 - 64	65 and over	Total
Males										
Smoker	353.4	981.3	500.9	136.7	1,972.3	35.9	36.3	30.3	16.9	32.1
Ex-smoker	88.4	624.3	618.6	437.8	1,769.2	9.0	23.1	37.5	54.2	28.8
Never smoked	541.9	1,096.9	531.8	232.6	2,403.2	55.1	40.6	32.2	28.8	39.1
<b>Total</b>	<b>983.7</b>	<b>2,702.5</b>	<b>1,651.3</b>	<b>807.1</b>	<b>6,144.7</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Females										
Smoker	343.5	753.0	343.7	118.2	1,558.5	36.0	28.3	21.5	10.8	24.7
Ex-smoker	112.2	501.9	295.4	212.5	1,122.0	11.8	18.9	18.5	19.5	17.8
Never smoked	497.9	1,403.7	958.2	759.3	3,619.0	52.2	52.8	60.0	69.7	57.4
<b>Total</b>	<b>953.6</b>	<b>2,658.6</b>	<b>1,597.4</b>	<b>1,089.9</b>	<b>6,299.5</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Persons										
Smoker	696.9	1,734.3	844.6	254.9	3,530.7	36.0	32.3	26.0	13.4	28.4
Ex-smoker	200.6	1,126.3	914.0	650.3	2,891.2	10.4	21.0	28.1	34.3	23.2
Never smoked	1,039.8	2,500.5	1,490.1	991.9	6,022.2	53.7	46.6	45.9	52.3	48.4
<b>Total</b>	<b>1,937.3</b>	<b>5,361.1</b>	<b>3,248.7</b>	<b>1,897.1</b>	<b>12,444.2</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

TABLE 2.3. PERSONS AGED 18 YEARS AND OVER: SMOKER STATUS BY SELF ASSESSED HEALTH STATUS BY AGE BY SEX  
AUSTRALIA, 1989-90  
('000)

Self assessed health status	Smoker				Ex-smoker				Never smoked				Total		
	Males		Females		Males		Females		Males		Females		Males	Females	Persons
	Persons	Females	Persons	Females	Persons	Females	Persons	Females	Persons	Females	Persons	Females	Persons	Females	Persons
	18 — 24 years														
Excellent	79.9	68.7	148.6	41.1	79.2	251.0	184.6	435.6	369.0	294.4	663.4				
Good	206.6	206.7	413.3	60.7	106.9	257.5	273.3	530.7	510.3	540.7	1,051.0				
Fair	61.8	61.3	123.1	9.1	12.7	30.4	34.8	65.2	95.8	105.2	201.0				
Poor	* 5.1	6.9	11.9	* 1.4	* 1.8	* 3.1	* 5.1	8.2	8.6	13.4	22.0				
<b>Total</b>	<b>353.4</b>	<b>343.5</b>	<b>696.9</b>	<b>112.2</b>	<b>200.6</b>	<b>541.9</b>	<b>497.9</b>	<b>1,039.8</b>	<b>983.7</b>	<b>953.6</b>	<b>1,937.3</b>				
	25 — 44 years														
Excellent	266.1	196.3	462.4	229.1	205.2	475.7	563.9	1,039.5	970.9	965.4	1,936.3				
Good	556.4	425.8	982.2	331.9	243.3	575.1	686.5	1,213.6	1,415.3	1,355.6	2,770.9				
Fair	137.5	110.0	247.5	55.5	44.3	83.1	131.6	214.7	276.1	285.9	562.0				
Poor	21.4	21.0	42.3	7.9	9.1	11.0	21.7	32.6	40.2	51.7	91.9				
<b>Total</b>	<b>981.3</b>	<b>753.0</b>	<b>1,734.3</b>	<b>624.3</b>	<b>501.9</b>	<b>1,096.9</b>	<b>1,403.7</b>	<b>2,500.5</b>	<b>2,702.5</b>	<b>2,658.6</b>	<b>5,361.1</b>				
	45 — 64 years														
Excellent	89.7	66.4	156.1	142.2	79.6	150.7	243.4	394.2	382.7	389.5	772.2				
Good	234.3	168.3	402.6	306.3	145.5	451.9	457.3	732.7	816.0	771.2	1,587.1				
Fair	129.4	86.5	215.9	125.5	49.7	175.2	199.2	280.9	336.6	335.3	672.0				
Poor	47.5	22.6	70.1	44.6	20.6	23.9	58.3	82.2	116.0	101.4	217.5				
<b>Total</b>	<b>500.9</b>	<b>343.7</b>	<b>844.6</b>	<b>618.6</b>	<b>295.4</b>	<b>531.8</b>	<b>958.2</b>	<b>1,490.1</b>	<b>1,651.3</b>	<b>1,597.4</b>	<b>3,248.7</b>				
	65 years and over														
Excellent	15.2	17.5	32.7	49.0	29.7	42.6	107.4	150.0	106.8	154.7	261.5				
Good	56.5	50.1	106.6	184.2	81.3	265.5	333.8	440.2	347.2	465.1	812.2				
Fair	44.3	38.2	82.5	139.7	64.4	60.3	241.8	302.1	244.2	344.5	588.7				
Poor	20.6	12.4	33.1	65.0	37.1	23.3	76.2	99.5	108.9	125.7	234.6				
<b>Total</b>	<b>136.7</b>	<b>118.2</b>	<b>254.9</b>	<b>437.8</b>	<b>212.5</b>	<b>232.6</b>	<b>759.3</b>	<b>991.9</b>	<b>807.1</b>	<b>1,089.9</b>	<b>1,897.1</b>				
	Total														
Excellent	450.9	348.9	799.8	458.5	355.6	920.0	1,099.4	2,019.4	1,829.3	1,803.9	3,633.3				
Good	1,053.8	850.9	1,904.6	868.6	590.7	1,166.3	1,750.9	2,917.2	3,088.7	3,132.5	6,221.2				
Fair	373.0	295.9	668.9	324.2	167.6	255.6	607.4	863.0	952.8	1,070.9	2,023.7				
Poor	94.6	62.8	157.4	117.9	68.1	61.3	161.3	222.6	273.8	292.2	566.0				
<b>Total</b>	<b>1,972.3</b>	<b>1,558.5</b>	<b>3,530.7</b>	<b>1,769.2</b>	<b>1,122.0</b>	<b>2,403.2</b>	<b>3,619.0</b>	<b>6,022.2</b>	<b>6,144.7</b>	<b>6,299.5</b>	<b>12,444.2</b>				







TABLE 2.5. AVERAGE NUMBER OF CONDITIONS EXPERIENCED(a): SMOKER STATUS OF PERSONS AGED 18 YEARS AND OVER BY SELECTED CHARACTERISTICS AUSTRALIA, 1989-90

	<i>Smoker</i>	<i>Ex-smoker</i>	<i>Never smoked</i>	<i>Total</i>
<i>Sex—</i>				
Males	2.9	3.7	2.9	3.2
Females	3.7	4.1	3.8	3.8
<i>Age group (years)—</i>				
18 — 24	2.8	3.0	2.6	2.7
25 — 44	3.0	3.1	2.9	3.0
45 — 64	3.8	4.1	3.9	3.9
65 and over	4.6	5.2	4.9	5.0
<i>Country of birth—</i>				
Australia	3.3	3.9	3.5	3.5
New Zealand and other Oceania	2.9	3.2	3.2	3.1
United Kingdom and Ireland	3.5	4.1	3.6	3.7
Southern Europe	2.8	3.4	3.1	3.1
Western Europe	3.2	3.6	3.6	3.5
Other Europe and U.S.S.R.	3.6	3.9	3.7	3.7
Middle East	3.0	3.1	2.8	2.9
Southeast Asia	2.5	3.1	2.6	2.7
Northeast/ Southern Asia	2.4	3.6	2.8	2.9
America and the Caribbean(b)	3.2	3.6	3.2	3.3
Africa (incl. North Africa)	3.4	4.1	3.1	3.4
Total overseas born	3.1	3.7	3.2	3.3
<i>Highest post school qualifications —</i>				
Still at school or never went to school	2.9	3.1	3.1	3.0
Bachelor degree or higher	3.3	3.7	3.1	3.3
Trade/Apprenticeship	3.0	3.8	3.1	3.3
Certificate/Diploma	3.4	3.9	3.5	3.6
Other	3.5	4.1	3.8	3.8
No post-school qualification	3.3	3.9	3.5	3.5
<i>Labour force status —</i>				
Not applicable(c)	4.6	5.2	4.9	5.0
Employed	3.0	3.3	3.0	3.0
Unemployed (looking for work)	3.2	3.3	3.0	3.1
Not in labour force	3.9	4.3	3.6	3.8
<i>Annual income —</i>				
Not applicable(d)	3.4	3.9	3.2	3.4
\$0 — 9,999	3.9	4.6	4.0	4.1
\$10,000 — 19,999	3.2	3.8	3.3	3.4
\$20,000 — 29,999	2.9	3.3	3.0	3.0
\$30,000 — 39,999	3.0	3.4	3.0	3.1
\$40,000 — 49,999	3.1	3.3	3.1	3.1
\$50,000 or more	2.9	3.5	3.1	3.2
Not stated	2.8	3.7	3.2	3.3
<b>Total</b>	<b>3.3</b>	<b>3.9</b>	<b>3.4</b>	<b>3.5</b>

(a) Reported as recent and/or long-term conditions (b) Includes Northern, South and Central America. (c) Persons aged 65 years and over. (d) Persons 18 years and over still at school and persons who did not report a source of income.



TABLE 2.6. PERSONS AGED 18 YEARS AND OVER : SMOKER STATUS BY SELECTED CONDITIONS REPORTED(a) BY AGE AND SEX  
AUSTRALIA, 1989-90  
(Per cent)—continued

Type of condition reported	Smoker	Ex-smoker	Never smoked	Total		
				Males	Females	Persons
No illness	39.4	27.1	35.9	41.1	28.7	34.8
Neoplasms	2.2	4.3	2.8	3.0	3.0	3.0
Gout	1.3	3.5	1.4	3.1	0.7	1.9
Diabetes mellitus	1.2	2.7	1.9	1.9	1.8	1.9
Obesity	0.3	0.4	0.5	0.2	0.6	0.4
High cholesterol	2.4	4.5	3.6	3.2	3.8	3.5
Nerves, tension, nervousness, emotional problems	3.7	4.4	3.7	2.6	5.1	3.8
Depression	0.9	1.0	0.8	0.6	1.1	0.9
Hypertension	7.4	16.1	13.4	10.5	14.1	12.3
Heart disease	2.2	6.4	2.9	3.8	3.3	3.5
Bronchitis, emphysema	5.3	5.1	2.5	3.8	4.0	3.9
Asthma	6.7	7.3	6.3	6.0	7.2	6.6
Ulcer	3.2	3.7	1.7	3.0	2.1	2.6
Other diseases of the digestive system	5.0	7.1	5.7	5.2	6.5	5.8
Kidney diseases	1.4	1.7	1.3	1.3	1.5	1.4
Arthritis	11.9	19.6	15.5	12.2	18.6	15.5
Disorders of the intervertebral disc	4.3	4.9	2.9	4.5	3.1	3.8
Backtrouble (unspecified)	13.5	12.9	10.9	13.2	11.0	12.1
<b>Total(b)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Reported as recent and/or long-term conditions. Each person may have reported more than one type of condition. (b) Selected conditions only are shown and therefore components do not add to totals.

TABLE 2.7. EX-SMOKERS OF PACKET CIGARETTES AGED 45 YEARS AND OVER: SELECTED CONDITIONS REPORTED(a) BY MAIN REASON FOR QUITTING SMOKING  
AUSTRALIA, 1989-90  
(\*000)

Type of condition reported	Harmful to health(b)	Cough/sore throat	Reduces fitness/stricts activity	Other health reasons eg. pregnancy	Offensive to others	Expense	Lost interest/did not feel like it anymore	Other reasons	Total
No illness	73.0	18.2	16.1	14.7	8.2	15.3	44.8	17.6	207.9
Neoplasms	38.0	5.8	* 2.9	5.5	* 2.7	* 4.9	15.1	6.2	80.9
Gout	24.1	7.0	* 1.9	7.4	* 1.5	* 3.4	11.3	6.7	63.3
Diabetes mellitus	22.6	* 4.3	* 1.5	9.2	**	* 3.5	9.7	* 2.5	54.4
Obesity	* 2.5	**	**	**	**	**	**	**	* 4.9
High cholesterol	38.7	7.8	* 3.8	12.2	* 3.7	* 2.9	15.4	6.9	91.5
Nerves, tension, nervousness, emotional problems	35.8	6.0	* 4.0	6.4	* 2.9	* 4.0	14.0	* 3.7	76.9
Depression	9.9	**	**	* 1.5	**	* 1.6	* 3.7	* 1.7	20.7
Hypertension	143.1	30.0	10.6	34.5	10.6	17.6	67.8	24.5	338.8
Heart disease	75.3	5.9	* 1.6	12.0	* 1.9	* 4.3	20.8	11.1	133.0
Bronchitis, emphysema	52.8	9.8	* 3.1	11.0	* 3.0	* 2.7	7.9	5.7	96.2
Asthma	42.8	5.5	* 2.6	9.9	* 3.0	* 4.4	11.8	6.6	86.7
Ulcer	31.5	* 4.2	* 1.6	7.5	* 2.9	* 3.8	13.5	* 3.6	68.7
Other diseases of the digestive system	60.0	13.5	* 2.6	11.1	6.9	7.8	19.6	9.4	130.8
Kidney diseases	14.0	* 3.0	**	* 3.4	**	* 2.3	* 4.0	* 1.8	29.8
Arthritis	156.1	32.5	11.8	45.5	15.7	25.2	70.0	34.3	391.2
Disorders of the intervertebral disc	26.3	6.2	* 3.3	9.1	* 4.4	* 3.1	16.4	6.0	74.8
Backtrouble (unspecified)	69.7	15.9	8.1	14.9	5.6	9.0	30.5	16.8	170.5
<b>Total(c)</b>	<b>512.6</b>	<b>103.3</b>	<b>55.6</b>	<b>130.0</b>	<b>50.1</b>	<b>78.1</b>	<b>243.9</b>	<b>114.2</b>	<b>1,287.8</b>

(a) Reported as recent and/or long-term conditions. Each person may have reported more than one type of condition. (b) Includes headaches, shortness of breath, heart disease, lung cancer, bronchitis, asthma, emphysema, etc. (c) Selected conditions only are shown and therefore components do not add to totals.

TABLE 2.8. PERSONS AGED 18 YEARS AND OVER: SMOKER STATUS BY BODY MASS(a) BY SEX BY AGE  
AUSTRALIA, 1989-90  
('000)

Body mass	Smoker						Never smoked						Total		
	Ex-smoker			Smoker			Ex-smoker			Smoker			Males	Females	
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
	18 — 24 years														
Underweight	52.0	98.3	150.3	10.3	31.5	41.7	69.8	165.6	235.4	132.1	295.4	427.5			
Acceptable weight	185.6	168.1	353.6	51.4	55.2	106.6	323.2	244.2	567.4	560.2	467.5	1,027.6			
Overweight	82.5	38.2	120.6	19.2	14.1	33.4	106.6	46.5	153.1	208.3	98.8	307.1			
Obese	13.1	12.8	26.0	* 3.0	* 5.3	8.3	20.0	18.1	38.1	36.1	36.2	72.3			
Not available	20.3	26.1	46.4	* 4.5	6.1	10.6	22.3	23.5	45.8	47.1	55.7	102.7			
<b>Total</b>	<b>353.4</b>	<b>343.5</b>	<b>696.9</b>	<b>88.4</b>	<b>112.2</b>	<b>200.6</b>	<b>541.9</b>	<b>497.9</b>	<b>1,039.8</b>	<b>983.7</b>	<b>953.6</b>	<b>1,937.3</b>			
	25 — 44 years														
Underweight	58.5	154.7	213.2	27.3	84.1	111.4	50.5	255.9	306.4	136.2	494.7	630.9			
Acceptable weight	488.9	390.7	879.6	271.4	284.6	556.0	570.0	721.7	1,291.7	1,330.3	1,397.0	2,727.2			
Overweight	336.2	118.8	455.0	256.7	80.6	337.3	367.7	265.2	633.0	960.7	464.6	1,425.2			
Obese	76.3	62.9	139.2	61.3	37.9	99.2	87.4	114.0	201.4	225.0	214.8	439.8			
Not available	21.4	25.9	47.3	7.7	14.7	22.4	21.2	46.9	68.1	50.4	87.5	137.9			
<b>Total</b>	<b>981.3</b>	<b>753.0</b>	<b>1,734.3</b>	<b>624.3</b>	<b>501.9</b>	<b>1,126.3</b>	<b>1,096.9</b>	<b>1,403.7</b>	<b>2,500.5</b>	<b>2,702.5</b>	<b>2,658.6</b>	<b>5,361.1</b>			
	45 — 64 years														
Underweight	29.7	47.6	77.3	12.0	21.7	33.7	15.0	74.8	89.8	56.7	144.1	200.8			
Acceptable weight	229.4	164.8	394.2	226.8	146.2	372.9	216.0	419.3	635.3	672.2	730.3	1,402.5			
Overweight	185.6	90.7	276.4	292.9	79.3	372.2	230.8	287.8	518.6	709.3	457.8	1,167.1			
Obese	43.9	29.4	73.2	77.4	40.8	118.2	59.7	146.2	206.0	181.0	216.4	397.4			
Not available	12.3	11.2	23.5	9.5	7.5	17.0	10.3	30.1	40.4	32.1	48.8	80.9			
<b>Total</b>	<b>500.9</b>	<b>343.7</b>	<b>844.6</b>	<b>618.6</b>	<b>295.4</b>	<b>914.0</b>	<b>537.8</b>	<b>958.2</b>	<b>1,490.1</b>	<b>1,651.3</b>	<b>1,597.4</b>	<b>3,248.7</b>			
	65 years and over														
Underweight	15.8	23.4	39.2	28.3	25.2	53.5	14.4	101.6	116.0	58.4	150.3	208.7			
Acceptable weight	69.5	53.6	123.1	194.3	96.4	290.8	106.9	320.9	427.9	370.8	470.9	841.7			
Overweight	38.6	25.1	63.7	171.3	52.4	223.7	83.3	192.8	276.1	293.3	270.3	563.6			
Obese	8.2	5.9	14.1	36.6	23.8	60.4	17.7	75.6	93.3	62.5	105.3	167.8			
Not available	* 4.6	10.2	14.8	7.3	14.6	21.9	10.3	68.3	78.6	22.2	93.2	115.3			
<b>Total</b>	<b>136.7</b>	<b>118.2</b>	<b>254.9</b>	<b>437.8</b>	<b>212.5</b>	<b>650.3</b>	<b>232.6</b>	<b>759.3</b>	<b>991.9</b>	<b>807.1</b>	<b>1,089.9</b>	<b>1,897.1</b>			
	Total														
Underweight	156.0	324.0	480.0	77.8	162.5	240.4	149.6	597.9	747.6	383.4	1,084.4	1,467.9			
Acceptable weight	973.3	777.2	1,750.5	743.9	582.4	1,326.3	1,216.2	1,706.1	2,922.3	2,933.4	3,065.7	5,999.1			
Overweight	642.9	272.8	915.7	740.2	226.4	966.5	788.5	792.3	1,580.8	2,171.6	1,291.5	3,463.1			
Obese	141.5	111.0	252.5	178.3	107.8	286.1	184.8	353.9	538.7	504.6	572.8	1,077.3			
Not available	58.6	73.5	132.0	29.1	42.9	72.0	64.0	168.8	232.8	151.7	285.1	436.8			
<b>Total</b>	<b>1,972.3</b>	<b>1,558.5</b>	<b>3,530.7</b>	<b>1,769.2</b>	<b>1,122.0</b>	<b>2,891.2</b>	<b>2,403.2</b>	<b>3,619.0</b>	<b>6,022.2</b>	<b>6,144.7</b>	<b>6,299.5</b>	<b>12,444.2</b>			

(a) Derived from self-reported height and weight.



TABLE 2.10. PERSONS AGED 45 YEARS AND OVER WHO ARE CURRENT OR EX-SMOKERS: DURATION OF SMOKING BY SELECTED CONDITIONS(a) EXPERIENCED AUSTRALIA, 1989-90

Type of condition experienced	Current Smokers			Ex-smokers			Total
	Less than 10 years	10 - 19 years	20 years or more	Less than 10 years	10 - 19 years	20 years or more	
	— '000—						
No illness	* 2.9	8.6	262.6	31.3	50.4	121.1	522.3
Neoplasms	**	* 1.7	52.0	6.2	12.5	61.2	160.4
Gout	**	**	31.0	* 3.7	11.2	47.6	118.5
Diabetes mellitus	**	* 1.5	28.8	* 4.4	9.9	40.1	101.8
Obesity	**	**	* 2.8	**	**	* 3.6	8.3
High cholesterol	**	* 1.6	50.8	8.2	16.8	65.8	157.6
Nerves, tension, nervousness, emotional problems	* 1.4	* 2.3	62.8	6.9	13.5	55.5	157.6
Depression	**	**	12.3	* 3.6	* 2.7	14.3	36.4
Hypertension	* 1.9	* 4.2	195.3	34.6	52.0	249.3	623.3
Heart disease	**	* 1.9	63.5	8.7	11.4	111.5	243.5
Bronchitis, emphysema	**	* 1.7	84.0	* 3.8	8.9	82.5	205.8
Asthma	**	* 1.4	60.2	9.3	16.4	60.1	164.8
Ulcer	**	**	62.1	6.5	11.4	49.0	150.4
Other diseases of the digestive system	**	* 2.5	79.1	14.2	20.0	95.1	236.4
Kidney diseases	**	**	23.1	* 4.5	**	24.6	61.5
Arthritis	* 3.2	6.7	266.9	38.0	64.5	285.2	767.5
Disorders of the intervertebral disc	**	* 2.2	65.8	11.2	12.3	51.0	167.7
Backtrouble (unspecified)	* 2.1	* 4.7	140.0	20.8	38.3	107.9	342.1
<b>Total(b)</b>	<b>10.8</b>	<b>31.7</b>	<b>1,057.1</b>	<b>157.0</b>	<b>254.3</b>	<b>857.6</b>	<b>2,663.8</b>
	— Per cent—						
No illness	* 26.7	27.0	24.8	19.9	19.8	14.1	19.6
Neoplasms	**	* 5.3	4.9	3.9	4.9	7.1	6.0
Gout	**	**	2.9	* 2.4	4.4	5.6	4.4
Diabetes mellitus	**	* 4.9	2.7	* 2.8	3.9	4.7	3.8
Obesity	**	**	* 0.3	**	**	* 0.4	0.3
High cholesterol	**	* 5.2	4.8	5.2	6.6	7.7	5.9
Nerves, tension, nervousness, emotional problems	* 12.7	* 7.2	5.9	4.4	5.3	6.5	5.9
Depression	**	**	1.2	* 2.3	* 1.1	1.7	1.4
Hypertension	* 17.5	* 13.1	18.5	22.0	20.5	29.1	23.4
Heart disease	**	* 6.1	6.0	5.6	4.5	13.0	9.1
Bronchitis, emphysema	**	* 5.5	7.9	* 2.4	3.5	9.6	7.7
Asthma	**	* 4.3	5.7	5.9	6.4	7.0	6.2
Ulcer	**	**	5.9	4.1	4.5	5.7	5.6
Other diseases of the digestive system	**	* 7.9	7.5	9.0	7.9	11.1	8.9
Kidney diseases	**	**	2.2	* 2.9	**	2.9	2.3
Arthritis	* 29.5	21.3	25.2	24.2	25.4	33.3	28.8
Disorders of the intervertebral disc	**	* 7.0	6.2	7.2	4.8	5.9	6.3
Backtrouble (unspecified)	* 19.2	* 14.9	13.2	13.3	15.1	12.6	12.8
<b>Total(b)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Reported as recent and/or long-term conditions. Each person may have reported more than one condition. (b) Selected conditions only are shown and therefore components do not add to totals.

TABLE 2.11. CHILDREN AGED 0 TO 14 YEARS: SELECTED TYPES OF RECENT AND LONG-TERM CONDITIONS EXPERIENCED(a) BY AGE BY NUMBER OF SMOKERS IN HOUSEHOLD AUSTRALIA, 1989-90 (Per cent)

Type of conditions	0 to 4 years		5 to 9 years		10 to 14 years		Total
	No smokers in household	1 or more smokers in household	No smokers in household	1 or more smokers in household	No smokers in household	1 or more smokers in household	
No illness	21.3	23.8	25.4	25.9	25.1	25.0	24.4
Diseases of the nervous system and sense organs —							
Disorders of refraction and accommodation	* 0.4	* 0.6	3.5	4.7	8.9	9.9	4.9
Otitis media	4.9	4.5	4.0	3.1	1.6	1.6	3.2
Diseases of the respiratory system —							
Common cold	22.9	22.5	15.9	14.3	10.7	9.7	15.7
Influenza	2.0	2.9	1.8	2.1	2.3	2.8	2.3
Bronchitis, emphysema	2.0	2.8	2.2	3.4	1.2	2.0	2.2
Asthma	9.3	10.1	16.0	18.3	13.7	16.1	13.9
Sinusitis	**	* 0.2	1.3	1.2	2.5	2.8	1.4
Hayfever	1.8	1.4	4.7	3.7	10.5	8.9	5.5
Cough or sore throat	4.2	4.4	5.0	4.4	3.0	2.8	3.9
Other diseases of the respiratory system	5.5	4.8	4.9	5.7	2.9	3.6	4.5
Diseases of the digestive system —							
Dental problems	10.7	9.8	5.5	5.5	7.9	6.1	7.6
Other diseases of the digestive system	4.7	3.7	3.4	3.9	2.6	2.6	3.4
Diseases of the skin and subcutaneous tissue —							
Skin rash	2.4	2.5	1.4	1.1	1.2	1.1	1.6
Eczema, dermatitis	18.2	16.1	6.8	6.7	5.2	5.6	9.5
Other diseases of the skin and subcutaneous tissue	2.5	2.2	3.1	2.4	7.0	5.3	3.9
Symptoms, signs and ill-defined conditions —							
Allergy unspecified	3.1	2.4	3.7	3.1	3.4	3.7	3.3
Headache — due to unspecified or trivial cause	* 0.3	* 0.6	4.3	4.3	9.4	10.7	5.2
Virus	1.3	2.4	1.8	1.8	1.2	1.7	1.7
Injury and poisoning —							
Injuries	7.1	7.1	8.5	9.4	9.6	10.1	8.7
<b>Total(b)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Conditions most commonly experienced by children. (b) Selected conditions only are shown and therefore components do not add to totals.

## ALCOHOL CONSUMPTION

### CHARACTERISTICS OF DRINKERS

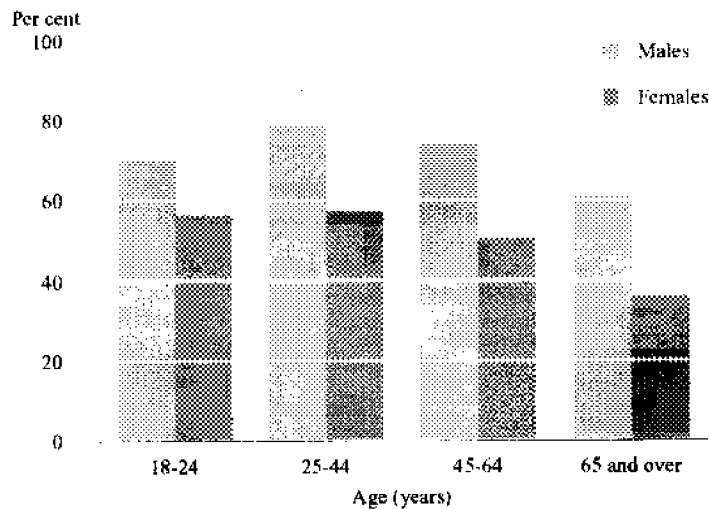
Results of the 1989-90 National Health Survey show that the majority of adult Australians drank alcohol, with almost three quarters of survey respondents reporting they had drunk alcohol in the previous month, and 62.5 per cent in the previous week. Some 15.9 per cent reported they did not drink alcohol or had last consumed alcohol 12 months or more ago.

Of those who drank in the week prior to interview, 82.2 per cent drank a quantity in that week which would constitute a low risk to their health (according to National Health and Medical Research Council guidelines) if they continued to drink alcohol in that quantity (for males less than 50 mls of alcohol per day, for females less than 25 mls). Some 10.9 per cent drank at a level constituting a moderate risk to health (for males 50 to 75 mls per day, for females 25 to 50 mls) and 6.9 per cent were in the high risk group (males over 75 mls, and females over 50 mls per day).

A higher proportion of males consumed alcohol in the week prior to interview (73.5%) than females (51.8%). The majority of both males and females who drank in that week did so at low health risk levels (79.7% of males, 85.6% of females).

The pattern of alcohol consumption differed between age groups, with proportionally fewer people in older age groups drinking alcohol than those in younger groups. For example, 46.6 per cent of those aged 65 years and over drank alcohol in the previous week compared with 63.4 per cent of those aged 18 to 24 years and 67.8 per cent of those aged 25 to 44 years. Among those aged 18 to 24 years who drank, 9.4 per cent consumed alcohol at a high risk level.

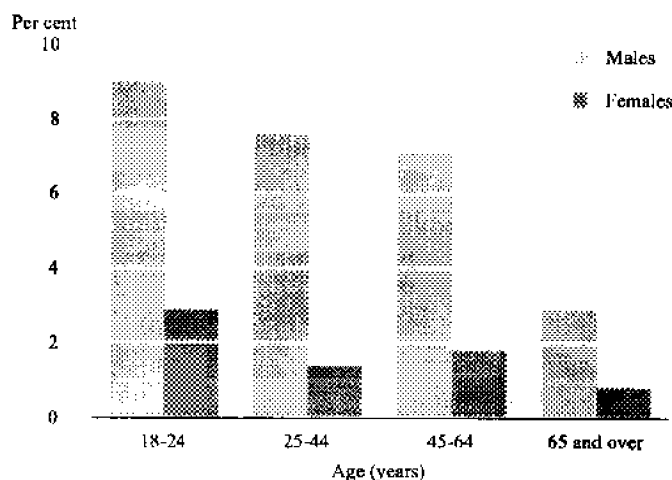
**CHART 3.1. PERSONS AGED 18 YEARS AND OVER WHO DRANK ALCOHOL(a): AGE BY SEX, AUSTRALIA 1989-90**



(a) In the week prior to interview.



**CHART 3.2. PERSONS AGED 18 YEARS AND OVER WHO DRANK ALCOHOL AT HIGH RISK LEVEL(a): AGE BY SEX, AUSTRALIA 1989-90**



(a) In the week prior to interview.

Drinker status also differed by birthplace (Table 3.1). Of those people born overseas, 49.8 per cent were classified as low risk drinkers while 42.0 per cent consumed no alcohol in the previous week. Equivalent proportions for Australian born people were 52.0 per cent and 35.8 per cent respectively. Among those born in Southern Europe, the Middle East, and Southeast, Southern and Northern Asia, the proportion who had not consumed alcohol in the previous week was higher than the proportion who were low risk drinkers.

The pattern of alcohol consumption also differed by education level. For example, almost nine out of every ten people with no post-school qualification reported no or low risk consumption in the previous week. In contrast, 16.7 per cent of those with a trade or apprenticeship qualification reported moderate or high risk level consumption.

Consistent with their older age profile, proportionally fewer persons not in the labour force consumed alcohol than either employed or unemployed people. Proportionally more employed people drank alcohol (71.2%) than people in the other labour force groups and of these, 80.8 per cent reported consumption at a low risk level.

Alcohol consumption also varied for different levels of income. The proportion of people consuming some alcohol in the previous week was much higher in higher income groups (for example, 82.8% of those with a gross personal annual income of \$50,000 or more) than low income groups (47.8% of those with an annual income of less than \$10,000). However, within each income group the distribution of drinkers by health risk level was similar.

#### **Whether drank more or less than usual**

As much of the alcohol consumption data discussed in this chapter relates to consumption in the week prior to interview, an important consideration in looking at associations between consumption levels and health is the extent to which consumption in that week was typical.

Of those persons who reported drinking alcohol in the previous week, 33.8 per cent reported they drank more than usual in that week, 6.4 per cent drank less than usual while 59.9 per cent reported drinking about the same amount as usual. The pattern differed slightly for men and women with 31.6 per cent of men drinking more than usual compared to 36.8 per cent of women.

The drinking pattern also varied for different age groups. A smaller proportion of both males and females in the older age groups reported drinking more than usual (for example, 18.6% of those aged 65 years and over) than in the younger age groups (45.2% of 18 to 24 year olds). Conversely, the percentage of people who drank about the same amount as usual increased with age (44.6% of 18 to 24 year olds compared with 77.6% of those aged 65 and over).

Overall, the proportion of people who reported drinking more than usual in the previous week increased slightly as alcohol risk level increased (33.2% of low risk, 36.1% of medium risk and 36.3% of high risk level drinkers). However, this pattern was not consistent across all age groups. Among 18 to 24 years olds, 41.7 per cent of low risk, 56.2 per cent of medium risk and 59.5 per cent of high risk level drinkers reported drinking more than usual with higher proportions of females than males for all risk levels. No clear pattern emerged for people aged 25 years and over.

#### **Self assessed health status**

Overall, the majority of Australian adults reported that they were in good or excellent health (79.2%) with similar proportions recorded for males (80.1%) and females (78.3%). As expected, the survey results show that health status is related to age with the proportion of people in good or excellent health decreasing with age (88.4% of 18 to 24 year olds, 72.7% of 45 to 64 year olds and 56.6% of those aged 65 years and over). Conversely, the older age groups had a greater proportion of people in fair or poor health (11.5% of 18 to 24 year olds increasing to 27.4% of 45 to 64 year olds and 33.4% of the 65 and over age group).

Health status also differed according to alcohol risk level (Table 3.4). A higher proportion of people who consumed alcohol regarded themselves as in good or excellent health (83.0%) than people who did not drink in the previous week (72.9%). Of the estimated 7,777,500 people who consumed alcohol, however, the high risk level group recorded the smallest proportion of people in good or excellent health (76.6%). The health status pattern was similar for males and females.

#### **Number of conditions reported**

Consistent with the older age profile of those who had not consumed alcohol in the previous week, this group had the highest proportion of people with illnesses. Overall, 81.0 per cent of non drinkers reported one or more recent illnesses while 76.6 per cent had at least one long-term illness. This compares with low risk level drinkers (79.4% had recent illnesses and 76.1% had long-term illnesses) and those who drank at the high risk level (74.3% had recent illnesses and 72.9% had long-term illnesses). Of all age and risk level groups, females aged 45 years and over who drank at the high risk level recorded the highest prevalence of illness with 94.5 per cent reporting one or more long-term illnesses.

The number of illness conditions experienced by people varied considerably by age with the prevalence of illness increasing in older age groups, from an average number of 2.7 for 18 to 24 year olds to 5.0 for those aged 65 and over. This pattern was evident regardless of drinking status but some variations by risk level were apparent.

Among those aged 45 years and over, persons who did not drink in the previous week reported the highest average number of illnesses (4.1 for the 45 to 64 years age group and 5.0 for the 65 and over age group). In the younger age groups, however, medium risk level drinkers reported a higher average number of conditions (2.9 for the 18 to 24 years age group and 3.0 for those aged 25 to 44 years) than either the high risk level group or the non drinkers.

The pattern also differed for males and females. The average number of conditions reported by males decreased with level of risk from 3.3 for non drinkers to 3.0 for those in the high risk group. In contrast, females in the high risk group had the highest average number of conditions (4.1) while the low and medium risk level drinkers had an equal average number of conditions (3.8).

### **Types of conditions reported**

Some differences were found in the prevalence of certain illness conditions according to alcohol consumption. These differences were most pronounced among the older age groups (Table 3.7).

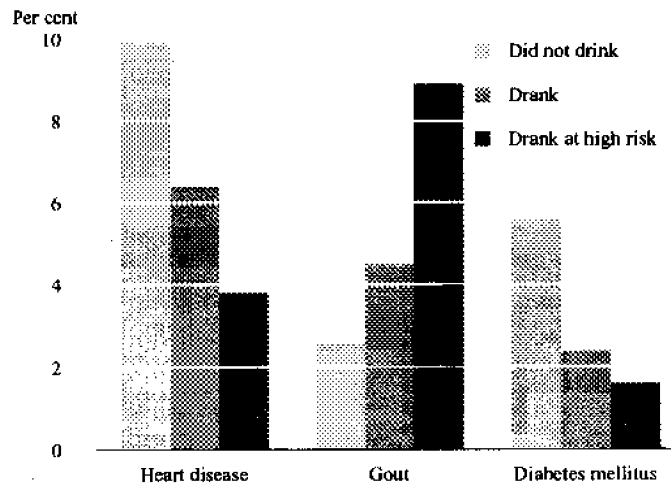
Heart disease, which has been associated with alcohol consumption, was found to be more prevalent among those aged 45 years and over who had not consumed alcohol in the previous week (9.9%) than those who had (6.4%) (see Chart 3.3). The pattern of heart disease was similar for males and females in this age group although the overall rates were higher for males. Among those who did not drink, 11.8 per cent of males reported heart disease compared with 9.0 per cent of females. Of those males who consumed alcohol, 7.6 per cent reported heart disease with the highest rate recorded for the low risk level drinkers (8.3%). Of females aged 45 years and over, 4.8 per cent of drinkers and 5.2 per cent of low risk level drinkers reported that they had the disease.

These figures on heart disease should be interpreted with care, however, as it is possible that people stopped drinking after being diagnosed with a heart condition. Other risk factors including age, obesity and smoking should also be taken into consideration.

Gout, which has also been linked with alcohol consumption, was more prevalent among males (6.1%) than females (1.3%) aged 45 years and over. Of all males in this age group, the proportion of drinkers with gout (8.9%) was more than double that of persons who did not drink (4.3%). Among those males who consumed alcohol, the highest proportions reporting the disease were recorded for the medium and high risk level groups (11.9% and 10.7% respectively).

In the 45 years and over age group, diabetes mellitus was more prevalent among persons who had not consumed alcohol in the previous week (5.6%) than drinkers (2.4%) (see Chart 3.3). The pattern was similar for males and females although, overall, the disease was more prevalent among males. Care should be taken when interpreting these results, however, as non drinkers tend to be older than drinkers and are therefore at greater risk of illness irrespective of alcohol consumption patterns. For example, 21.7 per cent of those who did not drink in the previous week were aged 65 years and over compared to only 11.4 per cent of drinkers. It is also likely that people may have stopped drinking after contracting diabetes mellitus.

**CHART 3.3. PERSONS AGED 45 YEARS AND OVER: SELECTED ALCOHOL RISK LEVEL BY SELECTED CONDITIONS(a), AUSTRALIA 1989-90**



(a) Reported as recent and/or long-term conditions.

Drinking has also been linked with cancer of the larynx and oesophagus. Information identifying specific sites of neoplasms (cancer) is not available from the survey. However, in the 45 years and over age group, the prevalence of neoplasms among females who drank at high risk level (10.6%) was double that of those who did not drink (5.0%). The pattern was different for males, however, with the same proportion of high risk level drinkers and those who did not drink (7.2%) reporting neoplasms.

Nerves, tension, nervousness and emotional problems were more prevalent among females, reported by 5.1 per cent of the adult female population compared with only 2.6 per cent of men. Of all alcohol risk level groups, the prevalence of those conditions was highest among women aged 45 years and over who drank at the high risk level (10.6%).

In the 45 years and over age group, ulcers and other diseases of the digestive system were more prevalent among those persons who did not drink in the previous week than those who did. Ulcers were reported by 4.6 per cent of non drinkers compared to 4.2 per cent of drinkers and were more common among males (5.1%) than females (3.7%). Of those persons who consumed alcohol in the previous week, ulcers were most prevalent among the high risk level drinkers (5.8% of males and 5.7% of females). Other diseases of the digestive system were reported by 9.6 per cent of those who did not drink compared with 7.9 per cent of drinkers aged 45 years and over. The pattern differed for males and females, with the highest prevalence for males recorded for low risk level drinkers (7.3%) whereas the highest proportion with these diseases (12.5%) was recorded among females who drank at the highest risk level.

## Body mass

Obesity, which is often associated with high levels of alcohol consumption, has also been linked to ill health, and particularly diseases such as diabetes and heart disease.

Adults were classified into body mass groups - underweight, acceptable weight, overweight or obese on the basis of their reported height and weight. Overall, 43.5 per cent of males and 29.6 per cent of females were classified overweight or obese, with similar proportions of drinkers (36.3%) and those who did not drink in the previous week (36.7%) falling into this category (Table 3.9). Among drinkers, the highest proportion of overweight and obese persons (42.7%), was recorded for those who consumed alcohol at a high risk level.

The pattern of alcohol consumption and body mass differed considerably for males and females. The proportion of overweight and obese males increased with alcohol risk level from 41.6 per cent of those who did not drink to 43.5 per cent of low risk level, 46.9 per cent of medium risk level and 47.3 per cent of high risk level drinkers. In contrast, the highest proportion of overweight and obese females was recorded for non drinkers (34.2%) while medium and high risk level drinkers recorded the lowest rates (21.5% and 23.2% respectively).

## SUMMARY

Of adult Australians, more than half consumed alcohol in the previous week with the majority drinking at a low risk level. Most Australians reported they were in good or excellent health but a higher proportion of drinkers rated their health as good or excellent than those who did not drink. Among drinkers, however, those who drank at a high risk level recorded the smallest proportion of people in good or excellent health.

Consistent with the older age profile of those who did not drink in the previous week, this group reported the highest prevalence of illness conditions. In the 45 years and over age group, heart disease, diabetes, ulcers and other diseases of the digestive system were all more common among those people who did not drink in the previous week. It is possible, however, that people may have stopped drinking after being diagnosed with these conditions. Gout, a disease most common among males, was far more prevalent among those males who drank than those who did not. Nerves, tension, nervousness and emotional problems were more common among females, particularly those who drank at a high risk level.

TABLE 3.1. PERSONS AGED 18 YEARS AND OVER: ALCOHOL RISK LEVEL<sup>(a)</sup> SELECTED CHARACTERISTICS AUSTRALIA, 1989-90

Selected characteristics	('000)						(Per cent)					
	Drank alcohol					Total	Drank alcohol					Total
	Did not drink alcohol	Low risk	Medium risk	High risk	Total who consumed alcohol		Did not drink alcohol	Low risk	Medium risk	High risk	Total who consumed alcohol	
<b>Sex —</b>												
Males	1,627.4	3,602.3	480.4	434.5	4,517.2	6,144.7	26.5	58.6	7.8	7.1	73.5	100.0
Females	3,039.2	2,790.3	368.5	101.5	3,260.3	6,299.5	48.2	44.3	5.9	1.6	51.8	100.0
<b>Age group (years) —</b>												
18 — 24	708.7	960.1	152.9	115.6	1,228.6	1,937.3	36.6	49.6	7.9	6.0	63.4	100.0
25 — 44	1,723.7	2,997.9	396.4	243.1	3,637.4	5,361.1	32.2	55.9	7.4	4.5	67.8	100.0
45 — 64	1,221.7	1,655.2	225.9	146.0	2,027.1	3,248.7	37.6	50.9	7.0	4.5	62.4	100.0
65 and over	1,012.6	779.4	73.8	31.3	884.5	1,897.1	53.4	41.1	3.9	1.6	46.6	100.0
<b>Country of birth —</b>												
Australia	3,236.7	4,696.3	669.7	437.0	5,803.0	9,039.7	35.8	52.0	7.4	4.8	64.2	100.0
New Zealand and other Oceania	86.5	146.0	25.3	19.1	190.4	276.9	31.2	52.7	9.1	6.9	68.8	100.0
United Kingdom and Ireland	364.8	670.8	89.3	43.6	803.7	1,168.6	31.2	57.4	7.6	3.7	68.8	100.0
Southern Europe	340.7	328.5	24.7	14.6	367.9	708.5	48.1	46.4	3.5	2.1	51.9	100.0
Other Europe and U.S.S.R.	172.9	237.3	21.3	12.2	270.7	443.6	39.0	53.5	4.8	2.7	61.0	100.0
Middle East	97.2	51.6	**	**	53.3	150.6	64.6	34.3	**	**	35.4	100.0
Southeast Asia	173.6	82.0	* 4.0	* 2.3	88.3	261.9	66.3	31.3	* 1.5	* 0.9	33.7	100.0
Northeast/ Southern Asia	132.1	79.3	* 4.3	* 2.4	86.0	218.1	60.6	36.4	* 2.0	* 1.1	39.4	100.0
Northern, South and Central America and the Caribbean	35.1	60.2	5.6	* 2.6	68.4	103.5	33.9	58.2	5.4	* 2.5	66.1	100.0
Africa (incl. North Africa)	27.0	40.5	* 3.7	* 1.6	45.8	72.8	37.1	55.6	* 5.1	* 2.1	62.9	100.0
<b>Total overseas born</b>	<b>1,430.0</b>	<b>1,696.4</b>	<b>179.2</b>	<b>99.0</b>	<b>1,974.5</b>	<b>3,404.5</b>	<b>42.0</b>	<b>49.8</b>	<b>5.3</b>	<b>2.9</b>	<b>58.0</b>	<b>100.0</b>
<b>Highest post school qualifications —</b>												
Still at school or never went to school	66.6	19.5	* 1.6	**	21.9	88.5	75.2	22.0	* 1.8	**	24.8	100.0
Bachelor degree or higher	286.8	703.3	77.3	34.0	814.7	1,101.5	26.0	63.9	7.0	3.1	74.0	100.0
Trade/Apprenticeship	468.5	1,034.5	166.2	135.7	1,336.4	1,804.9	26.0	57.3	9.2	7.5	74.0	100.0
Certificate/Diploma	887.2	1,400.5	163.3	81.8	1,645.7	2,532.9	35.0	55.3	6.4	3.2	65.0	100.0
Other	40.6	64.4	11.3	* 4.5	80.2	120.8	33.6	53.3	9.4	* 3.8	66.4	100.0
No post-school qualification	2,917.0	3,170.5	429.1	279.0	3,878.6	6,795.6	42.9	46.7	6.3	4.1	57.1	100.0
<b>Labour force status<sup>(b)</sup> —</b>												
Employed	2,192.1	4,383.0	626.2	414.0	5,423.2	7,615.3	28.8	57.6	8.2	5.4	71.2	100.0
Unemployed (looking for work)	219.2	266.7	42.0	38.9	347.6	566.8	38.7	47.1	7.4	6.9	61.3	100.0
Not in labour force	1,242.8	963.5	107.0	51.8	1,122.2	2,365.1	52.5	40.7	4.5	2.2	47.5	100.0
<b>Gross personal annual income<sup>(c)</sup> —</b>												
\$0 — 9,999	1,995.3	1,566.5	162.4	95.0	1,823.8	3,819.2	52.2	41.0	4.3	2.5	47.8	100.0
\$10,000 — 19,999	1,020.7	1,395.6	182.3	119.4	1,697.4	2,718.1	37.6	51.3	6.7	4.4	62.4	100.0
\$20,000 — 29,999	666.0	1,422.7	213.5	152.7	1,788.9	2,454.9	27.1	58.0	8.7	6.2	72.9	100.0
\$30,000 — 39,999	289.1	805.9	124.8	76.6	1,007.3	1,296.4	22.3	62.2	9.6	5.9	77.7	100.0
\$40,000 — 49,999	85.7	333.2	45.0	29.0	407.1	492.8	17.4	67.6	9.1	5.9	82.6	100.0
\$50,000 or more	86.7	336.0	50.3	30.2	416.5	503.3	17.2	66.8	10.0	6.0	82.8	100.0
Not stated	162.1	233.3	30.1	16.1	279.5	441.6	36.7	52.8	6.8	3.6	63.3	100.0
<b>Total</b>	<b>4,666.7</b>	<b>6,392.6</b>	<b>848.9</b>	<b>535.9</b>	<b>7,777.5</b>	<b>12,444.2</b>	<b>37.5</b>	<b>51.4</b>	<b>6.8</b>	<b>4.3</b>	<b>62.5</b>	<b>100.0</b>

(a) Derived from consumption reported during the week prior to interview. See Appendix B. (b) Persons 18 to 64 years only. (c) Persons 18 years and over who reported a source of income.

TABLE 3.2. PERSONS AGED 18 YEARS AND OVER: ALCOHOL RISK LEVEL(a) BY AGE BY SEX  
AUSTRALIA, 1989-90

Age group (years)	('000)					Per cent					Total	
	Drank alcohol				Total who con- sumed alcohol	Drank alcohol				Total who con- sumed alcohol		
	Did not drink alcohol	Low risk	Medium risk	High risk		Did not drink alcohol	Low risk	Medium risk	High risk			
Males												
18 — 24	293.9	518.6	83.1	88.1	689.8	983.7	29.9	52.7	8.4	9.0	70.1	100.0
25 — 44	587.3	1,676.6	233.2	205.5	2,115.2	2,702.5	21.7	62.0	8.6	7.6	78.3	100.0
45 — 64	430.3	972.9	130.3	117.9	1,221.0	1,651.3	26.1	58.9	7.9	7.1	73.9	100.0
65 and over	316.0	434.3	33.8	23.0	491.2	807.1	39.1	53.8	4.2	2.9	60.9	100.0
<b>Total</b>	<b>1,627.4</b>	<b>3,602.3</b>	<b>480.4</b>	<b>434.5</b>	<b>4,517.2</b>	<b>6,144.7</b>	<b>26.5</b>	<b>58.6</b>	<b>7.8</b>	<b>7.1</b>	<b>73.5</b>	<b>100.0</b>
Females												
18 — 24	414.8	441.5	69.8	27.5	538.8	953.6	43.5	46.3	7.3	2.9	56.5	100.0
25 — 44	1,136.4	1,321.3	163.2	37.6	1,522.2	2,658.6	42.7	49.7	6.1	1.4	57.3	100.0
45 — 64	791.4	682.3	95.6	28.1	806.0	1,597.4	49.5	42.7	6.0	1.8	50.5	100.0
65 and over	696.6	345.2	39.9	8.2	393.3	1,089.9	63.9	31.7	3.7	0.8	36.1	100.0
<b>Total</b>	<b>3,039.2</b>	<b>2,790.3</b>	<b>368.5</b>	<b>101.5</b>	<b>3,260.3</b>	<b>6,299.5</b>	<b>48.2</b>	<b>44.3</b>	<b>5.9</b>	<b>1.6</b>	<b>51.8</b>	<b>100.0</b>
Persons												
18 — 24	708.7	960.1	152.9	115.6	1,228.6	1,937.3	36.6	49.6	7.9	6.0	63.4	100.0
25 — 44	1,723.7	2,997.9	396.4	243.1	3,637.4	5,361.1	32.2	55.9	7.4	4.5	67.8	100.0
45 — 64	1,221.7	1,655.2	225.9	146.0	2,027.1	3,248.7	37.6	50.9	7.0	4.5	62.4	100.0
65 and over	1,012.6	779.4	73.8	31.3	884.5	1,897.1	53.4	41.1	3.9	1.6	46.6	100.0
<b>Total</b>	<b>4,666.7</b>	<b>6,392.6</b>	<b>848.9</b>	<b>535.9</b>	<b>7,777.5</b>	<b>12,444.2</b>	<b>37.5</b>	<b>51.4</b>	<b>6.8</b>	<b>4.3</b>	<b>62.5</b>	<b>100.0</b>

(a) Derived from consumption rates reported during the week prior to interview. See Appendix B.

TABLE 3.3. PERSONS AGED 18 YEARS AND OVER: AGE BY WHETHER DRANK MORE OR LESS THAN USUAL BY ALCOHOL RISK LEVEL (a) BY SEX  
AUSTRALIA, 1989-90  
(Per cent)

Whether drank more or less than usual	Drank alcohol												Total						
	Low risk				Medium risk				High risk					Total who consumed alcohol					
	Males	Females	Persons	Persons	Males	Females	Persons	Persons	Males	Females	Persons	Persons		Males	Females	Persons			
	18 — 24 years																		
Did not drink alcohol	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	29.9	43.5	36.6
More than usual	38.7	45.2	41.7	48.7	65.0	56.2	57.3	66.3	59.5	42.3	48.9	45.2	42.3	29.7	27.6	28.7	29.7	27.6	28.7
Less than usual	11.7	10.8	11.3	9.1	5.6	7.5	5.2	**	4.6	10.6	9.7	10.2	10.6	7.4	5.5	6.5	7.4	5.5	6.5
About the same	49.5	43.9	47.0	42.2	29.5	36.4	37.4	31.0	35.9	47.1	41.4	44.6	47.1	33.0	23.4	28.3	33.0	23.4	28.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	25 — 44 years																		
Did not drink alcohol	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	21.7	42.7	32.1
More than usual	35.9	39.6	37.5	43.8	46.2	44.8	40.1	44.1	40.7	37.1	40.4	38.5	37.1	29.1	23.1	26.1	29.1	23.1	26.1
Less than usual	7.9	6.7	7.4	3.1	3.8	3.4	1.8	4.4	2.2	6.8	6.4	6.6	6.8	5.3	3.6	4.5	5.3	3.6	4.5
About the same	56.2	53.7	55.1	53.0	50.0	51.8	58.1	51.5	57.1	56.1	53.2	54.9	56.1	43.9	30.5	37.2	43.9	30.5	37.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	45 — 64 years																		
Did not drink alcohol	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	26.1	49.5	37.6
More than usual	23.7	31.1	26.7	16.2	18.2	17.0	14.8	23.1	16.4	22.0	29.3	24.9	22.0	16.3	14.8	15.5	16.3	14.8	15.5
Less than usual	5.7	4.7	5.3	3.4	**	2.3	3.1	**	3.2	5.2	4.2	4.8	5.2	3.8	2.1	3.0	3.8	2.1	3.0
About the same	70.7	64.2	68.0	80.4	80.9	80.6	82.1	73.0	80.4	72.8	66.5	70.3	72.8	53.8	33.5	43.9	53.8	33.5	43.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	65 years and over																		
Did not drink alcohol	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	39.1	63.9	53.4
More than usual	17.2	23.7	20.1	7.3	5.9	6.5	8.7	**	8.8	16.1	21.6	18.6	16.1	9.8	7.8	8.7	9.8	7.8	8.7
Less than usual	4.3	3.9	4.1	**	3.7	2.4	**	**	**	3.9	3.8	3.8	3.9	2.4	1.4	1.8	2.4	1.4	1.8
About the same	78.4	72.4	75.8	91.9	90.4	91.1	91.3	90.8	91.2	80.0	74.6	77.6	80.0	48.7	26.9	36.2	48.7	26.9	36.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0



TABLE 3.3. PERSONS AGED 18 YEARS AND OVER: AGE BY WHETHER DRANK MORE OR LESS THAN USUAL BY ALCOHOL RISK LEVEL(a) BY SEX  
 AUSTRALIA, 1989-90  
 (Per cent)—continued

Whether drank more or less than usual	Drank alcohol						Total who consumed alcohol						Total			
	Low risk		Medium risk		High risk		Males		Females		Persons		Males	Females	Persons	
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	
Did not drink alcohol	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**	**
More than usual	30.7	36.4	33.2	34.6	38.2	36.1	35.1	41.5	36.3	31.6	36.8	33.8	26.5	48.2	37.5	
Less than usual	7.4	6.5	7.0	4.1	3.4	3.8	2.7	3.4	2.9	6.6	6.1	6.4	23.2	19.0	21.1	
About the same	61.8	57.0	59.7	61.3	58.5	60.1	62.2	55.1	60.8	61.8	57.1	59.9	4.9	3.1	4.0	
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	

(a) Derived from consumption reported during the week prior to interview. See Appendix B.

TABLE 3.4. PERSONS AGED 18 YEARS AND OVER: ALCOHOL RISK LEVEL(2) BY SELF ASSESSED HEALTH STATUS BY AGE BY SEX AUSTRALIA, 1989-90 ('000)

Self assessed health status	Drank alcohol																			
	Did not drink alcohol				Low risk				Medium risk				High risk				Total persons who consumed alcohol			
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons		
	18 — 24 years																			
Excellent	126.9	121.1	248.0	200.1	149.0	349.1	21.4	15.9	37.3	20.6	8.3	28.9	242.1	173.3	415.4	369.0	294.4	663.4		
Good	138.6	239.0	377.5	270.4	245.7	516.1	49.7	43.2	92.9	51.7	12.7	64.4	371.8	301.7	673.4	510.3	540.7	1,051.0		
Fair	24.8	48.0	72.8	45.7	41.5	87.3	12.0	9.7	21.6	13.3	6.0	19.3	71.0	57.2	128.2	95.8	105.2	201.0		
Poor	* 3.7	6.7	10.4	* 2.4	* 5.1	7.6	**	**	**	* 2.4	**	* 2.9	* 4.9	6.7	11.6	8.6	13.4	22.0		
Total	293.9	414.8	708.7	518.6	441.5	960.1	83.1	69.8	152.9	88.1	27.5	115.6	689.8	538.8	1,228.6	983.7	953.6	1,937.3		
	25 — 44 years																			
Excellent	194.8	351.5	546.3	636.5	537.5	1,174.1	77.4	65.2	142.6	62.1	11.2	73.3	776.1	613.9	1,389.9	970.9	965.4	1,936.3		
Good	301.0	603.9	904.9	881.9	647.4	1,529.3	127.6	84.2	211.8	104.8	20.1	124.9	1,114.3	751.7	1,866.0	1,415.3	1,355.6	2,770.9		
Fair	71.6	150.6	222.3	143.0	116.6	259.6	26.8	13.4	40.3	34.6	* 5.2	39.9	204.5	135.3	339.7	276.1	285.9	562.0		
Poor	19.9	30.4	50.3	15.1	19.8	34.9	* 1.3	**	* 1.7	* 3.9	**	* 5.0	20.3	21.3	41.7	40.2	51.7	91.9		
Total	587.3	1,136.4	1,723.7	1,676.6	1,321.3	2,997.9	233.2	163.2	396.4	205.5	37.6	243.1	2,115.2	1,522.2	3,637.4	2,702.5	2,638.6	5,361.1		
	45 — 64 years																			
Excellent	83.1	155.4	238.4	246.2	198.9	445.2	31.1	27.0	58.1	22.3	8.2	30.5	299.6	234.1	533.7	382.7	389.5	772.2		
Good	196.5	364.2	560.7	497.4	341.3	838.6	63.9	54.5	118.4	58.1	11.3	69.4	619.4	407.0	1,026.4	816.0	771.2	1,587.1		
Fair	104.3	198.3	302.6	174.0	118.4	292.3	27.2	11.5	38.7	31.2	7.1	38.3	232.4	137.0	369.3	336.6	335.3	672.0		
Poor	46.4	73.5	119.9	55.3	23.8	79.1	8.1	* 2.6	10.7	6.2	* 1.5	7.8	69.6	27.9	97.5	116.0	101.4	217.5		
Total	430.3	791.4	1,221.7	972.9	682.3	1,655.2	130.3	95.6	225.9	117.9	28.1	146.0	1,221.0	806.0	2,027.1	1,651.3	1,597.4	3,248.7		
	65 years and over																			
Excellent	35.2	78.8	113.9	59.9	63.8	123.7	5.7	10.7	16.5	6.1	* 1.3	7.3	71.6	75.9	147.5	106.8	154.7	261.5		
Good	126.4	282.5	408.9	196.7	161.3	358.0	15.4	18.0	33.4	8.7	* 3.2	11.9	220.8	182.6	403.3	347.2	465.1	812.2		
Fair	98.3	242.4	340.7	130.6	91.3	221.9	9.0	8.4	17.3	6.4	* 2.4	8.8	146.0	102.0	248.0	244.2	344.5	588.7		
Poor	56.1	92.9	149.0	47.1	28.7	75.8	* 3.8	* 2.8	6.6	* 1.9	* 1.4	* 3.2	52.8	32.9	85.7	108.9	125.7	234.6		
Total	316.0	696.6	1,012.6	434.3	345.2	779.4	33.8	39.9	73.8	23.0	8.2	31.3	491.2	393.3	884.5	807.1	1,089.9	1,897.1		

TABLE 3.4. PERSONS AGED 18 YEARS AND OVER: ALCOHOL RISK LEVEL(a) BY SELF ASSESSED HEALTH STATUS BY AGE BY SEX  
AUSTRALIA, 1989-90  
(\*000)—continued

Self assessed health status	Drank alcohol																	
	Did not drink alcohol				Low risk				Medium risk		High risk		Total persons who consumed alcohol					
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons			
	Total (Number)																	
Excellent	439.9	706.8	1,146.7	1,142.7	949.3	2,092.1	135.6	118.9	254.5	111.1	28.9	140.0	1,389.4	1,097.1	2,486.6	1,829.3	1,803.9	3,633.3
Good	762.5	1,489.5	2,252.0	1,846.4	1,395.8	3,242.1	256.6	199.9	456.5	223.3	47.3	270.6	2,326.3	1,643.0	3,969.3	3,088.7	3,132.5	6,221.2
Fair	299.0	639.4	938.4	493.2	367.8	861.1	74.9	42.9	117.9	85.6	20.7	106.3	653.8	431.4	1,085.2	952.8	1,070.9	2,023.7
Poor	126.1	203.5	329.5	120.0	77.4	197.4	13.2	6.8	20.1	14.4	* 4.6	19.0	147.7	88.8	236.5	273.8	292.2	566.0
<b>Total</b>	<b>1,627.4</b>	<b>3,039.2</b>	<b>4,666.7</b>	<b>3,602.3</b>	<b>2,790.3</b>	<b>6,392.6</b>	<b>480.4</b>	<b>368.5</b>	<b>848.9</b>	<b>434.5</b>	<b>101.5</b>	<b>535.9</b>	<b>4,517.2</b>	<b>3,260.3</b>	<b>7,777.5</b>	<b>6,144.7</b>	<b>6,299.5</b>	<b>12,444.2</b>
	Per cent																	
Excellent	27.0	23.3	24.6	31.7	34.0	32.7	28.2	32.3	30.0	25.6	28.5	26.1	30.8	33.7	32.0	29.8	28.6	29.2
Good	46.9	49.0	48.3	51.3	50.0	50.7	53.4	54.2	53.8	51.4	46.6	50.5	51.5	50.4	51.0	50.3	49.7	50.0
Fair	18.4	21.0	20.1	13.7	13.2	13.5	15.6	11.7	13.9	19.7	20.4	19.8	14.5	13.2	14.0	15.5	17.0	16.3
Poor	7.7	6.7	7.1	3.3	2.8	3.1	2.8	1.9	2.4	3.3	4.5	3.5	3.3	2.7	3.0	4.5	4.6	4.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Derived from consumption reported during the week prior to interview. See Appendix B.



TABLE 3.5. PERSONS AGED 18 YEARS AND OVER: AGE BY NUMBER OF RECENT AND LONG-TERM CONDITIONS BY ALCOHOL RISK LEVEL(a) BY SEX  
 AUSTRALIA, 1989-90  
 (Per cent) — continued

Number of recent and long-term illnesses	Drank alcohol										Total							
	Did not drink alcohol		Low risk		Medium risk		High risk		Total persons who consumed alcohol		Total							
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females						
<b>Number of recent illnesses</b>																		
None	27.0	14.7	19.0	26.5	13.0	20.6	27.2	12.8	20.9	27.9	16.2	25.7	26.7	13.1	21.0	26.8	13.9	20.2
One	30.2	27.1	28.2	32.4	27.9	30.4	32.0	26.3	29.5	31.2	22.4	29.6	32.2	27.5	30.3	31.7	27.3	29.5
Two to three	30.6	39.5	36.4	32.8	42.4	37.0	32.7	43.4	37.3	33.1	42.7	35.0	32.8	42.5	36.9	32.2	41.1	36.7
Four or more	12.2	18.7	16.4	8.4	16.7	12.0	8.1	17.6	12.2	7.7	18.6	9.8	8.3	16.8	11.9	9.3	17.7	13.6
<b>Number of chronic illnesses</b>																		
None	27.3	21.4	23.4	26.2	21.0	23.9	28.9	19.5	24.8	29.1	18.6	27.1	26.8	20.8	24.2	26.9	21.0	23.9
One	27.2	24.4	25.4	29.6	26.6	28.3	30.6	27.4	29.2	29.9	29.0	29.7	29.7	26.8	28.5	29.1	25.6	27.3
Two to three	30.2	35.0	33.3	31.9	36.1	33.7	28.9	36.7	32.3	29.2	30.7	29.5	31.3	36.0	33.3	31.0	35.5	33.3
Four or more	15.3	19.2	17.9	12.3	16.3	14.1	11.7	16.3	13.7	11.8	21.8	13.7	12.2	16.5	14.0	13.0	17.8	15.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Derived from consumption reported during the week prior to interview. See Appendix B.

TABLE 3.6. AVERAGE NUMBER OF CONDITIONS EXPERIENCED(a): ALCOHOL RISK LEVEL(b) OF PERSONS AGED 18 YEARS AND OVER BY SELECTED CHARACTERISTICS AUSTRALIA, 1989-90

Selected characteristics	Drank alcohol				Total who consumed alcohol	Total
	Did not drink alcohol	Low risk	Medium risk	High risk		
<b>Sex —</b>						
Males	3.3	3.1	3.0	3.0	3.1	3.2
Females	3.8	3.8	3.8	4.1	3.8	3.8
<b>Age group (years) —</b>						
18 — 24	2.6	2.7	2.9	2.7	2.8	2.7
25 — 44	2.9	3.0	3.0	2.9	3.0	3.0
45 — 64	4.1	3.9	4.0	3.8	3.9	3.9
65 and over	5.0	4.9	4.6	4.9	4.9	5.0
<b>Country of birth —</b>						
Australia	3.7	3.4	3.4	3.2	3.4	3.5
New Zealand and other Oceania	3.1	3.2	2.7	3.0	3.1	3.1
United Kingdom and Ireland	4.1	3.6	3.5	3.2	3.6	3.7
Southern Europe	3.2	3.0	3.2	3.0	3.0	3.1
Other Europe and U.S.S.R.	3.9	3.4	3.3	2.8	3.4	3.6
Middle East	2.9	3.1	**	**	3.1	2.9
Southeast Asia	2.6	2.9	* 2.2	* 4.0	2.9	2.7
Northeast/Southern Asia	2.9	2.9	* 2.5	* 3.1	2.9	2.9
Northern, South and Central America and the Caribbean	3.3	3.2	3.9	* 3.5	3.3	3.3
Africa (incl. North Africa)	3.2	3.3	* 5.6	* 4.1	3.5	3.4
<b>Total overseas born</b>	3.4	3.3	3.3	3.2	3.3	3.3
<b>Highest post school qualifications —</b>						
Still at school or never went to school	3.2	2.5	* 4.2	**	2.6	3.0
Bachelor degree or higher	3.2	3.3	3.4	3.3	3.3	3.3
Trade/Apprenticeship	3.5	3.2	3.0	3.1	3.2	3.3
Certificate/Diploma	3.6	3.6	3.8	3.6	3.6	3.6
Other	3.9	3.8	3.7	* 2.7	3.7	3.8
No post-school qualification	3.7	3.4	3.3	3.2	3.4	3.5
<b>Labour force status(c) —</b>						
Employed	3.0	3.0	3.1	3.0	3.1	3.0
Unemployed (looking for work)	3.0	3.3	3.1	3.1	3.2	3.1
Not in labour force	3.7	3.9	4.0	4.3	3.9	3.8
<b>Gross personal annual income(d) —</b>						
\$0 — 9,999	4.2	4.1	4.0	4.1	4.1	4.1
\$10,000 — 19,999	3.4	3.3	3.5	3.1	3.3	3.4
\$20,000 — 29,999	3.0	3.1	3.0	2.9	3.0	3.0
\$30,000 — 39,999	3.1	3.1	3.3	3.1	3.1	3.1
\$40,000 — 49,999	3.0	3.2	3.2	2.9	3.2	3.1
\$50,000 or more	3.2	3.2	3.2	3.1	3.2	3.2
Not stated	3.2	3.3	3.0	3.0	3.3	3.3
<b>Total</b>	3.6	3.4	3.4	3.2	3.4	3.5

(a) Reported as recent and/or long-term conditions. (b) Derived from consumption reported during the week prior to interview. See Appendix B. (c) Persons 18 to 64 years only. (d) Persons 18 years and over who reported a source of income.







TABLE 3.7. PERSONS AGED 18 YEARS AND OVER : ALCOHOL RISK LEVEL(g) BY SELECTED CONDITIONS REPORTED(b) BY AGE AND SEX  
 AUSTRALIA, 1989-90  
 (Per cent)—continued

Type of condition reported	Drank alcohol						Persons	
	Did not drink alcohol			Total who consumed alcohol				
	Low risk	Medium risk	High risk	Males	Females	Total		
No illness	33.1	35.4	36.3	40.8	35.9	41.1	28.7	34.8
Neoplasms	3.3	2.8	2.8	3.1	2.8	3.0	3.0	3.0
Gout	1.4	1.8	3.4	4.3	2.1	3.1	0.7	1.9
Diabetes mellitus	3.1	1.2	0.7	0.6	1.1	1.9	1.8	1.9
Obesity	0.5	0.3	**	0.2	0.3	0.2	0.6	0.4
High cholesterol	3.6	3.5	3.1	2.5	3.4	3.2	3.8	3.5
Nerves, tension, nervousness, emotional problems	5.0	3.1	3.4	2.9	3.1	2.6	5.1	3.8
Depression	1.3	0.7	0.5	0.5	0.6	0.6	1.1	0.9
Hypertension	15.9	10.1	10.7	10.8	10.2	10.5	14.1	12.3
Heart disease	5.0	2.9	1.5	1.6	2.7	3.8	3.3	3.5
Bronchitis, emphysema	3.9	3.8	3.9	5.2	3.9	3.8	4.0	3.9
Asthma	6.6	6.4	7.4	8.0	6.6	6.0	7.2	6.6
Ulcer	2.9	2.3	2.3	3.9	2.4	3.0	2.1	2.6
Other diseases of the digestive system	6.5	5.5	4.6	5.4	5.4	5.2	6.5	5.8
Kidney diseases	1.7	1.3	1.1	0.8	1.2	1.3	1.5	1.4
Arthritis	18.8	13.8	11.5	11.6	13.4	12.2	18.6	15.5
Disorders of the intervertebral disc	3.4	3.9	4.5	3.8	4.0	4.5	3.1	3.8
Back trouble (unspecified)	10.0	13.1	14.3	15.3	13.4	13.2	11.0	12.1
<b>Total(c)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Derived from consumption reported during the week prior to interview. See Appendix B. (b) Recent and/or long-term conditions. Each person may have reported more than one condition. (c) Selected conditions only are shown and therefore components do not add to totals.

TABLE 3.8. AVERAGE NUMBER OF CONDITIONS EXPERIENCED(a): PERSONS AGED 18 YEARS AND OVER BY AGE BY SEX BY PERIOD SINCE LAST CONSUMED ALCOHOL AUSTRALIA, 1989-90

Age group (years)	1 week or less	More than 1 week to less than 1 month ago	1 month to less than 3 months ago	3 months to less than 12 months ago	12 months or more ago	Never	Total
Males							
18 — 24	2.4	2.3	2.1	2.3	2.2	2.0	2.3
25 — 44	2.7	2.7	2.7	2.8	2.8	2.4	2.7
45 — 64	3.6	3.6	3.6	3.9	4.1	3.4	3.6
65 and over	4.8	4.6	4.9	4.9	5.0	4.5	4.8
<i>Total</i>	<i>3.1</i>	<i>3.0</i>	<i>3.1</i>	<i>3.4</i>	<i>3.8</i>	<i>3.0</i>	<i>3.2</i>
Females							
18 — 24	3.2	3.1	2.9	3.0	2.9	2.6	3.1
25 — 44	3.4	3.3	3.2	3.2	3.1	2.6	3.2
45 — 64	4.3	4.3	4.4	4.3	4.4	4.0	4.3
65 and over	5.1	5.2	5.0	5.0	5.3	5.0	5.1
<i>Total</i>	<i>3.8</i>	<i>3.8</i>	<i>3.7</i>	<i>3.8</i>	<i>4.1</i>	<i>3.8</i>	<i>3.8</i>
Persons							
18 — 24	2.8	2.7	2.6	2.7	2.6	2.3	2.7
25 — 44	3.0	3.0	3.0	3.0	3.0	2.6	3.0
45 — 64	3.9	4.0	4.1	4.2	4.3	3.8	3.9
65 and over	4.9	5.0	5.0	5.0	5.2	4.9	5.0
<i>Total</i>	<i>3.4</i>	<i>3.5</i>	<i>3.5</i>	<i>3.6</i>	<i>4.0</i>	<i>3.6</i>	<i>3.5</i>

(a) Recent and/or long-term conditions.



TABLE 3.9. PERSONS AGED 18 YEARS AND OVER : ALCOHOL RISK LEVEL (a) BODY MASS BY SEX BY AGE  
 AUSTRALIA, 1989-90  
 (Per cent)—continued

Body mass	Drank alcohol																				
	Did not drink alcohol				Low risk				Medium risk				High risk				Total persons who consumed alcohol				
	Males	Females	Persons	Total	Males	Females	Persons	Total	Males	Females	Persons	Total	Males	Females	Persons	Total	Males	Females	Persons	Total	
Underweight	8.2	16.6	13.7	5.7	18.0	11.0	4.7	16.4	9.8	5.6	16.6	7.7	5.5	17.8	10.7	6.2	17.2	11.8	48.2	48.2	
Acceptable weight	46.6	43.4	44.5	48.8	52.9	50.6	46.7	58.1	51.6	44.3	55.1	46.3	48.1	53.6	50.4	47.7	48.7	48.2	27.8	27.8	
Overweight	32.0	22.5	25.8	36.1	19.0	28.6	37.9	16.5	28.6	38.6	18.0	34.7	36.5	18.7	29.0	35.3	20.5	9.1	8.7	8.7	
Obese	9.6	11.7	10.9	7.4	7.0	7.2	9.0	5.0	7.3	8.7	*5.2	8.0	7.7	6.7	7.3	8.2	9.1	4.5	4.5	4.5	
Not available	3.6	5.8	5.1	2.0	3.1	2.5	1.8	4.0	2.8	2.8	*5.1	3.2	2.1	3.3	2.6	2.5	4.5	3.5	3.5	3.5	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Derived from consumption reported during the week prior to interview. See Appendix B.

TABLE 3.10. AVERAGE NUMBER OF CONDITIONS EXPERIENCED(a): PERSONS AGED 45 AND OVER WHO DRANK ALCOHOL BY NUMBER OF DAYS ON WHICH ALCOHOL CONSUMED(b) BY QUANTITY CONSUMED(c) BY SEX AUSTRALIA, 1989-90

Sex	1 day	2 days	3 days	4 days	5 days	6 days	7 days	Total
	1 to less than 25 ml							
Males	4.1	4.0	4.2	4.0	4.1	4.1	4.0	4.1
Females	4.6	4.6	4.9	4.8	4.9	4.5	4.6	4.7
Persons	439.6	434.6	455.9	442.6	446.2	430.5	431.2	438.0
	25 to less than 50 ml							
Males	3.7	3.9	3.8	3.8	3.9	4.2	4.0	3.9
Females	4.5	4.4	4.2	3.9	4.2	4.8	4.5	4.4
Persons	411.3	412.2	396.7	384.6	400.7	439.0	418.0	412.3
	50 to less than 75 ml							
Males	3.5	3.7	3.5	3.6	3.8	4.0	3.9	3.8
Females	4.0	4.3	3.8	* 3.2	* 3.5	* 6.6	4.5	4.2
Persons	366.2	382.6	355.0	356.0	379.3	428.7	400.4	387.5
	75 ml or more							
Males	3.3	3.7	3.4	3.2	4.2	4.0	3.8	3.7
Females	* 4.0	4.0	* 2.0	**	* 7.3	* 4.5	4.8	4.4
Persons	339.7	371.6	324.6	321.0	451.0	401.5	384.4	372.6
	Total							
Males	3.9	3.9	3.9	3.8	4.0	4.1	4.0	4.0
Females	4.6	4.5	4.6	4.5	4.7	4.7	4.6	4.6
Persons	424.6	418.2	419.7	400.5	424.4	429.6	417.3	432.0

(a) Recent and/or long-term conditions experienced. (b) Number of days consumed alcohol in the week prior to interview. (c) Average daily consumption in reference week.

## EXERCISE

### CHARACTERISTICS OF PERSONS WHO EXERCISED

Results of the survey showed that 35.8 per cent of adult Australians did not exercise, 32.2 per cent engaged in a low level of exercise, 16.6 per cent engaged in a medium level of exercise and 15.4 per cent engaged in a high level of exercise in the two weeks prior to interview. Exercise level was derived from reported frequency, intensity and duration of exercise undertaken for sport, recreation or fitness during that two week period (see Appendix B).

These proportions differed by population group, as shown in Table 4.1. The proportions of males and females who exercised were similar but males were more likely to engage in high levels of exercise (19.7%) than females (11.2%). Persons in younger age groups were more likely to have exercised and also to have engaged in high levels of exercise. For example, 74.7 per cent of persons aged 18 to 24 years reported exercising in the two weeks prior to interview compared with 58.8 per cent of persons aged 45 years and over. Among males aged 18 to 24 years, 31.6 per cent engaged in high levels of exercise (Table 4.2).

Exercise level differed by birthplace, with persons born in Southern Europe and Asia reporting lower than average levels of exercise and American born persons reporting higher than average levels. Exercise was more common among people whose highest qualification was a bachelor degree or higher (78.6%) than those with no post-school qualification (60.1%). Exercise level also varied by labour force status and gross personal annual income.

### SELF ASSESSED HEALTH STATUS

Overall most adult Australians believed they were in good or excellent health, with similar proportions being recorded for both males and females but differing by exercise level. The proportion of persons who believed their health status to be excellent increased as exercise levels increased. For example, 40.1 per cent of people who engaged in high levels of exercise believed their health status to be excellent compared with 23.1 per cent of those who did not exercise. This pattern was the same for both males and females and was exhibited across all age groups, being particularly pronounced among persons in older age groups (Table 4.3).

### ILLNESS CONDITIONS

#### Number of conditions reported

Results of the survey show little association between the prevalence of illness and the level of exercise. The proportion of people with one or more long-term conditions who reported low levels of exercise (78.1%) was only slightly above that of people who reported high levels of exercise (72.3%). Equivalent proportions of people reporting one or more recent illnesses were 82.5 per cent and 76.8 per cent respectively. This pattern was similar across age groups. Proportionally fewer people who did no exercise reported recent and/or long-term conditions than those who reported low exercise levels.

Overall, persons who engaged in low levels of exercise displayed a slightly higher average number of conditions (recent and long-term combined) (3.6) than other exercise level groups, with persons who engaged in high levels of exercise

displaying the lowest (3.3) (see Table 4.5). However, for many of the individual characteristics examined, there was no consistent pattern.

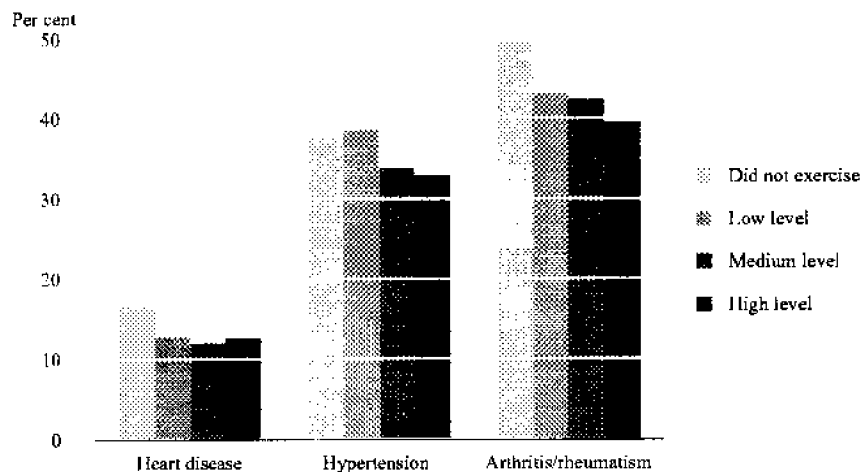
For both males and females, the average number of conditions was similar across exercise level groups, with females having a higher average number of conditions than males. Persons aged 65 years and over who did not exercise or engaged in low levels of exercise had the highest average number of conditions (5.0) of all. Younger age groups reported a lower average number of conditions for all exercise level groups than older age groups.

## Types of conditions

There were some differences in the prevalence of certain medical conditions according to exercise level and, as might be expected, these differences were most evident in the older age groups.

As shown in Table 4.6, the prevalence of hypertension was higher among persons aged 45 years and over who did not exercise (26.8%) or engaged in low levels of exercise (27.1%) than those who engaged in high levels of exercise (22.9%). This was particularly the case among persons aged 65 years and over, with 38.7 per cent of those who engaged in low levels of exercise reporting hypertension compared with 33.0 per cent of those who engaged in high levels of exercise (Chart 4.1). The prevalence of hypertension among males in all exercise level groups was lower than for females (Table 4.6).

**CHART 4.1. PERSONS AGED 65 YEARS AND OVER: SELECTED ILLNESS CONDITIONS<sup>(a)</sup> BY EXERCISE LEVEL, AUSTRALIA, 1989-90**



(a) Reported as a recent or long-term condition.

Chart 4.1 also shows differences in the prevalence of heart disease between exercise level groups. For persons aged 65 years and over, the prevalence of heart disease was highest among those who did no exercise (16.7%). This compares with 12.0 per cent of those engaged in medium levels of exercise. Females in this age group who did not exercise were almost twice as likely to report heart disease than those who engaged in high levels of exercise (15.9% and 8.3% respectively). In general, the prevalence of heart disease was higher for males than for females, particularly in the high exercise level group (Table 4.6).

Proportionally fewer persons aged 65 years and over who engaged in high levels of exercise reported arthritis or rheumatism (39.5%) than those who did not exercise (50.3%) (Chart 4.1). This was the case for both males and females, with the

prevalence of arthritis or rheumatism being higher among females than males in all exercise level groups (see also Table 4.6).

### EXERCISE PATTERNS

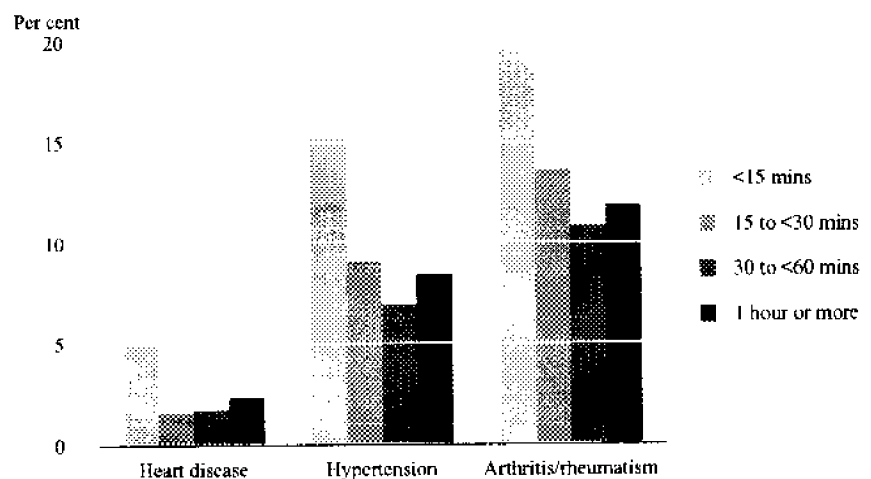
Information was also collected in the survey relating to frequency and duration of exercise for each type of exercise and from this, average duration of each exercise session was calculated. Analysis of the data showed that, in general, there was a stronger and more consistent association between average duration of exercise and various measures of health status than was the case with frequency of exercise.

In most cases, persons who spent more time on average for each exercise session were more likely to report better health, regardless of the frequency of such exercise sessions. Differences were particularly pronounced among persons who reported moderate exercise. For example, 37.6 per cent of persons whose average duration of each session of moderate exercise was 30 minutes to less than 60 minutes believed their health status to be excellent compared with 28.7 per cent of those whose average duration was less than 15 minutes (Table 4.7).

As shown in Table 4.8, 22.4 per cent of persons whose average duration of each moderate exercise session was one hour or more reported no recent illnesses compared with just 12.3 per cent of those whose average duration was less than 15 minutes. A similar pattern was found in relation to long-term illness. This overall trend was also noticeable with average number of conditions (recent and long-term combined). Lower proportions of people whose average duration of exercise was one hour or more reported two or more recent or long-term conditions than those who exercised on average for shorter periods.

Chart 4.2 shows differences in the prevalence of certain medical conditions according to average duration of each session of moderate exercise.

**CHART 4.2. PERSONS WHO REPORTED MODERATE EXERCISE: SELECTED ILLNESS CONDITIONS(a) BY AVERAGE DURATION OF EACH EXERCISE SESSION, AUSTRALIA, 1989-90**



(a) Reported as a recent and/or long-term condition.



## SUMMARY

Of Australians aged 18 years and over, more than one-third had not exercised in the two weeks prior to interview. The majority of adult Australians believed themselves to be in good or excellent health regardless of the level of exercise undertaken but persons who engaged in high levels of exercise were more likely to rate their health as excellent than persons who did not exercise.

The data on medical conditions appears to partially support this view. Persons who did not exercise experienced higher rates of hypertension, heart disease and arthritis/rheumatism compared with persons who engaged in higher levels of exercise. However, in most age groups, proportionally fewer persons who did not exercise reported experiencing any illness conditions.

The average duration of each exercise session appears to have some effect on health (or perceived health), particularly in the case of moderate exercise. Persons who spent more time on average for each exercise session were more likely to report excellent health and less likely to report experiencing any illness conditions.

TABLE 4.J. PERSONS AGED 18 YEARS AND OVER: EXERCISE LEVEL(a) BY SELECTED CHARACTERISTICS  
AUSTRALIA, 1989-90

Selected characteristics	('000)				Total	Per cent				Total
	Did not exercise	Low exercise level	Medium exercise level	High exercise level		Did not exercise	Low exercise level	Medium exercise level	High exercise level	
<b>Sex —</b>										
Males	2,173.3	1,717.4	1,042.1	1,211.9	6,144.7	35.4	27.9	17.0	19.7	100.0
Females	2,280.7	2,289.2	1,024.5	705.1	6,299.5	36.2	36.3	16.3	11.2	100.0
<b>Age group (years) —</b>										
18 — 24	490.0	613.6	369.7	464.0	1,937.3	25.3	31.7	19.1	24.0	100.0
25 — 44	1,846.2	1,807.7	906.7	800.5	5,361.1	34.4	33.7	16.9	14.9	100.0
45 — 64	1,318.0	1,012.5	511.9	406.4	3,248.7	40.6	31.2	15.8	12.5	100.0
65 and over	799.8	572.8	278.3	246.1	1,897.1	42.2	30.2	14.7	13.0	100.0
<b>Birthplace —</b>										
Australia	3,077.7	2,954.2	1,537.7	1,470.1	9,039.7	34.0	32.7	17.0	16.3	100.0
New Zealand and other Oceania	88.5	88.9	51.2	48.2	276.9	32.0	32.1	18.5	17.4	100.0
United Kingdom and Ireland	373.7	391.1	217.0	186.7	1,168.6	32.0	33.5	18.6	16.0	100.0
Southern Europe	398.7	177.1	73.7	59.0	708.5	56.3	25.0	10.4	8.3	100.0
Western Europe	93.4	78.9	42.5	37.4	252.3	37.0	31.3	16.9	14.8	100.0
Other Europe and U.S.S.R.	73.2	62.4	28.1	27.6	191.3	38.3	32.6	14.7	14.4	100.0
Middle East	75.9	43.1	19.3	12.4	150.6	50.4	28.6	12.8	8.2	100.0
Southeast Asia	121.9	81.5	35.1	23.4	261.9	46.5	31.1	13.4	9.0	100.0
Northeast/Southern Asia	93.7	68.9	34.0	21.5	218.1	42.9	31.6	15.6	9.9	100.0
Northern, South and Central America and the Caribbean	31.3	35.0	20.0	17.2	103.5	30.3	33.8	19.3	16.6	100.0
Africa (incl. North Africa)	26.1	25.3	8.0	13.5	72.8	35.8	34.8	10.9	18.5	100.0
Total overseas born	1,376.3	1,052.3	528.9	447.0	3,404.5	40.4	30.9	15.5	13.1	100.0
<b>Highest post school qualifications —</b>										
Still at school or never went to school	36.9	27.6	10.6	13.4	88.5	41.7	31.1	12.0	15.1	100.0
Bachelor degree or higher	235.6	408.4	252.0	205.4	1,101.5	21.4	37.1	22.9	18.6	100.0
Trade/Apprenticeship Certificate/Diploma	678.5	504.7	284.0	337.6	1,804.9	37.6	28.0	15.7	18.7	100.0
Other	752.0	923.7	465.4	391.7	2,532.9	29.7	36.5	18.4	15.5	100.0
No post-school qualification	40.3	39.5	20.3	20.7	120.8	33.3	32.7	16.8	17.1	100.0
<b>Labour force status(b) —</b>										
Employed	2,679.7	2,430.5	1,285.8	1,219.3	7,615.3	35.2	31.9	16.9	16.0	100.0
Unemployed (looking for work)	156.2	181.8	106.5	122.2	566.8	27.6	32.1	18.8	21.6	100.0
Not in labour force	818.2	821.5	396.0	329.4	2,365.1	34.6	34.7	16.7	13.9	100.0
<b>Gross personal annual income(c) —</b>										
\$0 — 9,999	1,427.5	1,268.7	607.8	515.2	3,819.2	37.4	33.2	15.9	13.5	100.0
\$10,000 — 19,999	1,021.8	878.9	429.4	388.0	2,718.1	37.6	32.3	15.8	14.3	100.0
\$20,000 — 29,999	874.8	750.8	416.0	413.3	2,454.9	35.6	30.6	16.9	16.8	100.0
\$30,000 — 39,999	406.8	417.9	236.7	235.0	1,296.4	31.4	32.2	18.3	18.1	100.0
\$40,000 — 49,999	158.8	162.7	89.1	82.2	492.8	32.2	33.0	18.1	16.7	100.0
\$50,000 or more	132.0	165.1	102.3	103.9	503.3	26.2	32.8	20.3	20.6	100.0
Not stated	186.8	125.8	68.4	60.6	441.6	42.3	28.5	15.5	13.7	100.0
<b>Total</b>	<b>4,454.0</b>	<b>4,006.6</b>	<b>2,066.6</b>	<b>1,917.0</b>	<b>12,444.2</b>	<b>35.8</b>	<b>32.2</b>	<b>16.6</b>	<b>15.4</b>	<b>100.0</b>

(a) Derived from frequency, duration and intensity of exercise reported in the two weeks prior to interview; see Appendix B. (b) Persons 18 to 64 years only. (c) Persons 18 years and over who reported a source of income.

TABLE 4.2. PERSONS AGED 18 YEARS AND OVER: EXERCISE LEVEL(a) BY AGE BY SEX  
AUSTRALIA, 1989-90

Age group (years)	('000)				Total	Per cent				Total
	Did not exercise	Low exercise level	Medium exercise level	High exercise level		Did not exercise	Low exercise level	Medium exercise level	High exercise level	
Males										
18 — 24	238.4	254.3	179.9	311.0	983.7	24.2	25.8	18.3	31.6	100.0
25 — 44	924.1	800.3	462.4	515.7	2,702.5	34.2	29.6	17.1	19.1	100.0
45 — 64	712.9	444.7	262.3	231.5	1,651.3	43.2	26.9	15.9	14.0	100.0
65 and over	297.9	218.1	137.4	153.6	807.1	36.9	27.0	17.0	19.0	100.0
<b>Total</b>	<b>2,173.3</b>	<b>1,717.4</b>	<b>1,042.1</b>	<b>1,211.9</b>	<b>6,144.7</b>	<b>35.4</b>	<b>27.9</b>	<b>17.0</b>	<b>19.7</b>	<b>100.0</b>
Females										
18 — 24	251.5	359.3	189.8	153.0	953.6	26.4	37.7	19.9	16.0	100.0
25 — 44	922.1	1,007.4	444.3	284.8	2,658.6	34.7	37.9	16.7	10.7	100.0
45 — 64	605.1	567.8	249.6	174.9	1,597.4	37.9	35.5	15.6	10.9	100.0
65 and over	501.9	354.7	140.8	92.5	1,089.9	46.1	32.5	12.9	8.5	100.0
<b>Total</b>	<b>2,280.7</b>	<b>2,289.2</b>	<b>1,024.5</b>	<b>705.1</b>	<b>6,299.5</b>	<b>36.2</b>	<b>36.3</b>	<b>16.3</b>	<b>11.2</b>	<b>100.0</b>
Persons										
18 — 24	490.0	613.6	369.7	464.0	1,937.3	25.3	31.7	19.1	24.0	100.0
25 — 44	1,846.2	1,807.7	906.7	800.5	5,361.1	34.4	33.7	16.9	14.9	100.0
45 — 64	1,318.0	1,012.5	511.9	406.4	3,248.7	40.6	31.2	15.8	12.5	100.0
65 and over	799.8	572.8	278.3	246.1	1,897.1	42.2	30.2	14.7	13.0	100.0
<b>Total</b>	<b>4,454.0</b>	<b>4,006.6</b>	<b>2,066.6</b>	<b>1,917.0</b>	<b>12,444.2</b>	<b>35.8</b>	<b>32.2</b>	<b>16.6</b>	<b>15.4</b>	<b>100.0</b>

(a) Derived from frequency, duration and intensity of exercise reported in the two weeks prior to interview; see Appendix B.

TABLE 4.3. PERSONS AGED 18 YEARS AND OVER: EXERCISE LEVEL(a) BY SELF ASSESSED HEALTH STATUS BY AGE BY SEX  
AUSTRALIA, 1989-90  
(Per cent)

Self assessed health status	Did not exercise				Low exercise level				Medium exercise level				High exercise level				Total	
	Males		Females		Males		Females		Males		Females		Males		Females		Males	Females
	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	Persons	
	18—24 years																	
Excellent	28.7	27.2	28.0	28.8	30.6	42.9	32.1	37.4	44.6	40.1	43.1	37.5	30.9	34.2				
Good	54.9	57.2	56.1	58.8	57.6	47.7	57.9	52.9	48.7	49.4	48.9	51.9	56.7	54.2				
Fair	14.2	13.7	13.9	11.5	11.0	9.4	8.2	8.8	6.1	9.2	7.1	9.7	11.0	10.4				
Poor	2.3	1.8	2.0	0.9	0.8	**	1.8	0.9	0.6	1.3	0.8	0.9	1.4	1.1				
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	25—44 years																	
Excellent	29.5	30.0	29.7	33.5	35.1	39.7	41.1	40.4	47.9	48.9	48.3	35.9	36.3	36.1				
Good	55.1	53.3	54.2	52.0	53.3	51.6	49.2	50.5	44.0	42.7	43.5	52.4	51.0	51.7				
Fair	13.5	13.2	13.3	10.1	10.3	7.5	8.6	8.0	6.9	7.6	7.2	10.2	10.8	10.5				
Poor	2.0	3.5	2.7	1.4	1.3	1.1	1.1	1.1	1.1	0.9	1.0	1.5	1.9	1.7				
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	45—64 years																	
Excellent	19.1	19.5	19.3	23.4	24.3	26.6	28.0	27.3	31.4	34.4	32.7	23.2	24.4	23.8				
Good	51.2	47.3	49.4	47.6	48.9	50.3	49.1	49.7	46.4	45.3	46.0	49.4	48.3	48.9				
Fair	22.4	24.6	23.4	21.3	20.2	16.5	19.1	17.8	16.8	16.8	16.8	20.4	21.0	20.7				
Poor	7.3	8.7	7.9	7.7	6.7	6.6	3.8	5.2	5.5	3.5	4.6	7.0	6.3	6.7				
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	65 years and over																	
Excellent	10.7	11.2	11.0	15.4	13.3	16.9	17.3	17.1	19.4	21.4	20.2	13.2	14.2	13.8				
Good	37.1	36.5	36.7	46.8	46.8	43.4	50.7	47.1	48.6	48.6	48.6	43.0	42.7	42.8				
Fair	32.3	35.1	34.1	30.8	31.0	32.1	24.5	28.3	24.0	25.1	24.4	30.3	31.6	31.0				
Poor	19.9	17.3	18.2	12.4	8.9	7.5	7.5	7.5	8.0	5.0	6.9	13.5	11.5	12.4				
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Total																	
Excellent	23.4	22.7	23.1	27.8	28.6	34.0	33.0	33.5	40.3	39.8	40.1	29.8	28.6	29.2				
Good	51.3	48.4	49.8	52.2	51.9	49.5	51.0	50.3	46.3	45.6	46.0	50.3	49.7	50.0				
Fair	19.1	21.1	20.1	15.7	15.9	13.4	13.2	13.3	10.8	12.5	11.4	15.5	17.0	16.3				
Poor	6.2	7.7	7.0	4.3	3.6	3.2	2.8	3.0	2.7	2.2	2.5	4.5	4.6	4.5				
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Derived from frequency, duration and intensity of exercise reported in the two weeks prior to interview; see Appendix B.

TABLE 4.4. PERSONS AGED 18 YEARS AND OVER : EXERCISE LEVEL(G) BY NUMBER OF RECENT AND LONG-TERM CONDITIONS BY AGE BY SEX  
 AUSTRALIA, 1989-90  
 (Per cent)

Number of recent and long-term conditions	Did not exercise			Low exercise level			Medium exercise level			High exercise level			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
	18—44 years			18—44 years			18—44 years			18—44 years			Total		
18—44 years															
<i>Number of recent illnesses</i>															
None	34.7	18.4	26.5	29.2	15.3	21.4	32.6	17.2	25.0	31.9	18.7	27.3	32.1	17.0	24.7
One	35.5	33.5	34.5	35.7	31.3	33.2	33.5	29.5	31.5	32.9	29.2	31.6	34.6	31.5	33.1
Two to three	25.8	37.9	31.9	30.4	42.8	37.4	29.0	41.4	35.1	30.6	40.4	34.0	28.7	40.7	34.6
Four or more	4.0	10.2	7.1	4.7	10.6	8.0	4.9	11.9	8.4	4.6	11.7	7.1	4.5	10.8	7.6
<i>Number of long-term conditions</i>															
None	40.1	34.1	37.1	34.4	29.9	31.9	38.6	29.7	34.2	40.5	32.5	37.7	38.3	31.6	35.0
One	32.4	30.6	31.5	34.0	31.7	32.7	31.7	31.4	31.6	33.2	29.8	32.0	32.9	31.1	32.0
Two to three	23.4	27.4	25.4	26.4	29.8	28.3	24.9	30.8	27.8	23.2	30.1	25.6	24.5	29.2	26.8
Four or more	4.2	7.8	6.0	5.2	8.5	7.1	4.7	8.1	6.4	3.1	7.5	4.6	4.3	8.1	6.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
45 years and over															
<i>Number of recent illnesses</i>															
None	21.7	9.7	15.4	16.0	8.5	11.6	16.7	10.7	13.8	17.7	11.5	15.2	18.7	9.6	14.0
One	29.1	20.9	24.8	24.8	22.5	23.5	26.0	20.9	23.5	28.5	24.3	26.8	27.3	21.8	24.4
Two to three	34.5	40.4	37.6	39.8	42.0	41.0	41.4	44.7	43.0	37.0	40.8	38.5	37.4	41.6	39.6
Four or more	14.7	29.1	22.2	19.5	27.0	23.9	15.9	23.7	19.7	16.9	23.4	19.5	16.5	27.0	22.0
<i>Number of long-term conditions</i>															
None	12.6	7.3	9.8	6.8	6.6	6.7	9.2	5.8	7.5	8.4	7.9	8.2	9.8	6.9	8.3
One	24.7	18.5	21.4	23.2	17.1	19.6	21.9	19.8	20.8	21.3	19.7	20.7	23.3	18.3	20.7
Two to three	38.6	42.7	40.7	42.9	45.9	44.6	41.1	44.1	42.6	42.7	42.2	42.5	40.8	43.9	42.4
Four or more	24.2	31.6	28.1	27.1	30.4	29.0	27.9	30.3	29.1	27.6	30.2	28.6	26.1	30.9	28.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 4.4. PERSONS AGED 18 YEARS AND OVER : EXERCISE LEVEL(a) BY NUMBER OF RECENT AND LONG-TERM CONDITIONS BY AGE BY SEX  
 AUSTRALIA, 1989-90  
 (Per cent) — continued

Number of recent and long-term conditions	Did not exercise			Low exercise level			Medium exercise level			High exercise level			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Total															
<i>Number of recent illnesses</i>															
None	28.6	14.2	21.2	24.1	12.6	17.5	26.5	14.7	20.7	27.4	16.0	23.2	26.8	13.9	20.2
One	32.5	27.4	29.9	31.5	27.8	29.3	30.6	26.2	28.4	31.5	27.3	30.0	31.7	27.3	29.5
Two to three	29.9	39.1	34.6	34.0	42.4	38.8	33.7	42.7	38.1	32.6	40.6	35.6	32.2	41.1	36.7
Four or more	9.0	19.4	14.3	10.4	17.2	14.3	9.1	16.4	12.7	8.5	16.1	11.3	9.3	17.7	13.6
<i>Number of long-term conditions</i>															
None	27.3	21.1	24.1	23.8	20.5	21.9	27.3	20.6	24.0	30.3	23.2	27.7	26.9	21.0	23.9
One	28.8	24.7	26.7	29.8	25.8	27.5	27.9	27.0	27.5	29.4	26.0	28.2	29.1	25.6	27.3
Two to three	30.5	34.8	32.7	32.8	36.3	34.8	31.1	35.9	33.5	29.4	34.7	31.3	31.0	35.5	33.3
Four or more	13.5	19.4	16.5	13.6	17.3	15.8	13.6	16.6	15.1	10.9	16.1	12.8	13.0	17.8	15.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Derived from frequency, duration and intensity of exercise reported in the two weeks prior to interview; see Appendix B.

TABLE 4.5. AVERAGE NUMBER OF CONDITIONS EXPERIENCED(a): EXERCISE LEVEL(b) OF PERSONS AGED 18 YEARS AND OVER BY SELECTED CHARACTERISTICS AUSTRALIA, 1989-90

<i>Selected characteristics</i>	<i>Did not exercise</i>	<i>Low exercise level</i>	<i>Medium exercise level</i>	<i>High exercise level</i>	<i>Total</i>
<i>Sex—</i>					
Males	3.1	3.3	3.2	3.1	3.2
Females	3.8	3.8	3.7	3.7	3.8
<i>Age group (years) —</i>					
18 — 24	2.5	2.8	2.8	2.6	2.7
25 — 44	2.9	3.1	3.0	2.9	3.0
45 — 64	3.7	4.2	4.0	3.9	3.9
65 and over	5.0	5.0	4.8	4.8	5.0
<i>Birthplace —</i>					
Australia	3.6	3.6	3.5	3.3	3.5
New Zealand and other Oceania	2.8	3.5	3.0	3.0	3.1
United Kingdom and Ireland	3.9	3.7	3.6	3.4	3.7
Southern Europe	2.9	3.5	3.2	3.3	3.1
Western Europe	3.4	3.6	3.6	3.3	3.5
Other Europe and U.S.S.R.	3.9	3.6	3.5	3.8	3.7
Middle East	2.8	3.2	3.2	2.6	2.9
Southeast Asia	2.6	2.7	2.7	2.7	2.7
Northeast/Southern Asia	2.7	3.0	3.1	2.9	2.9
Northern, South and Central America and the Caribbean	3.2	3.3	3.4	3.3	3.3
Africa (incl. North Africa)	3.3	3.4	4.0	3.3	3.4
<i>Total overseas born</i>	3.2	3.5	3.4	3.3	3.3
<i>Highest post school qualifications —</i>					
Still at school or never went to school	3.3	3.2	2.6	2.6	3.0
Bachelor degree or higher	3.3	3.4	3.3	3.1	3.3
Trade/Apprenticeship	3.2	3.3	3.3	3.2	3.3
Certificate/Diploma	3.5	3.7	3.6	3.5	3.6
Other	3.7	3.9	4.3	3.1	3.8
No post-school qualification	3.5	3.7	3.5	3.3	3.5
<i>Labour force status(c) —</i>					
Employed	2.9	3.2	3.0	2.9	3.0
Unemployed (looking for work)	2.9	3.2	3.4	3.1	3.1
Not in labour force	3.8	3.9	3.9	3.8	3.8
<i>Gross personal annual income(d) —</i>					
\$0 — 9,999	4.2	4.1	4.1	4.0	4.1
\$10,000 — 19,999	3.3	3.5	3.3	3.3	3.4
\$20,000 — 29,999	2.9	3.2	3.0	2.9	3.0
\$30,000 — 39,999	3.0	3.3	3.1	2.8	3.1
\$40,000 — 49,999	3.0	3.2	3.2	3.1	3.1
\$50,000 or more	3.2	3.3	3.2	3.1	3.2
Not stated	3.2	3.5	3.1	3.0	3.3
<b>Total</b>	<b>3.5</b>	<b>3.6</b>	<b>3.5</b>	<b>3.3</b>	<b>3.5</b>

(a) Reported as recent and/or long-term conditions (b) Derived from frequency, duration and intensity of exercise reported in the two weeks prior to interview: see Appendix B.

(c) Persons 18 to 64 years only. (d) Persons 18 years and over who reported a source of income.

TABLE 4.6. PERSONS AGED 18 YEARS AND OVER : EXERCISE LEVEL(a) BY SELECTED CONDITIONS REPORTED(b) BY AGE AND SEX  
 AUSTRALIA, 1989-90  
 (Per cent)

Type of condition reported	Total						
	Did not exercise		Medium exercise level		High exercise level		
	Low exercise level	High exercise level	Males	Females	Persons	Persons	
	18 — 44 years						
No illness	48.0	42.4	45.8	50.2	52.7	39.4	46.1
Neoplasms	0.9	1.2	1.4	0.8	0.8	1.4	1.1
Gout	0.6	0.6	1.0	*0.4	1.1	*0.1	0.6
Diabetes mellitus	0.5	0.5	0.4	*0.3	0.4	0.5	0.5
Obesity	0.3	0.4	*0.4	*0.3	*0.1	0.6	0.3
High cholesterol	1.5	1.6	1.2	1.2	1.8	1.0	1.4
Nerves, tension, nervousness, emotional problems	2.5	2.3	2.4	1.7	1.6	3.0	2.3
Depression	0.6	0.5	0.6	0.5	0.3	0.8	0.6
Hypertension	2.7	2.7	2.6	2.4	2.7	2.6	2.6
Heart disease	0.5	0.4	*0.3	*0.4	0.4	0.4	0.4
Bronchitis, emphysema	2.7	2.7	2.7	2.5	2.2	3.2	2.7
Asthma	6.5	7.4	7.5	7.6	6.5	7.9	7.2
Ulcer	1.6	1.1	1.1	1.4	1.7	1.0	1.3
Other diseases of the digestive system	3.9	4.3	3.5	3.4	3.5	4.2	3.9
Kidney diseases	0.9	1.0	0.8	0.8	0.6	1.2	0.9
Arthritis	5.4	5.1	4.4	4.3	4.6	5.2	4.9
Disorders of the intervertebral disc	3.0	2.8	2.8	2.3	3.2	2.3	2.8
Back trouble (unspecific)	12.3	12.6	11.3	11.9	12.9	11.3	12.1
Total(c)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	45 years and over						
No illness	20.7	16.0	18.7	19.6	23.7	14.3	18.8
Neoplasms	5.5	5.7	5.3	7.1	6.3	5.2	5.7
Gout	3.6	3.6	3.4	4.2	6.1	1.3	3.6
Diabetes mellitus	4.0	4.1	3.1	3.5	4.2	3.5	3.8
Obesity	0.4	0.6	*0.2	*0.6	0.3	0.6	0.4
High cholesterol	5.2	6.9	6.9	8.4	5.2	7.4	6.4
Nerves, tension, nervousness, emotional problems	6.0	6.4	6.1	5.2	4.0	7.9	6.0
Depression	1.3	1.7	1.1	*0.7	1.0	1.6	1.3
Hypertension	26.8	27.1	24.9	22.9	22.3	29.6	26.1
Heart disease	8.9	7.1	6.9	8.1	8.9	7.1	8.0
Bronchitis, emphysema	6.3	5.2	4.8	5.8	6.2	5.2	5.6



TABLE 4.6. PERSONS AGED 18 YEARS AND OVER : EXERCISE LEVEL(a) BY SELECTED CONDITIONS REPORTED(b) BY AGE AND SEX  
 AUSTRALIA, 1989-90  
 (Per cent)—continued

Type of condition reported	45 years and over					Total	
	Did not exercise	Low exercise level	Medium exercise level	High exercise level	Males	Females	Persons
Asthma	6.4	5.4	5.5	5.3	5.3	6.3	5.8
Ulcer	4.4	4.6	4.2	4.1	5.1	3.7	4.4
Other diseases of the digestive system	8.2	9.2	8.4	8.9	7.7	9.5	8.6
Kidney diseases	2.1	2.1	2.0	2.3	2.2	2.0	2.1
Arthritis	31.8	29.9	29.8	27.8	23.6	36.6	30.4
Disorders of the intervertebral disc	4.9	5.2	5.6	5.7	6.3	4.2	5.2
Backtrouble (unspecific)	10.9	13.4	12.7	11.8	13.7	10.6	12.0
Total(c)	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total							
No illness	35.0	32.0	35.4	39.8	41.1	28.7	34.8
Neoplasms	3.1	3.0	2.9	2.9	3.0	3.0	3.0
Gout	2.0	1.8	1.9	1.7	3.1	0.7	1.9
Diabetes mellitus	2.2	1.9	1.5	1.4	1.9	1.8	1.9
Obesity	0.3	0.5	0.3	0.4	0.2	0.6	0.4
High cholesterol	3.2	3.7	3.4	3.7	3.2	3.8	3.5
Nerves, tension, nervousness, emotional problems	4.2	4.0	3.8	2.9	2.6	5.1	3.8
Depression	0.9	1.0	0.8	0.6	0.6	1.1	0.9
Hypertension	14.2	12.3	11.1	9.4	10.5	14.1	12.3
Heart disease	4.5	3.1	2.8	3.0	3.8	3.3	3.5
Bronchitis, emphysema	4.4	3.7	3.5	3.6	3.8	4.0	3.9
Asthma	6.4	6.6	6.8	6.8	6.0	7.2	6.6
Ulcer	2.9	2.5	2.3	2.3	3.0	2.1	2.6
Other diseases of the digestive system	5.9	6.2	5.4	5.3	5.2	6.5	5.8
Kidney diseases	1.5	1.4	1.3	1.3	1.3	1.5	1.4
Arthritis	18.0	14.9	14.1	12.3	12.2	18.6	15.5
Disorders of the intervertebral disc	3.9	3.7	3.9	3.5	4.5	3.1	3.8
Backtrouble (unspecific)	11.6	12.9	11.8	11.8	13.2	11.0	12.1
Total(c)	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Derived from frequency, duration and intensity of exercise reported in the two weeks prior to interview: see Appendix B. (b) Reported as recent and/or long-term conditions. Each person may have reported more than one type of condition. (c) Selected conditions only are shown and therefore components do not add to totals.

**TABLE 4.7 PERSONS AGED 18 AND OVER WHO REPORTED EXERCISING: NUMBER OF TIMES EXERCISED AND AVERAGE DURATION OF EXERCISE SESSION BY SELF ASSESSED HEALTH STATUS BY TYPE OF EXERCISE**  
**AUSTRALIA, 1989-90**  
 (Per cent)

<i>Number of times exercised average duration of session</i>	<i>Self-assessed health status</i>				<i>Total</i>
	<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Poor</i>	
<b>VIGOROUS EXERCISE</b>					
<i>Number of times—</i>					
Not applicable	28.1	51.1	16.7	4.0	100.0
One or two	40.5	50.7	7.8	0.9	100.0
Three to six	47.5	46.2	5.6	* 0.7	100.0
Seven to fourteen	53.3	40.8	5.2	* 0.7	100.0
More than fourteen	56.5	38.3	**	**	100.0
<b>Total</b>	<b>32.6</b>	<b>50.1</b>	<b>14.1</b>	<b>3.2</b>	<b>100.0</b>
<i>Average Duration—</i>					
Less than 15 mins	40.1	50.8	7.0	* 2.2	100.0
15 to less than 30 mins	38.8	51.7	8.6	* 0.9	100.0
30 to less than 60 mins	47.5	44.4	7.3	* 0.9	100.0
1 hour or more	46.4	47.1	5.8	0.7	100.0
<b>Total</b>	<b>32.6</b>	<b>50.1</b>	<b>14.1</b>	<b>3.2</b>	<b>100.0</b>
<b>MODERATE EXERCISE</b>					
<i>Number of times—</i>					
Not applicable	29.7	49.2	16.9	4.2	100.0
One or two	34.3	52.6	11.2	1.9	100.0
Three to six	37.6	51.6	9.7	1.2	100.0
Seven to fourteen	35.1	47.9	13.2	3.8	100.0
More than fourteen	34.1	52.4	10.3	* 3.2	100.0
<b>Total</b>	<b>32.6</b>	<b>50.1</b>	<b>14.1</b>	<b>3.2</b>	<b>100.0</b>
<i>Average Duration—</i>					
Less than 15 mins	28.7	50.0	16.5	4.8	100.0
15 to less than 30 mins	32.8	52.7	12.4	2.1	100.0
30 to less than 60 mins	37.6	50.6	10.0	1.8	100.0
1 hour or more	36.7	51.0	10.5	1.8	100.0
<b>Total</b>	<b>32.6</b>	<b>50.1</b>	<b>14.1</b>	<b>3.2</b>	<b>100.0</b>
<b>WALKING EXERCISE</b>					
<i>Number of times—</i>					
Not applicable	37.9	50.8	9.7	1.6	100.0
One or two	32.8	51.5	13.1	2.6	100.0
Three to six	31.7	51.1	14.5	2.7	100.0
Seven to fourteen	28.4	47.9	18.5	5.2	100.0
More than fourteen	28.0	50.2	16.6	5.2	100.0
<b>Total</b>	<b>32.6</b>	<b>50.1</b>	<b>14.1</b>	<b>3.2</b>	<b>100.0</b>
<i>Average Duration—</i>					
Less than 15 mins	27.4	47.5	19.8	5.3	100.0
15 to less than 30 mins	30.7	49.3	15.7	4.3	100.0
30 to less than 60 mins	29.9	50.7	15.5	3.8	100.0
1 hour or more	31.1	49.3	16.1	3.5	100.0
<b>Total</b>	<b>32.6</b>	<b>50.1</b>	<b>14.1</b>	<b>3.2</b>	<b>100.0</b>

TABLE 4.8 PERSONS AGED 18 AND OVER WHO REPORTED EXERCISING: NUMBER OF TIMES EXERCISED AND AVERAGE DURATION OF EXERCISE SESSION BY NUMBER OF RECENT AND LONG-TERM CONDITIONS BY TYPE OF EXERCISE  
AUSTRALIA, 1989-90  
(Per cent)

Number of times exercised average duration of session	Number of recent illnesses				Number of long-term conditions				Total	
	None	One	Two to three	Four or more	None	One	Two to three	Four or more		
<b>VIGOROUS EXERCISE</b>										
Number of times—										
Not applicable	18.2	28.6	38.5	14.7	21.3	26.3	35.1	31.3	100.0	
One or two	23.1	31.9	35.4	9.6	29.3	31.3	31.0	18.9	100.0	
Three to six	24.9	30.9	35.5	8.8	32.8	32.8	26.8	16.3	100.0	
Seven to fourteen	23.7	31.3	37.7	7.3	33.8	29.9	29.6	14.7	100.0	
More than fourteen	* 30.6	* 22.2	42.0	**	* 23.2	46.3	* 25.4	* 9.8	100.0	
<b>Total</b>	<b>19.7</b>	<b>29.3</b>	<b>37.9</b>	<b>13.2</b>	<b>23.8</b>	<b>27.7</b>	<b>33.6</b>	<b>27.7</b>	<b>100.0</b>	
Average Duration—										
Less than 15 mins	21.5	28.7	38.6	11.3	22.3	33.5	34.7	19.5	100.0	
15 to less than 30 mins	22.2	29.6	36.9	11.3	29.0	29.7	30.7	23.3	100.0	
30 to less than 60 mins	24.0	30.1	37.1	8.8	28.6	33.6	29.9	17.7	100.0	
1 hour or more	24.3	32.3	35.1	8.3	33.6	31.0	28.2	15.8	100.0	
<b>Total</b>	<b>19.7</b>	<b>29.3</b>	<b>37.9</b>	<b>13.2</b>	<b>23.8</b>	<b>27.7</b>	<b>33.6</b>	<b>27.7</b>	<b>100.0</b>	
<b>MODERATE EXERCISE</b>										
Number of times—										
Not applicable	19.1	29.0	37.7	14.1	22.2	26.6	34.7	29.8	100.0	
One or two	20.4	30.6	37.0	12.0	25.7	29.2	33.2	24.7	100.0	
Three to six	21.6	29.6	38.3	10.5	27.4	29.5	31.2	23.3	100.0	
Seven to fourteen	18.4	28.1	39.0	14.5	23.0	27.6	32.9	28.7	100.0	
More than fourteen	19.7	26.8	37.6	15.9	23.3	23.0	35.6	31.6	100.0	
<b>Total</b>	<b>19.7</b>	<b>29.3</b>	<b>37.9</b>	<b>13.2</b>	<b>23.8</b>	<b>27.7</b>	<b>33.6</b>	<b>27.7</b>	<b>100.0</b>	
Average Duration—										
Less than 15 mins	12.3	25.7	42.7	19.4	15.1	26.3	37.3	35.5	100.0	
15 to less than 30 mins	17.9	27.6	40.0	14.5	22.1	29.8	32.8	27.8	100.0	
30 to less than 60 mins	19.9	29.1	39.7	11.2	25.7	29.8	32.0	23.6	100.0	
1 hour or more	22.4	30.8	35.9	10.8	28.1	28.5	31.8	23.7	100.0	
<b>Total</b>	<b>19.7</b>	<b>29.3</b>	<b>37.9</b>	<b>13.2</b>	<b>23.8</b>	<b>27.7</b>	<b>33.6</b>	<b>27.7</b>	<b>100.0</b>	

TABLE 4.8 PERSONS AGED 18 AND OVER WHO REPORTED EXERCISING: NUMBER OF TIMES EXERCISED AND AVERAGE DURATION OF EXERCISE SESSION BY NUMBER OF RECENT AND LONG-TERM CONDITIONS BY TYPE OF EXERCISE  
AUSTRALIA, 1989-90  
(Per cent)—continued

Number of times exercised average duration of session	Number of recent illnesses				Number of long-term conditions				Total	
	None	One	Two to three	Four or more	None	One	Two to three	Four or more		
WALKING EXERCISE										
Number of times—										
Not applicable	24.1	31.6	35.1	9.1	30.5	30.2	29.4	20.3	100.0	
One or two	16.7	30.0	40.2	13.1	22.4	29.3	33.9	27.7	100.0	
Three to six	17.0	29.1	39.4	14.5	22.3	27.0	34.9	28.6	100.0	
Seven to fourteen	18.6	27.1	38.1	16.2	19.4	25.0	36.5	33.8	100.0	
More than fourteen	22.2	24.3	40.7	12.8	21.4	26.4	35.5	31.5	100.0	
<b>Total</b>	<b>19.7</b>	<b>29.3</b>	<b>37.9</b>	<b>13.2</b>	<b>23.8</b>	<b>27.7</b>	<b>33.6</b>	<b>27.7</b>	<b>100.0</b>	
Average Duration—										
Less than 15 mins	16.4	27.4	39.1	17.1	20.6	25.0	37.1	32.2	100.0	
15 to less than 30 mins	16.9	27.1	40.1	15.8	19.5	27.5	35.2	30.4	100.0	
30 to less than 60 mins	16.7	27.6	40.4	15.4	19.7	26.4	36.7	32.5	100.0	
1 hour or more	19.5	29.6	37.2	13.7	23.0	26.6	34.0	29.0	100.0	
<b>Total</b>	<b>19.7</b>	<b>29.3</b>	<b>37.9</b>	<b>13.2</b>	<b>23.8</b>	<b>27.7</b>	<b>33.6</b>	<b>27.7</b>	<b>100.0</b>	

## BODY MASS

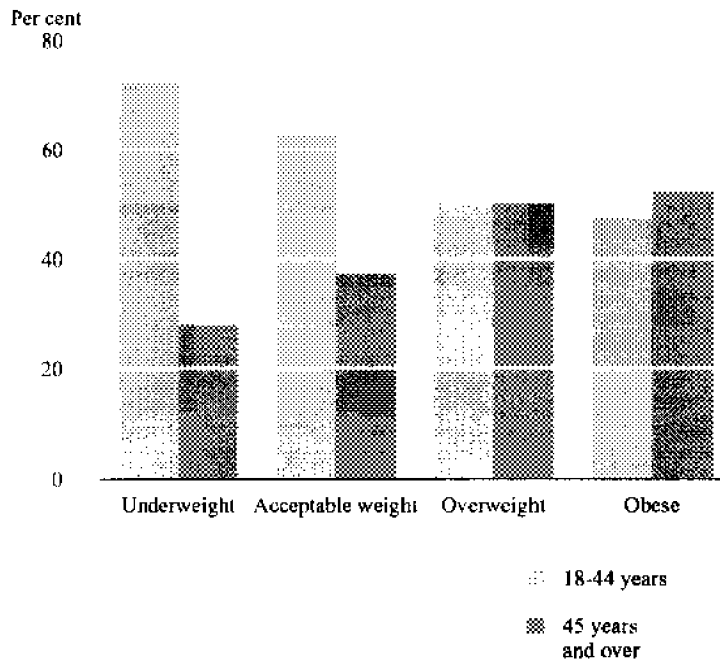
### CHARACTERISTICS OF PEOPLE BY BODY MASS

Based on information provided by respondents in the survey about their height and weight, people aged 18 years and over were grouped according to their body mass index (BMI) scores, derived using the formula weight(kg) divided by the square of height (m<sup>2</sup>).

Results of the survey show that in 1989-90 less than half (48.2%) of Australians were in the acceptable weight range, a further 27.8 per cent were overweight, 11.8 per cent were underweight and 8.7 per cent were obese according to standards adopted by the National Health and Medical Research Council (see Appendix B). The proportions differed depending on a range of demographic and socio-economic factors as shown in Table 5.1. Overall, males were more likely to be overweight or obese (43.5%) than females (29.6%).

Underweight was more prevalent among younger age groups (22.1% of people aged 18 to 24 years), with proportionally more females (31.0%) than males (13.4%) in this age group being underweight. The highest proportions of overweight and obese people were reported in the age group 45 to 64 years (35.9% and 12.2% respectively), with males more likely to be overweight or obese (54.0%) than females (42.2%).

**CHART 5.1. PERSONS AGED 18 YEARS AND OVER:  
BODY MASS BY AGE BY SEX, AUSTRALIA, 1989-90**



The age structures of both males and females classified as underweight or of acceptable weight were similar with the majority being in the younger age group. Differences between males and females were evident in the overweight and obese categories, with over half of females who were overweight or obese aged 45 years and over (56.3%), compared with males of whom most were in the age group 18 to 44 years (53.4%). These age patterns should be borne in mind in interpreting differences in body mass among birthplace, employment and income groups outlined below (Table 5.1).

Body mass differed according to birthplace. The highest proportions of people classified overweight or obese were recorded among people born in Southern Europe (39.2% and 16.3% respectively), while people born in Southeast Asia reported the highest proportion being underweight or acceptable weight (25.7% and 53.9% respectively). Proportions of people born in Northeast or Southern Asia were similar (22.5 per cent underweight and 53.9 per cent of acceptable weight).

Body mass patterns were similar across labour force groups. However, unemployed people were more likely to be underweight than any other employment status category (14.5%) and recorded the lowest proportion overweight (23.7%). The highest proportion of people classified to the overweight or obese categories (38.0% combined) was recorded among those not in the labour force reflecting the older age profile of these people.

The pattern of body mass differed across income groups, with a higher proportion of those in higher income groups (and in general older age groups) classified overweight than those in lower income groups. For example, the highest proportion (38.9%) of overweight people and the lowest proportion, (3.7%), of those underweight was recorded among those with an income of \$50,000 or more. The highest proportion in the underweight category (14.2%) was recorded among those with incomes below \$10,000. It is noteworthy the highest proportion classified as obese (10.5%) was also recorded for this group.

People who reported being still at school or never having been to school were more likely to be both underweight or obese (16.0% and 10.4% respectively). This may reflect the age profiles of the groups. People who hold Trade or Apprenticeship qualifications reported the lowest proportion underweight (5.8%) and the highest proportion overweight (36.5%).

#### **SELF-ASSESSED HEALTH STATUS**

The majority of Australians assessed their health status as either excellent or good (79.2%) but the proportion varied according to body mass. People with a body mass classified as acceptable were more likely to assess their health as either excellent or good (83.2%) than people classified as overweight or obese (74.4%). As shown in Table 5.3 this pattern applied to all age groups.

The pattern however differed for males and females for each body mass category. Generally females who were underweight showed a greater propensity to assess their health in a positive manner. In contrast more males in the overweight and obese categories, assessed their health positively.

## ILLNESS CONDITIONS

Body mass appears to be associated with the likelihood of illness being experienced. Associations apparent in the survey data are discussed in this section. It is emphasised however that the information available does not enable those associations to be interpreted as necessarily indicative of specific causal relationships, since, for example, data are not available from the survey to distinguish cause and effect, nor of the associated factors which may contribute to the onset of illness.

### Number of conditions

People who were classified as obese were more likely to report recent and/or long-term conditions than those in any other body mass group. Some 83.7 per cent of people in this group reported one or more recent illness, and 82.0 per cent reported long term condition(s). The lowest proportion of people reporting one or more recent illness (78.6%) was recorded by people in the acceptable weight range, while those who were underweight were least likely to report one or more long-term conditions (73.3%). However there were variations across age groups as shown in Table 5.4.

For all body mass categories, females were more likely to report one or more recent and/or long-term condition than males. Overall, females classified as obese reported the highest occurrence of two or more recent conditions (65.6%) and long-term conditions (64.3%).

The highest average number of conditions (3.9) were reported by people classified as obese, and this relationship was true for all age groups over 24 years (Table 5.5). People aged 65 years and over who were obese had the highest average number of conditions (5.3) of all age groups. In general, people in the younger age groups reported a lower average number of conditions than those in older age groups, regardless of body mass.

### Types of conditions

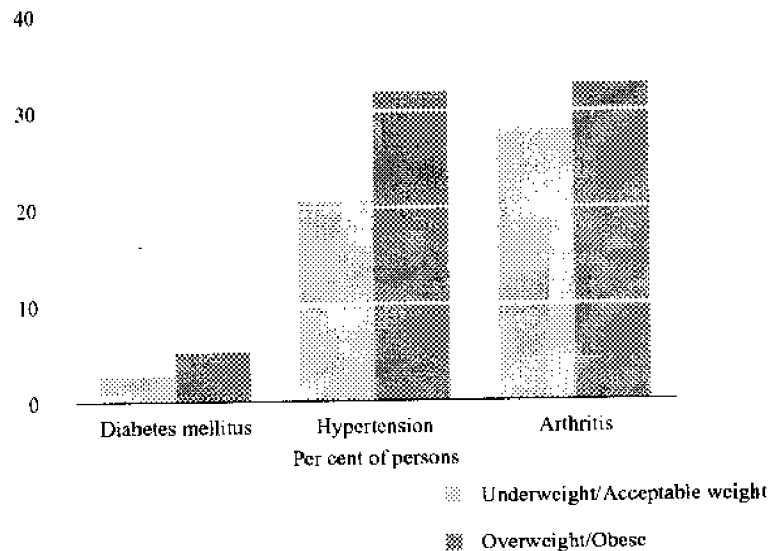
The level of association between body mass and illness conditions is higher for some types of conditions than for others; most notably for the condition groups endocrine, nutritional and metabolic diseases and immunity disorders, circulatory conditions and musculoskeletal conditions. Selected illness conditions from those groups are discussed below.

The prevalence of diabetes mellitus was higher among people who were obese (5.0%) and overweight (2.4%) than people who are underweight (0.6%) and acceptable weight (1.3%). This was discernible in persons in younger age groups, but was most prominent among people aged 45 years and over. For example, higher proportion of people aged 45 years and over who were obese or overweight reported diabetes than those who were underweight or acceptable weight (7.9% and 4.2% respectively compared with 1.9% and 2.9%). Females classified as obese reported a higher prevalence of diabetes than males for all ages. (Table 5.6).

Of those people who reported they had high cholesterol, 48.3 per cent were classified overweight or obese, compared with 36.5 per cent of the adult population overall. Although over three-quarters (76.0%) of people with high cholesterol were aged 45 years and over, the association between high cholesterol and body mass was slightly higher in the younger 18 to 44 year age group.

There was a strong association between the prevalence of hypertension and high body mass for all age groups, but was most notable for people aged 45 years and over. Some 20.7 per cent of people aged 45 years and over who were underweight or acceptable weight reported hypertension compared with 32.0 per cent of people who were overweight or obese in this age group.

**CHART 5.2. PERSONS AGED 45 YEARS AND OVER: SELECTED RECENT AND/OR LONG-TERM CONDITIONS BY BODY MASS, AUSTRALIA, 1989-90**



Research has indicated that body mass may be a risk factor for heart disease. Results of the survey showed that a slightly higher proportion of people who were overweight and obese reported heart disease compared with those who were underweight or acceptable weight. Among persons who were aged 65 years and over there was no clear association between heart disease and body mass, but for males aged 45 to 64 years some association was evident. Overall, the data suggests that age rather than body mass, is a key factor in the prevalence of heart disease.

As shown in Chart 5.2 the incidence of arthritis and rheumatism increased as body mass increased. This relationship was particularly evident in the 18 to 44 year age group despite the lower prevalence of this condition in younger age groups. The results show the condition to be more prevalent in people aged 45 years and over who were obese (38.1%) than for any other body mass index group.



Whereas in most cases the prevalence of conditions is higher among people classified overweight/obese, for respiratory conditions a small but reverse trend was evident. The prevalence of respiratory conditions was highest among underweight people (36.1%), and the pattern was most evident in the 18 to 44 year age group.

### DIETARY CHANGES

Information was collected in the National Health Survey about sustained changes people had made in their diet during the previous two years. This information cannot be directly related to body mass, although it is notable that of those people aged 18 years and over who reported dietary change(s), 25.5 per cent said they changed because of a medical condition they had, most commonly high cholesterol, diabetes/high blood sugar and obesity. A further 29.8 per cent said they changed their diet to improve their general health, and 15.1 per cent (18.1% of females) changed their diet to lose weight. Of those people classified as overweight and obese, 42.9 per cent and 46.1 per cent respectively said they had changed their diet in the previous two years.

Generally people in younger age groups showed a greater likelihood of increasing their consumption of 'healthy' food (e.g. vegetables, fruit, fish) while people in the middle age groups showed a greater tendency to decrease their consumption of 'unhealthy' food, such as fried foods, salt, sugar, cakes and pastries. Females aged 65 years and over were less likely to make the selected 'healthy' changes to their diet than any other age group (Table 5.8). Of those who did change their diet, the majority did so as a result of a medical condition (40.8%). Females aged 18 to 24 years showed a greater likelihood of increasing bread consumption, vegetables and fresh fruit than any other age group and also recorded the highest proportion to decrease sugar and the highest proportion to change their diet in order to lose weight (21.6%). Females aged 45 to 64 years were more likely to decrease salt, fat on meat and the consumption of cakes, pastries and desserts than any other age group.

Males aged 18 to 24 years were also most likely to increase the consumption of vegetables, fresh fruit and bread, but were least likely to reduce the unhealthy foods in their diet than other age groups. However this pattern changed for males aged 45 to 64 years, who were the most likely to decrease unhealthy foods, i.e. fat on meat, fried foods, salt, sugar, cakes, pastries and desserts than any other age group. The reasons most commonly reported for these changes were 'Improve health' (22.3%) and high cholesterol (17.8%). Males and females aged 45 to 64 years were also more likely to increase fish consumption than other age groups.

### SUMMARY

Based on self-reported height and weight, 36.5 per cent of adult Australians were classified overweight or obese. Overweight and obesity was most common among males in middle age groups, and among females in older age groups.

Results of the survey suggest an association between body mass and the likelihood of illness. The prevalence of recent and long-term conditions was generally highest among those classified as obese, and to a lesser degree among those overweight. These associations were strong for conditions such as diabetes, hypertension and rheumatism and arthritis.

TABLE 5.1. PERSONS AGED 18 YEARS AND OVER : BODY MASS(a) BY SELECTED CHARACTERISTICS  
AUSTRALIA, 1989-90

Selected characteristics	('000)					(Per cent)						
	Under-weight	Acceptable	Over-weight	Obese	Not avail-able	Total	Under-weight	Acceptable	Over-weight	Obese	Not avail-able	Total
<b>Sex—</b>												
Males	383.4	2,933.4	2,171.6	504.6	151.7	6,144.7	6.2	47.7	35.3	8.2	2.5	100.0
Females	1,084.4	3,065.7	1,291.5	572.8	285.1	6,299.5	17.2	48.7	20.5	9.1	4.5	100.0
<b>Age group (years) —</b>												
18 — 24	427.5	1,027.6	307.1	72.3	102.7	1,937.3	22.1	53.0	15.9	3.7	5.3	100.0
25 — 44	630.9	2,727.2	1,425.2	439.8	137.9	5,361.1	11.8	50.9	26.6	8.2	2.6	100.0
45 — 64	200.8	1,402.5	1,167.1	397.4	80.9	3,248.7	6.2	43.2	35.9	12.2	2.5	100.0
65 and over	208.7	841.7	563.6	167.8	115.3	1,897.1	11.0	44.4	29.7	8.8	6.1	100.0
<b>Country of birth —</b>												
Australia	1,096.6	4,395.9	2,471.3	753.3	322.7	9,039.7	12.1	48.6	27.3	8.3	3.6	100.0
New Zealand and other												
Oceania	38.7	133.4	77.8	20.8	6.2	276.9	14.0	48.2	28.1	7.5	2.2	100.0
United Kingdom and Ireland	123.0	600.0	322.9	90.3	32.2	1,168.6	10.5	51.3	27.6	7.7	2.8	100.0
Southern Europe	26.2	253.3	277.4	115.5	36.2	708.5	3.7	35.7	39.2	16.3	5.1	100.0
Other Europe and U.S.S.R.	32.2	203.7	142.6	48.7	16.4	443.6	7.2	45.9	32.1	11.0	3.7	100.0
Middle East	11.2	61.5	52.3	21.3	* 4.2	150.6	7.5	40.8	34.7	14.2	* 2.8	100.0
Southeast Asia	67.3	141.3	42.7	* 5.1	5.4	261.9	25.7	53.9	16.3	* 2.0	2.1	100.0
Northeast/ Southern Asia	49.0	117.1	35.6	9.1	7.3	218.1	22.5	53.7	16.3	4.2	3.3	100.0
Northern, South and Central												
America and the Caribbean	12.6	54.3	25.6	7.9	* 3.0	103.5	12.2	52.4	24.8	7.7	* 2.9	100.0
Africa (incl. North Africa)	11.1	38.6	14.8	* 5.1	* 3.2	72.8	15.2	53.0	20.3	* 7.1	* 4.3	100.0
<b>Total overseas born</b>	<b>371.3</b>	<b>1,603.2</b>	<b>991.7</b>	<b>324.1</b>	<b>114.2</b>	<b>3,404.5</b>	<b>10.9</b>	<b>47.1</b>	<b>29.1</b>	<b>9.5</b>	<b>3.4</b>	<b>100.0</b>
<b>Highest post school qualifications —</b>												
Still at school or never went to school	14.1	33.8	23.2	9.2	8.3	88.5	16.0	38.1	26.2	10.4	9.3	100.0
Bachelor degree or higher	128.9	638.6	269.7	47.6	16.7	1,101.5	11.7	58.0	24.5	4.3	1.5	100.0
Trade/Apprenticeship	105.4	845.5	659.4	160.0	34.6	1,804.9	5.8	46.8	36.5	8.9	1.9	100.0
Certificate/Diploma	371.0	1,313.4	604.6	175.7	68.1	2,532.9	14.6	51.9	23.9	6.9	2.7	100.0
Other	13.0	57.1	33.5	12.2	* 5.1	120.8	10.7	47.3	27.7	10.1	* 4.2	100.0
No post-school qualification	835.5	3,110.6	1,872.7	672.7	304.1	6,795.6	12.3	45.8	27.6	9.9	4.5	100.0
<b>Labour force status(b) —</b>												
Employed	851.4	3,834.1	2,143.3	584.1	202.4	7,615.3	11.2	50.3	28.1	7.7	2.7	100.0
Unemployed (looking for work)	82.4	278.5	134.6	49.0	22.4	566.8	14.5	49.1	23.7	8.6	3.9	100.0
Not in labour force	325.4	1,044.8	621.7	276.4	96.7	2,365.1	13.8	44.2	26.3	11.7	4.1	100.0
<b>Gross personal annual income(c) —</b>												
\$0 — 9,999	541.9	1,706.8	982.8	402.0	185.6	3,819.2	14.2	44.7	25.7	10.5	4.9	100.0
\$10,000 — 19,999	377.0	1,333.5	684.2	220.0	103.5	2,718.1	13.9	49.1	25.2	8.1	3.8	100.0
\$20,000 — 29,999	256.9	1,260.4	701.0	179.6	57.0	2,454.9	10.5	51.3	28.6	7.3	2.3	100.0
\$30,000 — 39,999	105.0	656.2	412.0	104.6	18.7	1,296.4	8.1	50.6	31.8	8.1	1.4	100.0
\$40,000 — 49,999	27.5	234.3	188.9	33.2	8.9	492.8	5.6	47.5	38.3	6.7	1.8	100.0
\$50,000 or more	18.7	244.5	195.6	40.2	* 4.4	503.3	3.7	48.6	38.9	8.0	* 0.9	100.0
Not stated	43.9	206.0	131.5	27.6	32.7	441.6	9.9	46.7	29.8	6.2	7.4	100.0
<b>Total</b>	<b>1,467.9</b>	<b>5,999.1</b>	<b>3,463.1</b>	<b>1,077.3</b>	<b>436.8</b>	<b>12,444.2</b>	<b>11.8</b>	<b>48.2</b>	<b>27.8</b>	<b>8.7</b>	<b>3.5</b>	<b>100.0</b>

(a) Derived from self-reported height and weight : see Appendix B. (b) Persons 18 to 64 years only. (c) Persons 18 years and over who reported a source of income.

TABLE 5.2. PERSONS AGED 18 YEARS AND OVER: BODY MASS(a) BY AGE BY SEX  
AUSTRALIA, 1989-90

Body mass	('000)					Per cent				
	Age group (years)									
	18 - 24	25 - 44	45 - 64	65 and over	Total	18 - 24	25 - 44	45 - 64	65 and over	Total
Males										
Underweight	132.1	136.2	56.7	58.4	383.4	13.4	5.0	3.4	7.2	6.2
Acceptable weight	560.2	1,330.3	672.2	370.8	2,933.4	56.9	49.2	40.7	45.9	47.7
Overweight	208.3	960.7	709.3	293.3	2,171.6	21.2	35.5	43.0	36.3	35.3
Obese	36.1	225.0	181.0	62.5	504.6	3.7	8.3	11.0	7.7	8.2
Not available	47.1	50.4	32.1	22.2	151.7	4.8	1.9	1.9	2.7	2.5
<b>Total</b>	<b>983.7</b>	<b>2,702.5</b>	<b>1,651.3</b>	<b>807.1</b>	<b>6,144.7</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Females										
Underweight	295.4	494.7	144.1	150.3	1,084.4	31.0	18.6	9.0	13.8	17.2
Acceptable weight	467.5	1,397.0	730.3	470.9	3,065.7	49.0	52.5	45.7	43.2	48.7
Overweight	98.8	464.6	457.8	270.3	1,291.5	10.4	17.5	28.7	24.8	20.5
Obese	36.2	214.8	216.4	105.3	572.8	3.8	8.1	13.5	9.7	9.1
Not available	55.7	87.5	48.8	93.2	285.1	5.8	3.3	3.1	8.5	4.5
<b>Total</b>	<b>953.6</b>	<b>2,658.6</b>	<b>1,597.4</b>	<b>1,089.9</b>	<b>6,299.5</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Persons										
Underweight	427.5	630.9	200.8	208.7	1,467.9	22.1	11.8	6.2	11.0	11.8
Acceptable weight	1,027.6	2,727.2	1,402.5	841.7	5,999.1	53.0	50.9	43.2	44.4	48.2
Overweight	307.1	1,425.2	1,167.1	563.6	3,463.1	15.9	26.6	35.9	29.7	27.8
Obese	72.3	439.8	397.4	167.8	1,077.3	3.7	8.2	12.2	8.8	8.7
Not available	102.7	137.9	80.9	115.3	436.8	5.3	2.6	2.5	6.1	3.5
<b>Total</b>	<b>1,937.3</b>	<b>5,361.1</b>	<b>3,248.7</b>	<b>1,897.1</b>	<b>12,444.2</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Derived from self-reported height and weight : see Appendix B.

TABLE 5.3. PERSONS AGED 18 YEARS AND OVER: BODY MASS(a) BY SELF ASSESSED HEALTH STATUS BY AGE BY SEX  
AUSTRALIA, 1989-90  
('000)

Self assessed health status	Underweight		Acceptable weight		Overweight		Obese		Not available		Total							
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons						
	18—24 years																	
Excellent	51.6	99.1	150.7	225.0	149.2	374.3	72.5	26.0	98.5	7.7	9.2	16.9	12.1	11.0	23.0	369.0	294.4	663.4
Good	67.9	159.7	227.7	282.4	272.1	554.5	113.2	56.5	169.7	20.2	16.0	36.2	26.6	36.3	62.9	510.3	540.7	1,051.0
Fair	11.4	29.8	41.2	49.2	41.1	90.3	20.4	15.1	35.6	7.5	11.0	18.6	7.3	8.1	15.4	95.8	105.2	201.0
Poor	**	6.8	7.9	* 3.5	* 5.1	8.6	* 2.1	**	* 3.3	**	**	**	**	**	* 1.4	8.6	13.4	22.0
Total	132.1	295.4	427.5	560.2	467.5	1,027.6	208.3	98.8	307.1	36.1	36.2	72.3	47.1	55.7	102.7	983.7	953.6	1,937.3
	25—44 years																	
Excellent	35.2	192.3	227.5	544.1	571.1	1,115.1	325.0	131.6	456.6	54.8	49.8	104.6	11.9	20.6	32.5	970.9	965.4	1,936.3
Good	78.0	243.8	321.8	659.1	682.8	1,341.8	520.3	257.8	778.1	127.6	121.7	249.3	30.4	49.5	79.9	1,415.3	1,355.6	2,770.9
Fair	20.0	47.8	67.9	112.4	125.9	238.4	101.1	64.6	165.7	35.7	33.5	69.1	6.9	14.1	21.0	276.1	285.9	562.0
Poor	* 3.0	10.8	13.8	14.7	17.2	31.9	14.3	10.6	24.9	6.9	9.9	16.8	* 1.3	* 3.2	* 4.6	40.2	51.7	91.9
Total	136.2	494.7	630.9	1,330.3	1,397.0	2,727.2	960.7	464.6	1,425.2	225.0	214.8	439.8	50.4	87.5	137.9	2,702.5	2,658.6	5,361.1
	45—64 years																	
Excellent	12.4	43.2	55.6	181.3	212.6	393.9	160.6	94.4	255.0	23.9	29.7	53.7	* 4.4	9.5	13.9	382.7	389.5	772.2
Good	20.8	67.9	88.7	331.1	366.4	697.5	361.5	225.0	586.5	87.0	90.4	177.4	15.6	21.5	37.0	816.0	771.2	1,587.1
Fair	15.5	23.7	39.2	124.0	120.7	244.8	139.2	108.8	247.9	49.1	70.1	119.2	8.8	12.1	20.9	336.6	335.3	672.0
Poor	8.0	9.4	17.4	35.8	30.5	66.3	48.0	29.6	77.6	20.9	26.2	47.1	* 3.3	5.8	9.1	116.0	101.4	217.5
Total	56.7	144.1	200.8	672.2	730.3	1,402.5	709.3	457.8	1,167.1	181.0	216.4	397.4	32.1	48.8	80.9	1,651.3	1,597.4	3,248.7
	65 years and over																	
Excellent	6.9	23.9	30.8	53.3	73.3	126.6	37.8	34.3	72.1	7.4	12.1	19.5	* 1.4	11.1	12.5	106.8	154.7	261.5
Good	20.6	59.4	80.0	166.1	219.7	385.9	126.1	117.7	243.8	23.2	36.5	59.7	11.2	31.8	42.9	347.2	465.1	812.2
Fair	14.8	47.2	61.9	106.7	135.7	242.4	94.3	85.6	180.0	21.8	41.9	63.7	6.6	34.1	40.7	244.2	344.5	588.7
Poor	16.2	19.8	36.0	44.6	42.2	86.8	35.1	32.7	67.8	10.0	14.9	24.9	* 3.0	16.2	19.2	108.9	125.7	234.6
Total	58.4	150.3	208.7	370.8	470.9	841.7	293.3	270.3	563.6	62.5	105.3	167.8	22.2	93.2	115.3	807.1	1,089.9	1,897.1
	Total																	
Excellent	106.1	358.4	464.5	1,003.7	1,006.3	2,009.9	595.9	286.3	882.2	93.9	100.8	194.6	29.8	52.2	82.0	1,829.3	1,803.9	3,633.3
Good	187.3	530.9	718.2	1,438.7	1,541.0	2,979.7	1,121.1	657.0	1,778.1	258.0	264.6	522.6	83.6	139.0	222.7	3,088.7	3,132.5	6,221.2
Fair	61.7	148.4	210.1	392.4	423.5	815.9	355.0	274.1	629.2	114.2	156.5	270.6	29.5	68.4	97.9	952.8	1,070.9	2,023.7
Poor	28.3	46.8	75.1	98.6	94.9	193.5	99.6	74.1	173.6	38.5	50.9	89.5	8.8	25.5	34.3	273.8	292.2	566.0
Total	383.4	1,084.4	1,467.9	2,933.4	3,065.7	5,999.1	2,171.6	1,291.5	3,463.1	504.6	572.8	1,077.3	151.7	285.1	436.8	6,144.7	6,299.5	12,444.2

(a) Derived from self-reported height and weight: see Appendix B.

TABLE 5.3. PERSONS AGED 18 YEARS AND OVER: BODY MASS(%) BY SELF ASSESSED HEALTH STATUS BY AGE BY SEX  
AUSTRALIA, 1989-90  
(Per cent)

Self assessed health status	Underweight		Acceptable weight		Overweight		Obese		Not available		Total						
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons					
18 — 24 years																	
Excellent	39.1	33.5	35.3	40.2	31.9	36.4	34.8	26.3	32.1	21.3	25.3	23.3	19.7	22.4	37.5	30.9	34.2
Good	51.5	54.1	53.3	50.4	58.2	54.0	54.3	57.2	55.3	55.9	44.2	50.0	65.2	61.2	51.9	56.7	54.2
Fair	8.6	10.1	9.6	8.8	8.8	9.8	9.8	15.3	11.6	20.8	30.5	25.7	15.4	14.6	9.7	11.0	10.4
Poor	**	2.3	1.9	0.6	1.1	0.8	1.0	**	1.1	**	**	**	**	1.4	0.9	1.4	1.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
25 — 44 years																	
Excellent	25.8	38.9	36.1	40.9	40.9	33.8	28.3	32.0	24.4	23.2	23.8	23.5	23.6	23.6	35.9	36.3	36.1
Good	57.3	49.3	51.0	49.5	48.9	49.2	54.2	55.5	54.6	56.7	56.6	60.3	56.6	57.9	52.4	51.0	51.7
Fair	14.7	9.7	10.8	8.5	9.0	8.7	10.5	13.9	11.6	15.9	15.6	15.7	13.6	16.1	15.2	10.2	10.5
Poor	2.2	2.2	2.2	1.1	1.2	1.2	1.5	2.3	1.7	3.1	4.6	3.8	3.7	3.3	1.5	1.9	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
45 — 64 years																	
Excellent	21.9	30.0	27.7	27.0	29.1	28.1	22.6	20.6	21.9	13.2	13.7	13.5	13.8	19.4	17.2	23.2	24.4
Good	36.6	47.1	44.1	49.3	50.2	49.7	51.0	49.1	50.3	48.1	41.8	44.6	48.5	44.0	45.8	49.4	48.3
Fair	27.4	16.4	19.5	18.5	16.5	17.5	19.6	23.8	21.2	27.2	32.4	30.0	27.4	24.8	25.8	20.4	20.7
Poor	14.2	6.5	8.7	5.3	4.2	4.7	6.8	6.5	6.7	11.5	12.1	11.8	10.3	11.8	11.2	7.0	6.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
65 years and over																	
Excellent	11.8	15.9	14.8	14.4	15.6	15.0	12.9	12.7	12.8	11.9	11.5	11.6	6.4	11.9	10.8	13.2	14.2
Good	35.2	39.5	38.3	44.8	46.7	45.8	43.0	43.5	43.3	37.2	34.6	35.6	50.4	34.1	37.2	43.0	42.7
Fair	25.3	31.4	29.7	28.8	28.8	28.8	32.2	31.7	31.9	34.9	39.8	38.0	29.6	36.6	35.2	30.3	31.6
Poor	27.7	13.2	17.2	12.0	9.0	10.3	12.0	12.1	12.0	16.1	14.1	14.8	13.6	17.4	16.7	13.5	11.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total																	
Excellent	27.7	33.0	31.6	34.2	32.8	33.5	27.4	22.2	25.5	18.6	17.6	18.1	19.6	18.3	18.8	29.8	28.6
Good	48.8	49.0	48.9	49.0	50.3	49.7	51.6	50.9	51.3	51.1	46.2	48.5	55.1	48.8	51.0	50.3	49.7
Fair	16.1	13.7	14.3	13.4	13.8	13.6	16.3	21.2	18.2	22.6	27.3	25.1	19.4	24.0	22.4	15.5	17.0
Poor	7.4	4.3	5.1	3.4	3.1	3.2	4.6	5.7	5.0	7.6	8.9	8.3	5.8	9.0	7.9	4.5	4.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Derived from self-reported height and weight: see Appendix B.

TABLE 5.4. PERSONS AGED 18 YEARS AND OVER: BODY MASS (a) BY NUMBER OF RECENT AND/OR LONG-TERM CONDITIONS BY AGE BY SEX  
AUSTRALIA, 1989-90  
(<sup>'000</sup>)

Number of recent and long-term illnesses	Underweight		Acceptable weight		Overweight		Obese		Not available		Total							
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons						
18—44 years																		
<i>Number of recent illnesses—</i>																		
None	83.6	135.3	218.9	624.7	323.2	947.9	364.7	86.4	451.1	74.1	37.8	111.9	37.1	33.1	70.1	1,184.1	615.8	1,799.9
One	93.8	255.8	349.6	661.2	599.3	1,260.5	402.6	167.6	570.2	91.6	69.1	160.7	27.3	44.7	72.0	1,276.5	1,136.5	2,413.0
Two to three	81.3	311.0	392.3	521.7	758.8	1,280.5	352.0	238.2	590.2	75.6	106.9	182.5	29.0	54.0	83.0	1,059.7	1,468.8	2,528.4
Four or more	9.6	88.0	97.6	82.7	183.2	266.0	49.7	71.2	120.9	19.8	37.3	57.1	* 4.1	11.4	15.5	165.9	391.1	557.1
<i>Number of long-term conditions—</i>																		
None	109.1	253.6	362.7	743.5	616.6	1,360.2	436.2	162.7	598.9	85.2	63.4	148.6	37.9	44.1	81.9	1,411.9	1,140.4	2,552.3
One	94.7	260.5	355.2	616.7	576.8	1,193.4	380.0	165.7	545.8	86.2	73.4	159.7	35.3	46.6	81.9	1,212.9	1,123.0	2,335.9
Two to three	55.4	224.0	279.4	455.0	534.8	989.9	298.6	175.7	474.3	72.7	82.0	154.7	20.4	39.6	60.1	902.2	1,056.1	1,958.3
Four or more	9.0	52.1	61.1	75.2	136.2	211.4	54.2	59.3	113.5	16.9	32.2	49.1	* 3.9	12.9	16.7	159.2	292.7	451.9
<i>Total</i>	268.3	790.1	1,058.4	1,890.4	1,864.5	3,754.9	1,169.0	563.4	1,732.4	261.1	251.1	572.2	97.5	143.2	240.6	3,686.2	3,612.2	7,298.4
45 years and over																		
<i>Number of recent illnesses—</i>																		
None	16.9	29.8	46.7	210.5	126.3	336.8	179.6	60.8	240.4	41.2	27.1	68.3	12.5	14.1	26.6	460.6	258.1	718.8
One	31.1	60.7	91.8	281.5	276.2	557.8	280.3	152.6	432.9	62.1	63.3	125.5	16.3	32.7	48.9	671.3	585.5	1,256.9
Two to three	44.5	126.0	170.5	394.3	511.9	906.3	376.7	299.8	676.5	88.6	123.8	212.3	16.2	55.9	72.1	920.3	1,117.4	2,037.7
Four or more	22.8	77.7	100.5	156.6	286.8	443.3	166.0	214.9	380.9	51.6	107.5	159.1	9.2	39.4	48.6	406.2	726.3	1,132.5
<i>Number of long-term conditions—</i>																		
None	12.3	17.5	29.9	101.6	86.3	187.9	97.3	49.2	146.5	22.2	22.7	44.9	7.8	9.8	17.6	241.2	185.5	426.7
One	26.0	58.9	84.9	246.9	235.6	482.5	237.0	127.1	364.1	48.0	45.0	92.9	14.6	25.3	39.9	572.5	491.8	1,064.3
Two to three	41.1	135.3	176.5	437.0	540.8	977.8	404.8	312.1	716.9	101.4	129.7	231.1	18.6	62.7	81.4	1,003.0	1,180.7	2,183.7
Four or more	35.6	82.7	118.3	257.4	338.6	596.0	263.5	239.7	503.2	71.9	124.3	196.3	13.2	44.2	57.4	641.7	829.4	1,471.1
<i>Total</i>	115.1	294.4	409.5	1,043.0	1,201.2	2,244.2	1,002.6	728.1	1,730.7	243.5	321.7	565.2	54.2	142.0	196.2	2,458.4	2,687.3	5,145.8

TABLE 5.4. PERSONS AGED 18 YEARS AND OVER: BODY MASS(a) BY NUMBER OF RECENT AND/OR LONG-TERM CONDITIONS BY AGE BY SEX  
AUSTRALIA, 1989-90  
('000) ---continued

Number of recent and long-term illnesses	Underweight		Acceptable weight		Overweight		Obese		Not available		Total							
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons						
Total (Number)																		
<i>Number of recent illnesses—</i>																		
None	100.5	165.1	265.6	835.2	449.5	1,284.7	544.2	147.2	691.4	115.2	64.9	180.1	49.6	47.2	96.7	1,644.7	873.9	2,518.6
One	124.9	316.6	441.4	942.8	875.5	1,818.2	682.9	320.2	1,003.1	153.7	132.4	286.2	43.6	77.3	120.9	1,947.9	1,722.0	3,669.9
Two to three	125.7	437.0	562.8	916.1	1,270.7	2,186.8	728.7	538.0	1,266.7	164.2	230.6	394.8	45.2	109.9	155.1	1,980.0	2,586.2	4,566.1
Four or more	32.3	165.7	198.1	239.3	470.0	709.3	215.7	286.1	501.8	71.4	144.8	216.2	13.3	50.8	64.1	572.1	1,117.4	1,689.5
<i>Number of long-term conditions—</i>																		
None	121.5	271.1	392.6	845.2	702.9	1,548.0	533.5	211.9	745.4	107.4	86.2	193.5	45.6	53.9	99.5	1,653.1	1,325.9	2,979.0
One	120.7	319.3	440.1	863.6	812.3	1,675.9	617.1	292.8	909.9	134.2	118.4	252.6	49.9	71.9	121.8	1,785.5	1,614.8	3,400.2
Two to three	96.6	359.3	455.9	892.0	1,075.6	1,967.7	703.4	487.8	1,191.2	174.1	211.7	385.8	39.1	102.4	141.4	1,905.2	2,236.8	4,142.0
Four or more	44.6	134.7	179.4	332.6	474.8	807.4	317.6	299.0	616.7	88.9	156.5	245.4	17.1	57.0	74.1	800.8	1,122.1	1,922.9
<b>Total</b>	<b>383.4</b>	<b>1,084.4</b>	<b>1,467.9</b>	<b>2,933.4</b>	<b>3,065.7</b>	<b>5,999.1</b>	<b>2,171.6</b>	<b>1,291.5</b>	<b>3,463.1</b>	<b>504.6</b>	<b>572.8</b>	<b>1,077.3</b>	<b>151.7</b>	<b>285.1</b>	<b>436.8</b>	<b>6,144.7</b>	<b>6,295.5</b>	<b>12,444.2</b>
Percent																		
<i>Number of recent illnesses—</i>																		
None	26.2	15.2	18.1	28.5	14.7	21.4	25.1	11.4	20.0	22.8	11.3	16.7	32.7	16.5	22.1	26.8	13.9	20.2
One	32.6	29.2	30.1	32.1	28.6	30.3	31.4	24.8	29.0	30.5	23.1	26.6	28.7	27.1	27.7	31.7	27.3	29.5
Two to three	32.8	40.3	38.3	31.2	41.4	36.5	33.6	41.7	36.6	32.5	40.3	36.6	29.8	38.5	35.5	32.2	41.1	36.7
Four or more	8.4	15.3	13.5	8.2	15.3	11.8	9.9	22.2	14.5	14.2	25.3	20.1	8.8	17.8	14.7	9.3	17.7	13.6
<i>Number of long-term conditions—</i>																		
None	31.7	25.0	26.7	28.8	22.9	25.8	24.6	16.4	21.5	21.3	15.0	18.0	30.1	18.9	22.8	26.9	21.0	23.9
One	31.5	29.4	30.0	29.4	26.5	27.9	28.4	22.7	26.3	26.6	20.7	23.4	32.9	25.2	27.9	29.1	25.6	27.3
Two to three	25.2	33.1	31.1	30.4	35.1	32.8	32.4	37.8	34.4	34.5	37.0	35.8	25.8	35.9	32.4	31.0	35.5	33.3
Four or more	11.6	12.4	12.2	11.3	15.5	13.5	14.6	23.2	17.8	17.6	27.3	22.8	11.3	20.0	17.0	13.0	17.8	15.5
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Derived from self-reported height and weight: see Appendix B.

TABLE 5.5. AVERAGE NUMBER OF CONDITIONS EXPERIENCED(a): PERSONS AGED 18 YEARS AND OVER BY SELECTED CHARACTERISTICS BY BODY MASS(b)  
AUSTRALIA, 1989-90

<i>Selected characteristics</i>	<i>Underweight</i>	<i>Acceptable weight</i>	<i>Overweight</i>	<i>Obese</i>	<i>Not available</i>	<i>Total</i>
<i>Sex —</i>						
Males	3.0	3.0	3.3	3.5	2.9	3.2
Females	3.6	3.7	4.1	4.3	3.8	3.8
<i>Age group (years) —</i>						
18 — 24	2.9	2.7	2.6	2.8	2.6	2.7
25 — 44	3.1	2.9	2.9	3.2	3.0	3.0
45 — 64	4.0	3.8	3.9	4.3	3.7	3.9
65 and over	5.0	4.8	5.1	5.3	4.8	5.0
<i>Birthplace —</i>						
Australia	3.5	3.4	3.6	4.0	3.5	3.5
New Zealand and other Oceania	3.1	3.1	3.1	3.1	2.7	3.1
United Kingdom and Ireland	3.9	3.6	3.7	4.2	4.1	3.7
Southern Europe	2.8	2.9	3.2	3.3	3.6	3.1
Western Europe	3.8	3.3	3.6	3.7	4.0	3.5
Other Europe and U.S.S.R.	3.8	3.4	3.8	4.5	4.1	3.7
Middle East	2.9	2.7	3.1	3.5	* 2.6	2.9
Southeast Asia	2.6	2.6	2.9	* 4.0	2.5	2.7
Northeast/Southern Asia	2.6	2.9	3.2	2.9	3.3	2.9
America and the Caribbean(c)	3.1	3.2	3.5	3.7	* 3.5	3.3
Africa (incl. North Africa)	2.8	3.4	4.0	* 3.7	* 2.5	3.4
<i>Total overseas born</i>	3.2	3.2	3.4	3.7	3.6	3.3
<i>Highest post school qualifications —</i>						
Still at school or never went to school	2.6	2.6	3.7	3.5	3.5	3.0
Bachelor degree or higher	3.2	3.2	3.4	3.6	3.3	3.3
Trade/Apprenticeship	3.5	3.2	3.3	3.5	3.0	3.3
Certificate/Diploma	3.4	3.5	3.8	4.2	3.7	3.6
Other	3.5	3.6	4.2	3.8	* 3.8	3.8
No post-school qualification	3.4	3.4	3.7	4.0	3.5	3.5
<i>Labour force status(d) —</i>						
Employed	3.0	3.0	3.0	3.3	2.9	3.0
Unemployed (looking for work)	3.1	3.1	3.1	3.7	3.0	3.1
Not in labour force	3.5	3.6	4.2	4.5	3.5	3.8
<i>Gross personal annual income(e) —</i>						
\$0 — 9,999	3.8	4.0	4.4	4.7	4.0	4.1
\$10,000 — 19,999	3.2	3.2	3.6	3.7	3.2	3.4
\$20,000 — 29,999	3.1	3.0	3.0	3.3	2.9	3.0
\$30,000 — 39,999	3.1	3.1	3.1	3.4	2.8	3.1
\$40,000 — 49,999	3.1	3.1	3.1	3.2	3.2	3.1
\$50,000 or more	2.9	3.3	3.2	3.0	* 2.7	3.2
Not stated	3.5	3.2	3.2	3.2	3.5	3.3
<b>Total</b>	<b>3.4</b>	<b>3.4</b>	<b>3.6</b>	<b>3.9</b>	<b>3.5</b>	<b>3.5</b>

(a) Reported as recent and/or long-term conditions. (b) Derived from self-reported height and weight: see Appendix B. (c) Includes Northern, South and Central America. (d) Persons aged 18 to 64 years only. (e) Persons aged 18 years and over who reported a source of income.



TABLE 5.6. PERSONS AGED 18 YEARS AND OVER : BODY MASS(a) BY SELECTED CONDITIONS REPORTED(b) BY AGE AND SEX  
AUSTRALIA, 1989-90  
( '000)

Type of condition reported	Total								
	Underweight	Acceptable weight	Overweight	Obese	Not available	Males	Females	Persons	
	18 — 44 years								
No illness	465.4	1,786.5	799.0	205.8	111.1	1,943.5	1,424.2	3,367.7	
Neoplasms	14.2	36.4	20.5	6.2	**	29.0	49.0	78.0	
Gout	**	10.1	19.3	14.7	**	40.4	* 5.1	45.5	
Diabetes mellitus	* 1.5	13.3	9.6	9.2	**	15.7	18.4	34.1	
Obesity	**	* 5.3	7.8	11.5	**	* 4.3	21.1	25.4	
High cholesterol	5.7	46.1	37.5	13.3	* 1.4	66.8	37.1	103.9	
Nerves, tension, nervousness, emotional problems	26.9	77.6	36.2	19.0	7.0	60.1	106.6	166.7	
Depression	* 5.0	16.5	10.6	6.9	**	11.9	28.4	40.3	
Hypertension	10.8	60.1	71.8	43.6	5.8	99.4	92.6	192.0	
Heart disease	* 3.6	12.5	10.7	* 3.9	**	15.5	15.4	30.9	
Bronchitis, emphysema	33.0	93.4	46.3	14.3	8.1	80.1	114.9	195.0	
Asthma	84.5	259.7	114.3	41.9	23.9	239.6	284.6	524.3	
Ulcer	12.4	41.2	29.1	11.6	* 2.4	61.1	35.5	96.6	
Other diseases of the digestive system	39.0	127.9	72.9	33.6	9.1	129.7	152.9	282.5	
Kidney diseases	6.6	32.8	14.8	8.4	* 4.1	23.8	43.0	66.7	
Arthritis	34.1	170.4	102.3	41.3	11.4	170.5	189.0	359.5	
Disorders of the intervertebral disc	15.9	90.9	68.6	20.7	6.1	119.3	82.8	202.1	
Back trouble (unspecified)	108.8	447.6	230.2	74.6	24.3	476.5	409.2	885.7	
<b>Total</b>	<b>1,058.4</b>	<b>3,754.9</b>	<b>1,732.4</b>	<b>512.2</b>	<b>240.6</b>	<b>3,686.2</b>	<b>3,612.2</b>	<b>7,298.4</b>	
	45 years and over								
No illness	66.8	439.8	330.7	94.4	35.9	583.4	384.2	967.6	
Neoplasms	33.2	127.1	100.6	25.4	7.8	154.6	139.4	294.0	
Gout	* 4.4	52.1	89.6	38.2	* 3.2	151.2	36.2	187.4	
Diabetes mellitus	7.7	64.6	71.9	44.8	7.7	102.0	94.6	196.6	
Obesity	**	* 3.4	8.8	9.5	**	6.5	15.6	22.1	
High cholesterol	19.3	142.5	119.7	38.3	8.9	128.8	200.0	328.8	
Nerves, tension, nervousness, emotional problems	30.4	126.1	98.6	37.9	17.8	97.3	213.5	310.8	
Depression	* 4.4	26.3	24.1	9.5	* 3.7	24.3	43.7	68.0	
Hypertension	75.2	474.8	507.9	227.6	57.7	547.3	795.8	1,343.1	
Heart disease	38.9	168.4	139.6	44.2	18.0	218.3	190.9	409.2	
Bronchitis, emphysema	34.4	119.7	88.8	38.2	9.4	151.9	138.6	290.5	
Asthma	23.6	121.6	93.9	46.1	13.7	130.1	168.9	298.9	

TABLE 5.6. PERSONS AGED 18 YEARS AND OVER : BODY MASS (a) BY SELECTED CONDITIONS REPORTED (b) BY AGE AND SEX  
 AUSTRALIA, 1989-90  
 ('000)—continued

Type of condition reported	45 years and over					Total		
	Underweight	Acceptable weight	Overweight	Obese	Not available	Males	Females	Persons
Ulcer	18.5	97.6	80.9	22.8	* 5.4	125.9	99.3	225.2
Other diseases of the digestive system	44.2	181.1	146.5	52.5	18.7	189.1	254.0	443.1
Kidney diseases	9.0	41.5	34.7	16.6	6.8	54.2	54.4	108.6
Arthritis	128.6	617.0	537.1	215.2	66.3	579.4	984.8	1,564.2
Disorders of the intervertebral disc	17.6	114.9	104.3	26.1	* 3.8	154.4	112.3	266.7
Back trouble (unspecified)	36.9	275.5	230.7	58.9	17.8	336.0	283.8	619.9
Total	409.5	2,244.2	1,730.7	565.2	196.2	2,458.4	2,687.3	5,145.8
Total (Number)								
No illness	532.2	2,226.3	1,129.7	300.2	147.0	2,526.9	1,808.4	4,335.4
Neoplasms	47.3	163.4	121.2	31.5	8.5	183.6	188.4	372.0
Gout	* 5.0	62.2	108.9	52.9	* 4.0	191.6	41.3	232.9
Diabetes mellitus	9.2	77.9	81.4	53.9	8.2	117.7	113.0	230.7
Obesity	**	8.7	16.6	21.0	**	10.8	36.7	47.5
High cholesterol	25.0	188.6	157.3	51.6	10.3	195.7	237.0	432.7
Nerves, tension, nervousness, emotional problems	57.3	203.7	134.8	56.9	24.8	157.5	320.1	477.6
Depression	9.4	42.8	34.7	16.4	* 4.9	36.2	72.1	108.3
Hypertension	86.0	334.8	579.7	271.1	63.5	646.7	888.4	1,535.1
Heart disease	42.5	80.9	150.3	48.1	18.3	233.9	206.3	440.1
Bronchitis, emphysema	67.3	113.1	135.2	52.4	17.5	232.0	253.5	485.5
Asthma	108.1	181.3	208.2	88.0	37.6	369.7	453.5	823.2
Ulcer	30.9	138.8	110.0	34.4	7.8	187.0	134.8	321.8
Other diseases of the digestive system	83.2	309.0	219.4	86.1	27.8	318.7	406.9	725.6
Kidney diseases	15.6	74.2	49.5	25.0	10.9	77.9	97.4	175.3
Arthritis	162.7	787.4	639.4	256.5	77.7	749.9	1,173.8	1,923.6
Disorders of the intervertebral disc	33.5	205.7	172.9	46.8	9.9	273.7	195.1	468.8
Back trouble (unspecified)	145.7	723.1	461.0	133.5	42.2	812.5	693.0	1,505.5
Total	1,467.9	5,999.1	3,463.1	1,077.3	436.8	6,144.7	6,299.5	12,444.2

(a) Derived from self-reported height and weight : see Appendix B. (b) Reported as recent and/or long-term conditions. Each person may have reported more than one type of condition.

TABLE 5.6. PERSONS AGED 18 YEARS AND OVER : BODY MASS(a) BY SELECTED CONDITIONS REPORTED(b) BY AGE AND SEX  
 AUSTRALIA, 1989-90  
 (Per cent)—continued

Type of condition reported	Total							
	Underweight	Acceptable weight	Overweight	Obese	Not available	Males	Females	Persons
No illness	36.3	37.1	32.6	27.9	33.6	41.1	28.7	34.8
Neoplasms	3.2	2.7	3.5	2.9	2.0	3.0	3.0	3.0
Gout	* 0.3	1.0	3.1	4.9	* 0.9	3.1	0.7	1.9
Diabetes mellitus	0.6	1.3	2.4	5.0	1.9	1.9	1.8	1.9
Obesity	**	0.1	0.5	2.0	**	0.2	0.6	0.4
High cholesterol	1.7	3.1	4.5	4.8	2.4	3.2	3.8	3.5
Nerves, tension, nervousness, emotional problems	3.9	3.4	3.9	5.3	5.7	2.6	5.1	3.8
Depression	0.6	0.7	1.0	1.5	* 1.1	0.6	1.1	0.9
Hypertension	5.9	8.9	16.7	25.2	14.5	10.5	14.1	12.3
Heart disease	2.9	3.0	4.3	4.5	4.2	3.8	3.3	3.5
Bronchitis, emphysema	4.6	3.6	3.9	4.9	4.0	3.8	4.0	3.9
Asthma	7.4	6.4	6.0	8.2	8.6	6.0	7.2	6.6
Ulcer	2.1	2.3	3.2	3.2	1.8	3.0	2.1	2.6
Other diseases of the digestive system	5.7	5.2	6.3	8.0	6.4	5.2	6.5	5.8
Kidney diseases	1.1	1.2	1.4	2.3	2.5	1.3	1.5	1.4
Arthritis	11.1	13.1	18.5	23.8	17.8	12.2	18.6	15.5
Disorders of the intervertebral disc	2.3	3.4	5.0	4.3	2.3	4.5	3.1	3.8
Back trouble (unspecified)	9.9	12.1	13.3	12.4	9.7	13.2	11.0	12.1
<b>Total(c)</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

(a) Derived from self-reported height and weight: see Appendix B. (b) Reported as recent and/or long-term conditions. Each person may have reported more than one type of condition. (c) Selected conditions only are shown, and therefore components do not add to totals.

TABLE 5.7. PERSONS AGED 18 YEARS AND OVER WHO CHANGED THEIR DIET(a) DURING THE LAST TWO YEARS:  
REASON FOR CHANGE IN DIET(b) BY AGE BY SEX  
AUSTRALIA, 1989-90  
(\*000)

Reason for change in diet	18 - 24	25 - 44	45 - 64	65 and over	Total		
					Males	Females	Persons
— Number —							
<i>Medical condition —</i>							
Neoplasms	**	6.0	8.0	6.6	10.8	9.9	20.7
Thyroid disorders	**	* 2.0	**	**	**	* 2.5	* 3.3
Gout	**	* 2.3	* 1.5	* 1.4	* 4.4	**	* 5.2
Diabetes mellitus and high blood sugar	* 3.7	17.3	37.8	36.1	45.7	49.2	94.9
High blood sugar	* 1.3	* 4.0	* 3.6	* 2.8	* 4.5	7.3	11.8
Obesity	6.1	32.9	35.2	18.2	36.6	55.9	92.5
High cholesterol	* 5.2	117.4	232.9	84.1	220.0	219.7	439.6
Hypertension	**	23.7	48.0	15.0	47.5	40.4	88.0
Heart disease	**	7.7	33.0	25.6	47.7	18.5	66.2
Ulcer	* 2.3	12.0	13.9	6.8	20.2	14.8	35.0
Hernia	**	6.0	9.1	7.6	10.7	13.0	23.8
Other diseases of the digestive system	9.4	30.0	28.4	23.4	37.4	53.8	91.3
Allergy unspecified	* 4.9	15.8	5.9	**	6.4	21.2	27.6
Pregnancy supervision/ childbirth	* 4.9	19.1	**	**	**	24.0	24.0
<i>Total all conditions</i>	75.5	407.7	539.1	268.2	601.9	688.7	1,290.5
Lose weight	127.8	363.1	210.5	61.7	270.5	492.6	763.1
Improve general health	263.3	799.5	342.1	102.8	673.8	833.9	1,507.7
Ageing/physical growth	56.4	28.0	59.5	108.3	134.6	117.5	252.1
Change in activity levels	90.6	98.9	58.3	36.9	175.7	109.0	284.7
Other	233.6	477.7	181.1	65.4	471.1	486.8	957.9
<i>Total</i>	847.6	2,175.7	1,390.7	643.4	2,328.5	2,728.9	5,057.3
— Per cent —							
<i>Medical condition —</i>							
Neoplasms	**	0.3	0.6	1.0	0.5	0.4	0.4
Thyroid disorders	**	* 0.1	**	**	**	* 0.1	* 0.1
Gout	**	* 0.1	* 0.1	* 0.2	* 0.2	**	* 0.1
Diabetes mellitus and high blood sugar	* 0.4	0.8	2.7	5.6	2.0	1.8	1.9
High blood sugar	* 0.2	* 0.2	* 0.3	* 0.4	* 0.2	0.3	0.2
Obesity	0.7	1.5	2.5	2.8	1.6	2.0	1.8
High cholesterol	* 0.6	5.4	16.7	13.1	9.4	8.1	8.7
Hypertension	**	1.1	3.5	2.3	2.0	1.5	1.7
Heart disease	**	0.4	2.4	4.0	2.0	0.7	1.3
Ulcer	* 0.3	0.6	1.0	1.1	0.9	0.5	0.7
Hernia	**	0.3	0.7	1.2	0.5	0.5	0.5
Other diseases of the digestive system	1.1	1.4	2.0	3.6	1.6	2.0	1.8
Allergy unspecified	* 0.6	0.7	0.4	**	0.3	0.8	0.5
Pregnancy supervision/ childbirth	* 0.6	0.9	**	**	**	0.9	0.5
<i>Total all conditions</i>	8.9	18.7	38.8	41.7	25.8	25.2	25.5
Lose weight	15.1	16.7	15.1	9.6	11.6	18.1	15.1
Improve general health	31.1	36.7	24.6	16.0	28.9	30.6	29.8
Ageing/physical growth	6.7	1.3	4.3	16.8	5.8	4.3	5.0
Change in activity levels	10.7	4.5	4.2	5.7	7.5	4.0	5.6
Other	27.6	22.0	13.0	10.2	20.2	17.8	18.9
<i>Total</i>	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes persons who had changed the kind and/or amount of food eaten and those who reported some other change(s) to their diet. (b) Provision was made in the survey to record only one reason for changing diet.

TABLE 5.8. PERSONS AGED 18 YEARS AND OVER WHO HAD MADE HEALTHY CHANGES TO THEIR DIET: SELECTED TYPE OF CHANGE BY AGE AND SEX  
 AUSTRALIA, 1989-90  
 ('000)

<i>Selected healthy changes to diet</i>	18 - 24	25 - 44	45 - 64	65 and over	Total
Males					
Increased vegetables	210.1	509.2	264.3	84.0	1,067.6
Increased fresh fruit (including fruit juices)	217.3	517.1	276.4	102.6	1,113.4
Increased fish	117.2	367.7	234.0	78.2	797.1
Increased bread	151.8	205.4	73.8	30.7	461.7
Decreased fat on meat	174.9	571.2	357.0	131.6	1,234.7
Decreased fried foods	155.5	575.4	365.6	124.8	1,221.4
Decreased salt	150.7	441.2	283.9	115.7	991.5
Decreased sugar	133.7	376.4	228.0	89.7	827.8
Decreased cakes, pastries and desserts	164.2	393.4	265.8	108.1	931.4
<i>Total</i>	407.0	1,028.4	623.3	269.9	2,328.5
Females					
Increased vegetables	259.6	660.7	377.4	123.6	1,421.3
Increased fresh fruit (including fruit juices)	262.8	650.2	350.2	141.2	1,404.4
Increased fish	135.6	430.5	306.9	106.3	979.4
Increased bread	80.3	168.5	81.4	37.1	367.3
Decreased fat on meat	232.5	643.8	405.7	166.3	1,448.3
Decreased fried foods	235.6	675.7	421.5	159.0	1,491.8
Decreased salt	193.2	506.7	365.3	162.8	1,228.1
Decreased sugar	192.4	457.7	306.5	128.2	1,084.9
Decreased cakes, pastries and desserts	208.5	538.5	388.0	170.7	1,305.7
<i>Total</i>	440.7	1,147.3	767.4	373.5	2,728.9
Persons					
Increased vegetables	469.7	1,169.9	641.7	207.6	2,488.9
Increased fresh fruit (including fruit juices)	480.1	1,167.3	626.7	243.8	2,517.9
Increased fish	252.8	798.2	540.9	184.6	1,776.5
Increased bread	232.1	373.9	155.2	67.8	829.0
Decreased fat on meat	407.4	1,214.9	762.8	298.0	2,683.0
Decreased fried foods	391.2	1,251.1	787.1	283.9	2,713.2
Decreased salt	343.9	947.9	649.2	278.6	2,219.6
Decreased sugar	326.1	834.2	534.5	217.9	1,912.7
Decreased cakes, pastries and desserts	372.6	931.9	653.8	278.8	2,237.1
<i>Total</i>	847.6	2,175.7	1,390.7	643.4	5,057.3

TABLE 5.8. PERSONS AGED 18 YEARS AND OVER WHO HAD MADE HEALTHY CHANGES TO THEIR DIET: SELECTED TYPE OF CHANGE BY AGE AND SEX  
 AUSTRALIA, 1989-90  
 (Per cent)

Selected healthy changes to diet	SEX				Total
	18-24	25-44	45-64	65 and over	
	Males				
Increased vegetables	51.6	49.5	42.4	31.1	45.8
Increased fresh fruit (including fruit juices)	53.4	50.3	44.4	38.0	47.8
Increased fish	28.8	35.8	37.5	29.0	34.2
Increased bread	37.3	20.0	11.8	11.4	19.8
Decreased fat on meat	43.0	55.5	57.3	48.8	53.0
Decreased fried foods	38.2	56.0	58.7	46.3	52.5
Decreased salt	37.0	42.9	45.6	42.9	42.6
Decreased sugar	32.8	36.6	36.6	33.2	35.6
Decreased cakes, pastries and desserts	40.3	38.3	42.6	40.0	40.0
Total	100.0	100.0	100.0	100.0	100.0
	Females				
Increased vegetables	58.9	57.6	49.2	33.1	52.1
Increased fresh fruit (including fruit juices)	59.6	56.7	45.6	37.8	51.5
Increased fish	30.8	37.5	40.0	28.5	35.9
Increased bread	18.2	14.7	10.6	9.9	13.5
Decreased fat on meat	52.8	56.1	52.9	44.5	53.1
Decreased fried foods	53.5	58.9	54.9	42.6	54.7
Decreased salt	43.8	44.2	47.6	43.6	45.0
Decreased sugar	43.7	39.9	39.9	34.3	39.8
Decreased cakes, pastries and desserts	47.3	46.9	50.6	45.7	47.8
Total	100.0	100.0	100.0	100.0	100.0
	Persons				
Increased vegetables	55.4	53.8	46.1	32.3	49.2
Increased fresh fruit (including fruit juices)	56.6	53.7	45.1	37.9	49.8
Increased fish	29.8	36.7	38.9	28.7	35.1
Increased bread	27.4	17.2	11.2	10.5	16.4
Decreased fat on meat	48.1	55.8	54.8	46.3	53.1
Decreased fried foods	46.2	57.5	56.6	44.1	53.6
Decreased salt	40.6	43.6	46.7	43.3	43.9
Decreased sugar	38.5	38.3	38.4	33.9	37.8
Decreased cakes, pastries and desserts	44.0	42.8	47.0	43.3	44.2
Total	100.0	100.0	100.0	100.0	100.0

## APPENDIX A

### EXPLANATORY NOTES

#### Introduction

1. The 1989-90 National Health Survey is the first in a new series of five yearly health surveys to be conducted by the ABS. The aim of the 1989-90 survey was to obtain information about the health status of Australians, their use of health services and facilities and about health related aspects of their lifestyle such as smoking, alcohol consumption and exercise. The survey was conducted throughout the twelve month period October 1989 to September 1990.

2. Similar national surveys covering health status and the use of health services were conducted by the ABS in 1977-78 and 1983. A national survey relating to alcohol and tobacco consumption patterns was conducted in 1977.

#### Scope and Coverage

3. The estimates contained in this publication are based on information obtained from residents of a sample of 22,202 private dwellings (houses, flats, etc.) and non-private dwellings (hotels, motels, boarding houses, caravan parks, etc.)

<i>State/Territory</i>	<i>Private and special dwelling units</i>	<i>Approximate Sampling Fraction</i>
NSW	6,403	1/320
Vic.	5,934	1/250
Qld	3,108	1/320
SA	2,189	1/230
WA	2,304	1/230
Tas.	1,696	1/100
NT	160	1/230
ACT	408	1/230
Australia	22,202	1/300

Households were selected at random using a stratified multi-stage area sample which ensured that persons within each State and Territory had a known and, in the main, an equal chance of selection in the survey.

4. At the request of the Health authorities in New South Wales, Victoria and Tasmania, the survey sample in those States was increased to enhance the reliability of estimates.

5. Certain groups of persons such as non-Australian diplomatic personnel, persons from overseas holidaying in Australia, members of non-Australian defence forces and their dependents stationed in Australia, students at boarding schools, and institutionalised persons (including inpatients of hospitals, nursing homes, etc.) were excluded from the survey.

#### Survey Method and Content

6. Trained ABS interviewers conducted personal interviews with residents of selected dwellings. Each person aged 18 years or more was interviewed personally, with the exception of persons too old or sick. Persons aged 15 to 17 years were interviewed with the consent of a parent or

guardian; otherwise, a parent or guardian was interviewed on their behalf. For persons aged less than 15 years, information was obtained from a person responsible for the child (usually the mother).

7. Women aged 18 to 64 years were invited to complete an additional questionnaire relating to selected women's health issues.

8. Topics covered in the survey were:

- recent illness
- long-term conditions
- self-assessed health status
- inpatient episodes in hospital
- visits to casualty/outpatient units at hospitals
- doctor consultations
- dental consultations
- consultations with other health professionals
- children's immunisation
- rubella immunisation
- use of medications, including vitamins/minerals and sunscreens
- days away from work/school
- other days of reduced activity
- smoking
- alcohol consumption
- exercise
- dietary changes
- height and weight
- women's health issues
- injury accidents

An extensive range of demographic and socio-economic information was also obtained.

9. The approaches used to collect this information varied as appropriate to the topic, and where possible, in accordance with approaches used in previous surveys in order to provide comparability of data. The design of the survey enables linkages to be established between medical conditions, actions taken as a consequence of those conditions and lifestyle behaviours. For example, the approach adopted for the collection of information about recent illness was to ascertain whether a range of health-related actions was taken in the two weeks prior to interview and to record the various reasons for those actions, including the specific illness or injury involved, and other reasons such as preventive health measures. This 'actions-based' approach is similar to that used in the 1983 Australian Health Survey.

10. Definitions for those items covered in this publication are provided in Appendix B. Comprehensive details of all the concepts, methodologies and procedures used in this survey are provided in *1989-90 National Health Survey: Users' Guide* (4363.0) released in June 1991.

#### Classification of medical conditions

11. All medical conditions (and other reasons for taking health-related actions) reported were classified to a list of 104 selected conditions, symptoms, treatments, etc. developed for this survey. This classification is based on the *International Classification of Diseases (ICD)*, 9th Revision (WHO, 1975) but was modified to take account of the types and quality of information likely to be reported in the survey. In general, fairly broad classification groups have been used. Special codes were created for some non-illness reasons for action (e.g. check-up, preventive measures) and for some frequently reported conditions which could not be reliably coded to ICD categories because insufficient detail was provided (e.g. back problems, virus, infection). A similar classification was used for the 1983 Australian Health Survey. In the 1977-78 survey, conditions were classified directly to the ICD, 8th Revision. As a result of the different classifications used care should be taken in comparing results between surveys. Details of the classification and associated coding procedures are contained in *1989-90 National Health Survey: Users' Guide (Cat. No. 4363.0)*.

12. The full classification of conditions is not shown in this publication. Instead, in the main a sub-set of conditions has been selected, reflecting those conditions which are known or suspected of being associated with lifestyle behaviours. This focus should be borne in mind in interpreting comments contained in the publication about the association of behaviours with types of conditions

#### Estimation procedures

13. Estimates derived from the survey are obtained by using a complex ratio estimation procedure which ensures that the survey estimates conform to an independently estimated distribution of the population by age and sex, rather than to the age and sex distribution within the sample itself. Since the survey was conducted over a 12

month period, estimates were made to conform to the distribution for each quarter of the year.

#### Reliability of estimates

14. Since the estimates are based on a sample they are subject to sampling variability (see Appendix C for further details). In this publication only estimates with relative standard errors less than 25 per cent are considered sufficiently reliable for most purposes. However estimates with relative standard errors between 25 and 50 per cent have been included and are preceded by an asterisk (e.g. \*4.3) to indicate they are subject to high standard errors and should be used with caution. Estimates with relative standard errors greater than 50 per cent have not been shown as they are considered too unreliable for use. These estimates have been replaced by two asterisks (\*\*).

15. In addition to sampling errors, the estimates are subject to non-sampling errors. These may be caused by errors in reporting (e.g. because some answers were based on memory, or because of misunderstanding or unwillingness of respondents to reveal all details) or errors arising during processing (e.g. coding, data recording). Such errors may occur in any statistical collection whether it is a full census count or a sample survey. Every effort is made to reduce non-sampling errors in the survey to a minimum by careful design and testing of questionnaires, by intensive training and supervision of interviewers, and by efficient operating procedures.

#### Interpretation of results

16. The following factors should be considered in interpreting the estimates in this bulletin:

(a) Information recorded in this survey is essentially 'as reported' by respondents, and hence may differ from that which might be obtained from other sources or via other methodologies. In particular;

- reported information on medical conditions was not medically verified, and was not necessarily based on diagnoses by a medical practitioner. Conditions which have a considerable effect on people are likely to be better reported than those which have little effect. Some people may be unaware of minor conditions, or indeed of serious conditions which they may have but have not been diagnosed as, or advised of, having. It is also probable that in some instances conditions which respondents were unwilling to talk about at an interview were not reported.
- results of previous surveys of alcohol and tobacco consumption using similar methodologies to those used in this survey suggest a tendency for respondents to under-report actual consumption levels.

(b) The exclusion from the survey of people currently in hospitals, nursing homes and other institutions will have affected the results.



(c) In terms of the methodologies used, data from this survey are broadly comparable with data from previous ABS national health and related surveys in the following areas:

- Recent illness  
- 1983 Australian Health Survey
- Chronic illness  
- 1977-78 Australian Health Survey
- Health-related actions  
- 1983 Australian Health Survey
- Alcohol consumption/Smoking  
- 1977 Alcohol and Tobacco Consumption Patterns Survey

In addition a number of surveys relating to topics covered in the 1989-90 NHS and using similar methodologies have been conducted by the ABS in individual States and Territories. However, in all cases comparisons should be made with care since minor changes to the approaches used, together with changes in community awareness and attitudes to health issues may have influenced the responses provided.

#### Related Publications

17. Information about other publications released or planned for release from the 1989-90 NHS is contained in Appendix E. Other ABS publications which may be of interest include:

*Health Insurance Survey, Australia, June 1992 (4335.0)*

*Australian Health Survey, Australia, 1983 (4311.0)*

*Australian Health Survey, 1983 Illness Conditions Experienced (4356.0)*

*Australian Health Survey, 1983 Health-Related Actions Taken by Australians (4358.0)*

*Survey of Disability, Aging and Carers, Australia, 1993*  
- *Summary of Findings (4430.0)*  
- *Data Reference Package (4432.0)*

Current publications produced by the ABS are listed in the *Catalogue of Publications and Products, Australia (1101.0)*. The ABS also issues, on Tuesdays and Fridays, a *Publications Advice (1105.0)* which lists publications to be released in the next few days. The *Catalogue and Publications Advice* are available from any ABS office.

#### Unpublished statistics

18. As well as the statistics included in this and related publications, the ABS may have other relevant, unpublished data available. Inquiries should be made to the contact shown at the front of this publication.

#### Symbols and other usages

- \* relative standard error between 25 and 50 per cent
- \*\* nil or subject to sampling variability too high for most practical uses. See Appendix C.
- not available
- .n.a. not available
- . . not applicable
- n.e.c. not elsewhere classified
- n.o.s. not otherwise specified

19. Estimates have been rounded and discrepancies may occur between sums of the component items and totals.

## APPENDIX B DEFINITIONS

The following definitions apply to selected items covered in the statistics contained in this publication. Further information about item definitions, concepts, methodologies and procedures used in this survey are contained in the publication *1989-90 National Health Survey: Users' Guide* (4363.0) which is available from any ABS office at a price of \$30.00.

### Data items and their definitions

#### *Health risk factors*

A great variety of social, economic and environmental, as well as aetiological, factors are recognised as increasing the risk of ill-health i.e. the chance an individual has of developing a particular illness or injury. The survey addressed only a selection of known health risk factors, and those covered in the statistics contained in this publication are outlined below. While data from the survey may suggest apparent associations between particular risk factor(s) and certain illness condition(s), the data should not be interpreted as proof of causal relationships. Rather the survey results can assist in quantifying clinical relationships already established by other means, and point to other areas for investigation and research.

*Alcohol consumption* refers to consumption of alcoholic drinks, and focuses on the intake of alcohol derived from information about the types of quantities of alcoholic drinks consumed on each of the seven days prior to interview. Homemade wines and beers were included.

The approach used was to determine whether or not respondents had consumed alcohol on each of the previous seven days before proceeding to obtain details of the type and quantity of drinks consumed.

Respondents were asked if in the last seven days they had consumed any drinks containing alcohol. Those respondents who answered 'yes' were asked for each of those seven days whether they had consumed alcohol, the type of drink(s) they had, the quantities consumed of each type and whether the total amount consumed in that week was more, less or about the same as usual. The period since last drank alcohol was collected for persons who did not drink in the seven days prior to interview.

Indicators of relative health risk were derived from the average daily amount of alcohol consumed over the reference week. According to average daily intake, respondents were grouped into three categories of relative risk level based on recommendations of the National Health and Medical Research Council (NH&MRC).

Recommendations expressed in grams of absolute alcohol per day have been converted to millilitre equivalents using the ratio 1ml=0.80g.

It should be noted however that the NH&MRC recommendations relate to consumption on a regular basis, whereas indicators derived in the 1989-90 NHIS relate to consumption only during the reference week and take no account of whether consumption in that week was more, less or similar to usual consumption levels.

*Smoking* refers to the regular smoking of tobacco, including manufactured (packet) cigarettes, roll-your-own cigarettes, cigars and pipes, but excludes chewing tobacco and smoking of non-tobacco products. 'Regular' was defined as one or more cigarettes (or pipes or cigars) per day on average as reported by the respondent.

Respondents were asked whether they currently smoke or have ever smoked regularly. In either case details were obtained about type of smoking (cigarettes, cigars and/or pipes), age commenced regular smoking, and for current and ex-smokers of packet cigarettes the number usually smoked in a day. For persons whose smoking patterns vary from day to day, the average daily consumption over a week was recorded. Any cigarette lighted was counted as smoked even if only one puff was taken.

The tar and nicotine content of the packet cigarettes usually smoked was recorded for current smokers enabling the calculation of daily tar and nicotine intake. Tar and nicotine content recorded was 'as reported' by the respondent, often with reference to details printed on the cigarette packet. Where tar/nicotine content were unknown to the respondent and a cigarette packet was not available or not labelled (e.g. imported cigarettes) the tar and nicotine content were recorded as not known.

For ex-smokers of packet cigarettes the age at which they last gave up smoking and the reasons for giving up were recorded. Stated reasons were categorised by interviewers according to an eight point classification derived from previous surveys and verified by testing. Persons were recorded against one or more reasons as appropriate. Respondents were also asked to identify the main reason from among those they had given.

*Exercise* refers to physical exercise undertaken for recreation, sport or health/fitness purposes during the two weeks prior to interview. The topic does not include physical activity undertaken in the course of work or for reasons other than recreation, sport or health/fitness.

<i>Risk level</i>	<i>Consumption per day</i>	
	<i>Male</i>	<i>Female</i>
Low	Less than 50ml	Less than 25 ml
Medium	50-75ml	25-50ml
High	Greater than 75 ml	Greater than 50 ml

Respondents were asked whether, during the two weeks, they did any —

- walking for exercise or recreation
- moderate exercise
- vigorous exercise

For each of these categories, respondents were asked the number of times they had exercised in the previous two weeks and the total amount of time spent (hours and minutes) on exercise in each of those categories over that two weeks.

For the purposes of the survey, moderate exercise was defined as exercise or other activities (undertaken for recreation, sport or fitness) that caused a moderate increase in the heart rate or breathing of the respondent. Vigorous exercise was defined as exercise or other activities (as above) that caused the respondent to perspire and/or resulted in a large increase in the respondent's heart rate or breathing.

From the information recorded about the frequency, duration and intensity of exercise, an 'exercise level' of low, medium and high was derived for each respondent who reported some exercise in the previous two weeks. The aim was to produce a single descriptor of relative overall exercise level, and to indicate the quality of the activities undertaken in terms of maintaining heart, lung and muscle fitness. The level is based on a score derived from:

No of times		Average time						
activity undertaken	X	per session	X	Intensity				

where Intensity is a measure of the energy expenditure required to carry out the exercise, expressed as a multiple of the resting metabolic rate. Because the NHS did not collect details of the types of activities undertaken an intensity value was estimated for each of the three categories of exercise identified in the survey; the values applied were 3.2 for walking, 5.7 for moderate exercise and 8.5 for vigorous exercise.

A score was derived for each of the three categories of exercise and then summed to provide a total for the respondent for that two week period. Respondents were grouped into levels as follows:

Score less than 1500	= low
Score 1500 to 3250	= medium
Score more than 3250	= high

These groupings, referred to as Exercise Level, are consistent with those used in published output from a series of six surveys on the physical activity patterns of Australians commissioned by the then Department of Sport, Recreation and Tourism in 1984.

*Height and weight* refers to the height (without shoes) and weight (without clothes and shoes) of respondents, as reported during the interview. No measurements of height and weight were taken as part of this survey.

Women who were pregnant at the time of interview were asked to provide their usual weight before pregnancy.

Persons were categorised into four groups according to their body mass, derived using the formula weight (kg) divided by the square of height (m<sup>2</sup>). The groups used as shown below, are consistent with the recommendations of the NH&MRC as applied in the National Heart Foundation 1989 Risk Factor Prevalence Study. The criteria defining these groups differs from that applied in defining data for groups shown in the publication *1989-90 National Health Survey: Summary of Results* (4364.0) and hence the estimates are not directly comparable.

	<i>Body mass index score</i>
Underweight	Less than 20
Acceptable weight	20 to 25
Overweight	Greater than 25 to 30
Obese	Greater than 30

*Dietary changes* refer to changes in the kind or amount of foods eaten or drunk, or to other changes respondents reported making in their diet during the two years prior to interview. Included is information about the reasons for change and selected types of changes made.

The topic therefore provides indicators of selected current dietary behaviours, but does not seek to describe food consumption levels or patterns, or nutritional intake.

Respondents were asked whether, during the previous two years, they had changed the quantity or type of food eaten or drunk, or made any other changes to their diet. These questions related to sustained changes only. For example, if a respondent reported they had decreased the amount eaten for a few months but had now returned to their previous diet, they were recorded as having made no change.

Respondents who reported that they had made a sustained change in the quantity or type of food they eat or drink were asked the reason for the change (medical condition or other reasons such as to lose weight, improve general health, etc.). Only one reason was recorded for each respondent. Reported medical conditions were coded according to the classification and procedures used for coding recent and long-term illness elsewhere in the survey.

The respondents were further asked whether they had changed the amount eaten of selected foodstuffs.

For each of the foodstuffs responses were recorded as increased, decreased, stayed the same, or does not consume, as appropriate to the information provided by respondents. Again, only sustained changes were recorded as increased or decreased. The category 'does not consume' refers to the respondent's diet at the time of the interview, not necessarily in respect of the full two year reference period. A respondent who, for example, reported that they stopped eating fried foods during the reference period was recorded against the category 'does not consume' rather than 'decrease'.

The data are essentially 'as reported' by respondents. Although the use of a two year period may have some effect on the accuracy of reporting it was not expected to have a significant effect bearing in mind the deliberate and sustained types of dietary change sought in the survey.

*Self assessed health status* refers to the overall level of health as reported by respondents aged 18 years or more.

*Recent illnesses* are medical conditions (illness, injury or disability) experienced in the two weeks prior to interview. They may include long-term conditions experienced in the period.

*Long-term conditions* are medical conditions (illness, injury or disability) which have lasted or are expected to last for six months or more. Include:

- long-term conditions from which the respondent experienced infrequent or spasmodic attacks e.g. asthma.
- long-term conditions which may be under control through use of medications or other treatment e.g. diabetes, epilepsy.
- conditions which, although present, may not be generally considered illness because they are not necessarily debilitating e.g. reduced eyesight.
- long-term and permanent impairments or disabilities.

## APPENDIX C

### TECHNICAL NOTE ON SAMPLING VARIABILITY

#### Estimation procedure

Estimates derived from the survey are obtained using a complex ratio estimation procedure which ensures that the estimates conform to an independently estimated distribution of the population by age and sex rather than to the age and sex distribution within the sample itself.

#### Reliability of the estimates

Since the estimates in this publication are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is they may differ from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of dwellings was included. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included, and about nineteen chances in twenty that the difference will be less than two standard errors. Another measure of the likely difference is the relative standard error, which is obtained by expressing the standard error as a percentage of the estimate.

Space does not allow for the separate indication of the standard errors of all estimates in this publication. A table of standard errors and relative standard errors for estimates of numbers of persons is given in Table A. These figures will not give a precise measure of the standard error or a particular estimate but they will provide an indication of its magnitude. An example of the calculation and use of standard errors follows.

As can be seen from the standard error table, the smaller the estimate the higher is the relative standard error. Very small estimates are thus subject to such high standard errors (relative to the size of the estimate) as to detract seriously from their value for most reasonable uses. In the tables in this publication, estimates less than the lowest levels shown in the standard error table have not been published. Although figures for these small components can in some cases be derived by subtraction they should not be regarded as reliable.

#### Standard errors of rates and percentages

The standard error of an estimated percentage or rate computed by using sample data for both numerator and denominator, depends upon both the size of the numerator and the size of the denominator. However, the relative standard error of the estimated percentage or rate will generally be lower than the relative standard error of the estimate of the numerator.

Approximate standard errors of rates or percentages may be derived by first obtaining the relative standard error of the number of persons corresponding to the numerator of this rate or percentage and then applying this figure to the estimated rate or percentage. An example of this calculation follows: The rate of chronic conditions of the respiratory system as published in *1989-90 National Health Survey: Summary of Results* (Cat No. 4364.0), is 219.8 per 1,000 persons and the numerator of this rate is 3,733,500 which has a relative standard error of 0.7 per cent. By interpolation from Table A, the standard error of this rate of 219.8 can then be approximated by:

$$\begin{aligned} \text{Rate} \times \text{Relative standard error} \\ &= 219.8 \times 0.7/100 \\ &= 1.5 \end{aligned}$$

Therefore there are two chances in three that the rate that would have been obtained if all dwellings had been included in the survey is in the range 218.3 to 221.3 per 1,000 persons and about nineteen chances in twenty that it is in the range 216.8 to 222.8 per 1,000 persons.

Published figures may also be used to estimate the difference between survey estimates (of numbers or percentages). Such a figure is itself an estimate and is subject to sampling error. The sampling error of the difference between two estimates depends on their standard errors and the relationship (correlation) between them. An approximate standard error (SE) of the difference between two estimates (x-y) may be calculated by the following formula:

$$\text{RSE}(x-y) = \sqrt{[\text{SE}(x)]^2 + [\text{SE}(y)]^2}$$

While this formula will only be exact for differences between separate and uncorrelated characteristics or sub-populations it is likely to be of interest in this publication.

The imprecision due to sampling variability, which is measured by the standard error, should not be confused with inaccuracies that may occur because of imperfections in reporting by interviewers and respondents and errors made in coding and processing of data. Inaccuracies of this kind are referred to as the non-sampling error, and they may occur in any enumeration, whether it be in a full count or only a sample.

TABLE A. STANDARD ERRORS AND RELATIVE STANDARD ERRORS FOR ESTIMATES OF PERSONS  
STATES AND TERRITORIES

Size of estimate	NSW	Vic.	Qld	SA	WA	Tas.	NT	ACT	Australia	
									SE	RSE%
400										
500						210				
600						230				
700						260				
800						280				
900						290		360		
1,000						310	450	390		
1,100				510		330	480	410		
1,200				530		340	500	430		
1,300		610		550	620	360	520	460	610	50.9
1,400		630		570	650	370	540	480	640	49.0
1,500		660		590	670	380	550	490	660	47.4
1,600		680	760	610	690	390	570	510	690	45.9
1,700	810	700	790	630	710	410	590	520	710	44.6
1,800	840	720	810	650	740	420	610	540	740	43.4
1,900	860	740	830	670	750	430	620	550	760	42.2
2,000	880	760	850	690	770	440	640	560	780	41.2
2,100	910	780	870	700	790	450	650	580	800	40.2
2,200	930	800	900	720	810	460	670	590	830	39.3
2,300	950	820	920	730	830	470	680	600	850	38.4
2,400	970	840	940	750	850	480	690	610	870	37.7
2,500	990	860	950	760	860	480	710	620	890	36.9
3,000	1,000	870	970	780	880	490	720	640	910	36.2
3,500	1,100	950	1,050	850	950	530	780	690	1,000	33.2
4,000	1,200	1,050	1,150	910	1,000	570	840	730	1,100	30.8
4,500	1,250	1,100	1,200	970	1,100	600	890	770	1,150	28.9
5,000	1,350	1,150	1,300	1,000	1,150	630	940	810	1,250	27.3
6,000	1,400	1,200	1,350	1,050	1,200	650	990	850	1,300	25.9
8,000	1,500	1,300	1,450	1,150	1,300	700	1,100	920	1,400	23.7
10,000	1,750	1,500	1,650	1,300	1,450	780	1,250	1,050	1,650	20.5
20,000	1,900	1,650	1,850	1,450	1,600	850	1,350	1,150	1,850	18.4
30,000	2,600	2,300	2,500	1,950	2,200	1,100	1,900	1,500	2,550	12.8
40,000	3,100	2,700	2,950	2,300	2,600	1,250	2,250	1,750	3,100	10.4
50,000	3,500	3,050	4,850	2,550	2,900	1,350	2,600	1,950	3,550	8.9
100,000	3,850	3,350	3,700	2,800	3,150	1,450	2,900	2,100	3,950	7.9
200,000	5,100	4,500	3,350	3,650	4,150	1,750	4,000	2,700	5,400	5.4
300,000	6,700	5,900	6,400	4,750	5,400	2,050	5,600	3,450	7,200	3.6
400,000	7,900	6,800	7,500	5,500	6,300	2,250		3,950	8,500	2.8
500,000	8,800	7,600	8,300	6,100	7,000	2,350			9,600	2.4
1,000,000	9,500	8,300	9,000	6,600	7,600				10,500	2.1
2,000,000	12,200	10,600	11,600	8,300	9,700				13,700	1.4
5,000,000	15,500	13,300	14,700	10,400	12,300				17,700	0.9
10,000,000	20,900	17,900	19,800						24,500	0.5
20,000,000	25,900	22,000							30,800	0.3
									38,300	0.2

## APPENDIX D

### PUBLICATIONS AND DATA SERVICES AVAILABLE FROM THIS SURVEY

#### Data availability

Results from the 1989-90 NHS are available in the form of:

- publications and other releases of standard sets of tables;
- unidentifiable unit records, available on magnetic tape, or floppy disk and;
- tables produced on request to meet specific information requirements from the survey.

Information about the range of proposed products and services available is contained in the brochure *1989-90 NHS - Products and Services*, which is available free of charge from any office of the ABS. Publications and other standard products may be obtained:

- by completing the order form contained in the brochure and forwarding it, together with payment, to the address shown, or
- by contacting Information Services at the ABS office in your State.

Unpublished data can be made available on request to -

- The Director, Social Statistics at the ABS office in your State, or
- The Director, Health Section at ABS Canberra.

#### Publications and other standard releases

Selected results of the 1989-90 NHS are contained in the following:

*Summary of Results* (4364.0)

Released - August 1991  
Price - \$20.00

The publication provides an overview of Australia's health through the use of key indicators of health status, use of health services and facilities and health related aspects of lifestyle.

Contains a cross-section of results including information on recent and long-term (chronic) illnesses experienced, consultations with doctors and other health professionals, use of medications and other actions taken as a result of illness and injury.

Information describing the levels and patterns of alcohol consumption, smoking and exercise is also provided.

*Health Status Indicators* (4370.0)

Released - January 1992  
Package Price - \$100.00

This package comprises 30 national tables which describe the prevalence and types of recent and long-term illness and injury experienced in the community. Illness and injury is cross-classified by a range of demographic and socio-economic characteristics and selected other topics covered in the survey.

This set of tables is available in printed form or on floppy disk.

The package includes a copy of each of the following specialised publications which contain information focusing on particular medical conditions:

- *Diabetes* (4371.0)
- *Cardiovascular Conditions* (4372.0)
- *Asthma and other Respiratory Conditions* (4373.0)
- *Musculoskeletal Conditions* (4374.0)

For users who do not wish to purchase the whole package, these publications are separately available at a cost of \$5.00 each.

Tables, similar to the national set but compiled separately for each State, are also available at a cost of \$80.00 per State.

*Health-Related Actions* (4375.0)

Released - January 1993  
Package Price - \$100.00

This package comprises approximately 30 detailed national tables which describe actions people take about their health, and in particular, actions taken as a consequence of illness or injury. Information includes consultations with doctors, dentists and other health professionals, use of medications, days away from work or school and hospital episodes.

This set of tables is available in printed form or on floppy disk.

The package includes a copy of each of the following specialised publications which contain information focusing on particular medical conditions:

- *Consultations with Health Professionals* (4376.0)
- *Use of Medications* (4377.0)
- *Screening for Breast and Cervical Cancer* (4378.0)
- *Children's Immunisation* (4379.0)

For users who do not wish to purchase the whole package, these publications are separately available at a cost of \$5.00 each.

Tables, similar to the national set but compiled separately for each State, are also available at a cost of \$80.00 per State.

*Health Risk Factors* (4380.0)

Released - May 1992  
Package Price - \$100.00

This package comprises 52 national tables which describe the levels and patterns of alcohol consumption, smoking and exercise in the population. Also included is information on height and weight and dietary changes. Tables contain cross-classifications by a range of demographic and socio-economic characteristics and selected other characteristics.

This set of tables is available in printed form or on floppy disk.

The package includes a copy of each of the following specialised publications which contain information focusing on particular health risk factors:

- *Alcohol Consumption* (4381.0)
- *Smoking* (4382.0)
- *Exercise* (4383.0)
- *Accidents* (4384.0)

For users who do not wish to purchase the whole package, these publications are separately available at a cost of \$5.00 each.

Tables, similar to the national set but compiled separately for each State, are also available at a cost of \$80.00 per State.

*Women's Health* (4365.0)

Expected Release - Early 1994  
Price - \$30.00

This publication covers the health status of women, their use of health services and health-related aspects of their lifestyle as described by the National Health Survey. Information on the use of screening techniques for breast and cervical cancer and the use of contraceptives and breastfeeding is included. In addition, the report will draw on data from other sources to address aspects of women's health such as fertility, causes of death and disability and ageing.

**Special data services**

As well as releasing information in publications and other standard formats, information from the survey is available in the form of:

- special tabulations produced on request to meet individual user requirements. These can be provided in printed form or on floppy disk.
- unidentified unit record data on magnetic tape.

**Special tabulations**

Subject to confidentiality and sampling variability constraints, tabulations can be produced from the survey incorporating data items, populations and geographic areas selected to meet individual requirements. Listings of output data items from the survey which can be used in the specification of tables are available.

All requests for special tabulations attract a service charge in addition to the charges arising from the table production.

**Unit record data**

For users who wish to produce their own tabulations and to conduct manipulations of survey data, a computer file on magnetic tape containing unidentified records from the survey can be purchased.

To protect the confidentiality of individual persons and families some data items have been removed from particular records and the level of detail for some items has been reduced.

The national unit record file for the survey is available at a cost of \$5,000 plus a service fee of \$100; unit record files for individual States are available at \$1000 each.

An information paper describing the data content of the file and conditions relating to the use of unit record data is available. Copies of this information paper can be obtained free of charge from any office of the ABS.







## For more information ...

The ABS publishes a wide range of statistics and other information on Australia's economic and social conditions. Details of what is available in various publications and other products can be found in the *ABS Catalogue of Publications and Products* available at all ABS Offices (see below for contact details).

### Information Consultancy Service

Information tailored to special needs of clients can be obtained from the Information Consultancy Service available at ABS Offices (see Information Inquiries below for contact details).

### National Dial-a-Statistic Line

0055 86 400

(Steadycorn P/L; premium rate 25c/21.4 secs.)

This number gives 24-hour access, 365 days a year for a range of statistics.

### Electronic Data Services

Selections of most frequently requested statistics are available, updated daily, on DISCOVERY (Key \*656#). For more details on electronic data services available, contact Information Services in any of the ABS Offices (see Information Inquiries below for contact details).

### Bookshops and Subscriptions

There are over 500 titles of various publications available from ABS bookshops in all ABS Offices (see below Bookshop Sales for contact details). The ABS also provides a subscription service through which nominated publications are provided by mail on a regular basis at no additional cost (telephone Publications Subscription Service toll free on 008 02 0608 Australia wide).

## Sales and Inquiries

Regional Offices	Information Inquiries	Bookshop Sales
SYDNEY (02)	268 4611	268 4620
MELBOURNE (03)	615 7000	615 7829
BRISBANE (07)	222 6351	222 6350
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