Australian Bureau of Statistics

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MATURE AGE PERSONS STATISTICAL PROFILE

HEALTH

EMBARGO: 11.30AM (CANBERRA TIME) TUES 23 NOV 2004

CONTENTS

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ADDITIONAL INFORMATION

INQUIRIES

- For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070.

NOTES

ABOUT THIS PUBLICATION

Over recent years the issues associated with the structural ageing of the population have received increased attention by governments and researchers. Broad issues affecting the ageing population include ensuring adequate retirement incomes, labour force participation, healthy ageing, and provision of community support, health services and aged care. Challenges in relation to population ageing include improving the capacity of older people for work through better education and health, identifying better incentives for people to remain in the labour force, and improved flexibility in the workplace.

Mature age persons, i.e. persons aged 45-64 years, have been identified as a key population group in terms of policy development to address these challenges. The older members of this group are nearing the traditional retirement age of 65 years and some have already withdrawn from the labour force. Younger mature age persons are part of the baby boom cohort which has special significance due to the large number of people involved.

This profile is a part of the series of Mature Age Persons Statistical Profiles developed to draw on relevant data sources to provide a comprehensive analysis of the characteristics of mature age persons. The complete set of profiles covers the following topics:

Population and Cultural Diversity

Labour Force

Health

Housing

Living Arrangements

Education and Training

Community Life

This profile focuses on the health characteristics of the mature age population.

Dennis Trewin
Australian Statistician

HEALTH STATUS

INTRODUCTION

The National Strategy for an Ageing Australia notes that a high priority across the life span will be health and well being. As the population ages there will be a change in patterns of disease and disability, with subsequent implications for health care. Mature age persons (aged 45-64 years) are of interest particularly in terms of health service availability and use. The ability or otherwise, of people to fund their own health costs will become increasingly important as the proportion of people of working age decreases.

There are a range of factors which influence the health outcomes of individuals or populations, including socioeconomic, biomedical and environmental factors, as well as lifestyle behaviours. To provide a comprehensive picture of the health status of mature age persons, analysis of Australian Bureau of Statistics (ABS) and non-ABS data sources will be undertaken. This will provide a measure of those who:

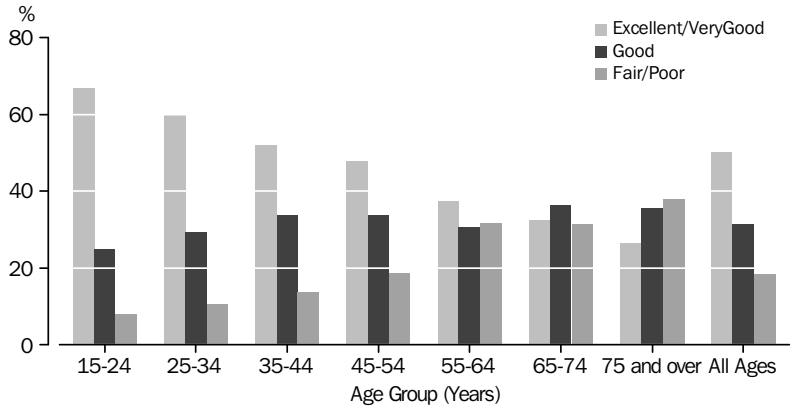
- are experiencing illness or disability,
- have recorded risk factors, and
- are using health services.

SELF ASSESSED HEALTH STATUS

The National Health Survey (NHS) asks respondents to provide a general assessment of their own health against a five point scale of excellent to poor. A person's perception of their own general health status is considered a good measure of their current physical and mental health. It can also be a predictor of mortality for those aged 65 years and over. (McCallum, 1994).

In 2001, persons reporting good to excellent health status decreased across the age groups with a high of 91% in the 15-24 years age group to a low of 61 in the 75 years and over age group. Of the mature age population, 19% of 45-54 year olds and 28% of 55-64 year olds felt their health was poor to fair.

1.1 SELF ASSESSED HEALTH STATUS, by Age Group: **2001**

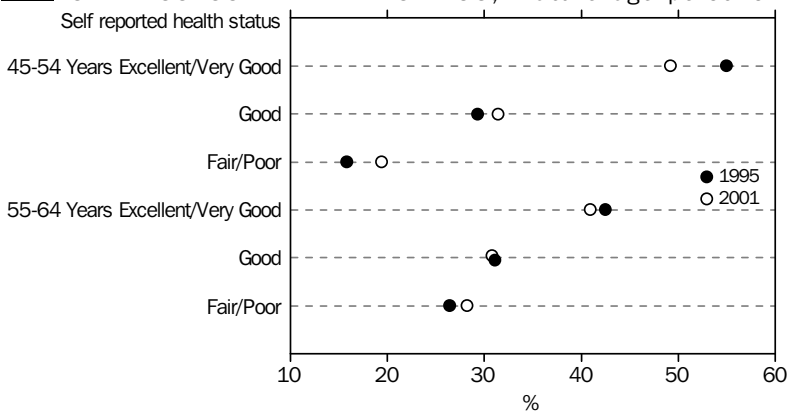


Source: National Health Survey 2001 (ABS cat. no. 4364.0)

SELF ASSESSED HEALTH STATUS *continued*

In comparison with 1995, there is a decrease of 5.7% of 45-54 year olds reporting very good to excellent health and an increase of 3.6% reporting poor to fair health in 2001. Within the 55-64 year olds, the differences are less, with a decrease of 1.6% reporting very good to excellent health and an increase of 1.8% reporting poor to fair health.

1.2 SELF ASSESSED HEALTH STATUS, Mature age persons



Source: National Health Survey (ABS cat. no. 4364.0)

LONG-TERM CONDITIONS

Long term conditions are those which in the respondent's opinion has lasted for 6 months or more or which he or she expects will last for 6 months or more. Some conditions reported were assumed to be long term conditions. These included asthma, cancer, diabetes insipidus, diabetes mellitus types 1 and 2, rheumatic heart disease, heart attack and stroke.

Respondents are able to report more than one long term condition. For those who report more than four long term conditions the four most severe conditions are recorded.

Of those aged 45 years and over, 98% reported having a long term condition, despite 81% of the mature age population identifying their health status as good to excellent.

1.3 LONG-TERM CONDITIONS, by Age of Respondent: 2001

	0–17 years	18–44 years	45–64			65 years and over	All ages
			45–54 years	55–64 years	Total		
	'000	'000	'000	'000	'000	'000	'000
Has a long-term condition							
Endocrine nutritional and metabolic diseases	19.5	266.0	330.9	426.8	757.7	631.6	1 674.8
Mental and behavioural disorders	329.0	830.5	303.1	186.8	489.9	163.2	1 812.6
Diseases of nervous system	135.4	745.3	313.4	135.8	449.2	104.1	1 434.1
Diseases of eye and adnexa	595.7	2 926.7	2 279.1	1 725.4	4 004.5	2 178.4	9 705.2
Diseases of ear and mastoid	216.8	639.5	452.6	459.5	912.1	832.8	2 601.2
Diseases of circulatory system	70.8	571.5	604.6	659.8	1 264.4	1 279.1	3 185.9
Diseases of respiratory system	1 112.6	2 545.2	859.3	543.4	1 402.8	710.7	5 771.3
Diseases of musculoskeletal system and connective tissue	163.8	2 281.9	1 187.9	985.5	2 173.4	1 439.1	6 058.1
Symptoms signs and conditions not elsewhere classified	396.1	888.9	371.3	249.6	620.9	316.2	2 222.2
Other conditions	344.8	987.1	538.9	452.8	991.7	697.9	3 021.5
Other	—	—	—	—	—	—	—

— nil or rounded to zero (including null cells)

Source: ABS data available on request, National Health Survey

LONG-TERM CONDITIONS *continued*

For all age groups, diseases of the eye are the most common long term condition. The majority of eye disorders are long sightedness and short sightedness; both conditions can generally be treated with corrective lenses. Of the mature age population, 87% of 45-54 year olds reported having an eye condition, increasing to 96% of 55-64 year olds.

Chronic musculoskeletal conditions such as arthritis, back pain and disc disorders have the potential to impact on a person's ability to participate in the work force and in social interaction. These conditions may also deteriorate with age. In the 18-44 year olds, 18% of the population reported having a long term musculoskeletal disorder (including arthritic conditions and back pain), increasing to 49% for the mature age population and 64% in the 65 years and over population.

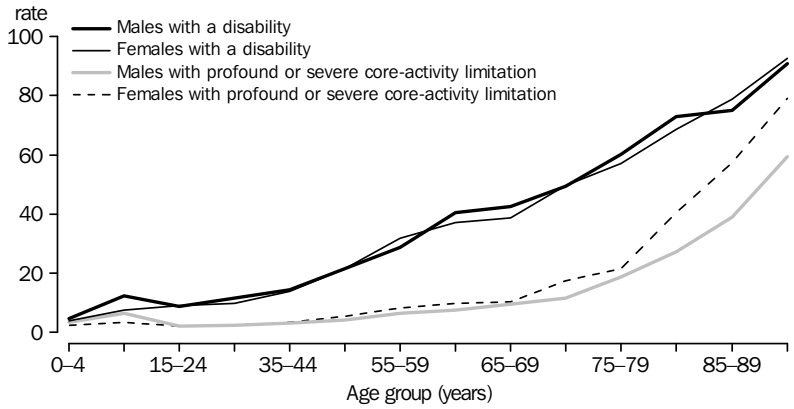
Only 20% of the 18-44 year olds reported having a long term respiratory condition, including asthma, hayfever and sinusitis compared with 32% of the mature age population. Upper respiratory conditions such as hayfever and chronic sinusitis are predominant with proportions of 49% and 44% respectively. Almost 10% of mature age persons report having asthma.

DISABILITY

According to the 2003 Survey of Disability, Ageing and Carers, one in five people in Australia (3,958,300 or 20%) had a reported disability in 2003. A further 4,149,000 (21%) had a long-term health condition that did not restrict their everyday activities. The remaining 11,703,800 (59%) had neither a disability nor a long term health condition. Disability was defined as any limitation, restriction or impairment, which has lasted, or is likely to last, for at least six months and restricts everyday activities. Examples range from hearing loss which requires the use of a hearing aid, to difficulty dressing due to arthritis, to advanced dementia requiring constant help and supervision.

Four levels of core activity restriction are determined based on whether a person needs help, has difficulty, or uses aids or equipment with any of the activities (communication, mobility or self-care). A person's overall level of core activity restriction is determined by their highest level of restriction in these activities. The four levels of restriction (in decreasing level of severity) are profound, severe, moderate and mild.

2.1 DISABILITY RATES, by age and sex: **2003**



Source: Disability, Ageing and Carers, Australia , 2003 (ABS cat. no. 4430.0)

The disability rate increased with age, reaching 92% for those aged 90 years and over. The pattern of prevalence of profound or severe core-activity limitation gradually increased from 3% for age groups 0–4 years through to 10% for 65–69 years but it then increased sharply to 74% for those aged 90 years and over. This contrasted with the overall disability rate which increased steadily from 4% of 0–4 year olds to 41% of 65–69 year olds and 92% of those aged 90 years and over.

According to the 2003 Survey of Disability, Ageing and Carers, 47% of mature aged persons had a disability. This included 11% with a profound or severe core-activity limitation, with 25% with a moderate or mild core-activity limitation.

Of those mature age persons with musculoskeletal disorders, 41% reported having arthritis and related disorders as their main conditions, 54% reported a disability and 42% of these persons had a severe or profound core-activity limitation.

Of the mature aged persons with a disability, 11% reported not being limited in core activities but restricted in schooling or employment.

2.2 STATUS AND LEVEL OF DISABILITY BY MAIN HEALTH CONDITIONS, Mature Age Persons—2003

	Profound or severe core-activity limitation	*Moderate or mild core-activity limitation*	*Has disability and not limited in core activities but restricted in schooling or employment*	*All with specific limitations or restrictions*	*All reported disability*	*No disability*	*Total*
	'000	'000	'000	'000	'000	'000	'000
Physical Conditions							
Cancer/lymphomas/leukaemias	*8.4	11.7	*5.5	25.6	27.0	19.0	46.0
Endocrine, nutritional and metabolic							
Diabetes	*6.2	15.6	*3.1	25.0	28.5	89.7	118.1
Total	*6.5	21.9	*3.1	31.5	38.1	169.4	207.5
Diseases of the nervous system	18.2	35.6	11.5	65.3	77.3	64.8	142.1
Diseases of the eye and adnexa	*6.3	*3.6	**2.0	11.8	19.5	*6.0	25.5
Diseases of the ear and mastoid process	*9.6	43.1	*7.2	59.9	83.7	73.4	157.1
Diseases of the circulation system							
Heart disease	*5.6	33.5	*7.9	47.0	50.2	29.5	79.7
Hypertension	*2.9	12.5	*4.3	19.8	24.8	287.5	312.3
Total	17.7	60.0	13.1	90.7	100.3	324.0	424.4
Diseases of the respiratory system							
Asthma	*6.6	21.4	**1.5	29.5	34.0	93.8	127.8
Other respiratory	*6.7	15.0	**0.4	22.1	23.4	15.5	38.9
Total	13.3	36.4	**1.9	51.6	57.4	109.2	166.6
Diseases of the digestive system	**2.1	*10.3	*3.8	16.2	19.5	37.2	56.7
Diseases of the musculoskeletal system							
Arthritis and related disorders	47.4	127.1	17.0	191.6	219.7	183.7	403.5
Other musculoskeletal	85.9	192.0	41.4	319.2	346.4	238.9	585.3
Total	133.3	319.1	58.4	510.8	566.2	422.6	988.8
Injury, poisoning and other external causes							
Other injury etc.	14.1	44.0	*8.5	66.5	78.1	14.9	93.0
Total	16.3	47.2	*8.9	72.3	83.9	49.2	133.2
Total Physical Conditions	*248.6*	*619.7*	*119.2*	*987.5*	*1 133.9*	*1 322.8*	*2 456.7*
Mental Conditions							
Psychoses and mood affective disorders							
Depression and mood affective disorders	*10.3	20.5	*6.1	36.9	39.1	28.1	67.2
Total	15.5	25.7	*6.3	47.5	49.9	29.1	79.0
Neurotic, stress related and somatoform disorders							
Nervous tension/stress	*6.0	14.8	*6.1	26.9	30.3	37.6	67.8
Other neurotic	12.0	12.3	**1.9	26.1	27.1	*7.4	34.5
Total	17.9	27.1	*7.9	53.0	57.3	45.0	102.3
Total Mental Conditions	*40.4*	*59.0*	*16.7*	*116.1*	*125.4*	*74.9*	*200.4*
Total	**289.0**	**678.7**	**136.0**	**1 103.6**	**1 259.3**	**1 397.8**	**2 657.1**

* estimate has a relative standard error of 25% to 50% and should be used with caution

** estimate has a relative standard error greater than 50% and is considered too unreliable for general use

Source: ABS data available on request, Survey of Disability, Ageing and Carers 2003

INTRODUCTION

A range of lifestyle and environmental factors are recognised as risk factors to good health, including cigarette smoking, excessive alcohol or fat consumption, limited exercise and being overweight.

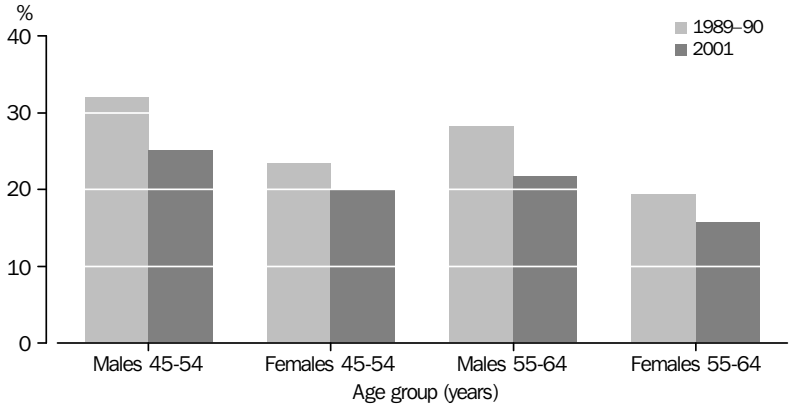
This section focuses on four risk factors: smoking; physical inactivity; overweight and obesity; and risky/high risk alcohol consumption. While each of these is discussed individually, they interact with other risk factors, and are rarely the sole contributor to a disease (WHO 2000). Unless otherwise stated the data presented are sourced from the 2001 National Health Survey (NHS). More detailed analysis on risk factors can be found in the ABS publication, *Health Risk Factors, Australia 2001,*cat. no. 4812.0).

SMOKING

Worldwide, smoking is estimated to cause almost five million premature deaths each year (WHO 2002). In Australia, it is estimated that around 19,000 people died as a result of smoking in 1998 (Riddolfo & Stevenson 2001). Among other conditions, smoking is associated with increased risk of coronary heart disease, stroke, lung cancer, other types of cancer and various respiratory and cardiovascular diseases (WHO 2000).

In 2001, 24% of the adult population were current smokers compared with 28% in 1989-90. Within the mature age group 21% were current smokers in 2001. Across all age groups, males were more likely to be smokers than females (ABS 2002).

3.1 PROPORTION OF MATURE MALES AND FEMALES WHO WERE SMOKERS



Source: ABS data available on request, National Health Survey

As shown in graph 3.1, the proportion of mature age males and females who were smokers decreased between 1989-90 and 2001. The decreases were greater for males than for females. In 2001, 25% of males aged 45-54 years were smokers compared with 20% of females in the same age group. For the 55-64 years age group, 22% of males were smokers compared with 16% of females.

ALCOHOL

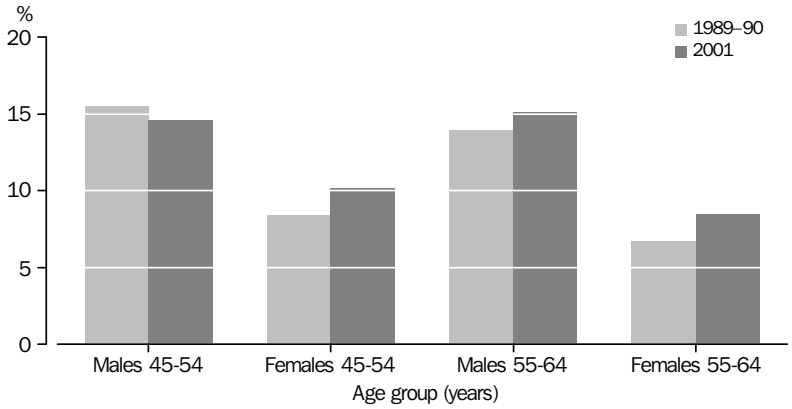
In 2001, 1.5 million Australian adults (11%) consumed alcohol in risky or high risk amounts. In 1989-90, the proportion of adults who consumed alcohol in risky or high risk amounts was also 11%. Levels of risky or high risk alcohol consumption were generally constant between the ages of 18-64 years (11%), only decreasing after the age of 65 years. Men were more likely to consume alcohol in risky or high risk amounts(13%)

ALCOHOL *continued*

compared to women (9%). Risky or high risk alcohol consumption was most prevalent for men between the ages of 55-64 years (15%).

Graph 3.2 shows the proportion of mature age males and females who consumed alcohol at risky/high risk levels. The level of risky/high risk alcohol consumption among mature age females, increased by 20% in the 45-54 year old age goup and by 27% in the 55-64 year old age group between 1989/90 to 2001.

3.2 RISKY/HIGH LEVEL RISK ALCOHOL CONSUMPTION, mature age males and females



Source: ABS data available on request, National Health Survey

PHYSICAL INACTIVITY

The health benefits of engaging in physical activity are numerous, such as offering protection against some cancers, a reduction in the risk of diabetes and cardiovascular disease and improvements in mental health (Armstrong et al. 2000). Physical activity may also reduce the risk of injury among older people (Armstrong et al. 2000), reduce body fat and improve musculoskeletal health (WHO 2002). Conversely, physical inactivity increases the risk of developing some cancers such as bowel and breast cancer, coronary heart disease, Type 2 diabetes and depression, among other conditions (Mathers et al. 1999).

Exercise levels

Exercise levels in the 2001 National Health Survey (NHS) are based on the frequency, intensity (i.e. walking, moderate exercise and vigourous exercise) and duration of exercise (for recreation, sport or fitness) in the 2 weeks prior to interview. From these components, an exercise score was derived using factors to represent the intensity of the exercise - sedentary, low, moderate and high.

In 2001, 32% of the adult population were physically inactive (i.e. they did not undertake deliberate exercise, or did so at a very low level, during the survey reference period). Similar proportions of men and women were physically inactive.

Exercise levels continued

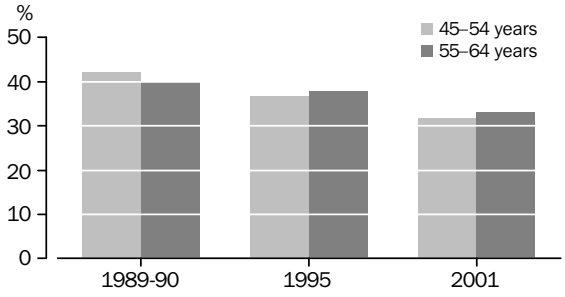
3.3 EXERCISE LEVELS, by age—2001

	18–24	25–34	35–44	45–64			65–74	75 and over	Total
				45–54	55–64	Total			
	PER CENT								
Sedentary	22.6	26.4	32.6	31.7	33.1	32.2	35.0	51.0	31.5
Low	38.1	40.1	39.2	39.3	36.8	38.3	34.5	29.6	37.9
Moderate	24.7	23.5	22.8	24.4	26.8	25.4	29.0	18.9	24.3
High	14.6	10.0	5.4	4.7	3.3	4.1	1.6	0.4	6.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: ABS data available on request, National Health Survey

In the mature age population, 31% of 45-54 year olds and 31% of 55-64 year old males participated in moderate to high levels of exercises, compared with 27% of 45-54 year old and 29% of 55-64 year old females.

3.4 SEDENTARY EXERCISE LEVEL, mature age persons



Source: ABS data available on request, National Health Survey

OVERWEIGHT AND OBESITY

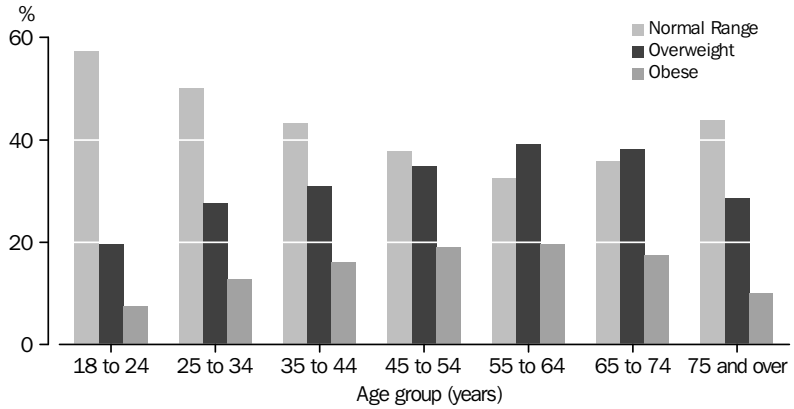
Being overweight is closely related to lack of exercise and diet. And being overweight or obese increases the risk of suffering from a range of conditions, including coronary heart disease, type 2 diabetes and some cancers. The proportion of people who are either overweight or obese is increasing worldwide (WHO 2000), and despite decreases in the proportion of people who are physically inactive, Australians are also carrying more excess weight. Body Mass Index (BMI) can be used to determine if adults are at a healthy weight, overweight or obese.

In the NHS respondents aged 18 years and over provided self-reported height and weight estimates. Based on this information, respondents are classified according to their BMI which is calculated as weight in kilograms divided by the square of height in metres. As the data are self-reported by respondents, they are considered to be underestimates of overweight and obesity. Studies have shown that respondents tend to overestimate height and underestimate weight.

Graph 3.5 shows that the mature age and older populations had the highest proportion of overweight and obese people. In 2001, 54% of persons aged 45-54 years, 59% of persons aged 55-64 years and 56% of 65-74 years were classified by their BMI as overweight or obese.

OVERWEIGHT AND OBESITY *continued*

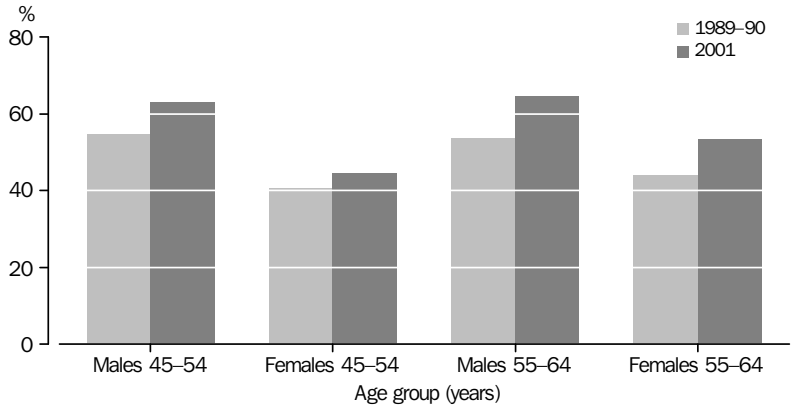
3.5 BODY MASS INDEX GROUP, by age: **2001**



Source: ABS data available on request, National Health Survey

More males than females across all age groups reported being overweight and obese. In the mature age population, 63% of males in the 45-54 year age group and 64% in the 55-64 year age group, reported as being overweight or obese, compared with 45% of females in the 45-54 year age group and 53% in the 55-64 year age group.

3.6 OVERWEIGHT AND OBESITY, by mature age males and females



Source: ABS data available on request, National Health Survey

Persons aged 45-54 years who reported being overweight or obese rose from 48% to 54% from 1989-90 to 2001. Males in this age group had the largest increase, rising from 55% to 63% over this time.

INTRODUCTION

People take a range of actions relating to their health, from preventative health care to ongoing medical treatment.

HEALTH SERVICE USAGE

The 2001 National Health Survey asked respondents to identify one or more health related action they had taken in the previous two weeks. These actions may vary from consultations with health professionals, to days of reduced activity, to hospitalisation. The most commonly reported use of health services was visits to a general practitioner (GP) or specialist (25% of all persons). Consultations with doctors increased usage for the age groups over 65 years in particular.

4.1 SELECTED ACTIONS TAKEN FOR HEALTH(a), by Age —2001

	18–34	*35–44*	45–64 *45–54*	45–64 *55–64*	45–64 *Total*	*65 and over*	*Total*
	'000	'000	'000	'000	'000	'000	'000
Hospital inpatient episode	33.6	23.9	22.0	16.6	38.6	35.2	131.3
Visited casualty/emergency	43.8	24.5	19.2	21.0	40.2	13.5	122.1
Visited outpatients	85.8	45.9	45.4	40.5	85.9	85.4	303.0
Visited day clinic	97.5	78.0	74.3	64.8	139.1	88.0	402.6
Consulted general practioner	839.7	555.8	594.1	502.2	1 096.3	869.7	3 361.5
Consulted specialist	224.1	147.1	157.4	151.2	308.6	223.1	902.9
Consulted dentist	204.9	159.7	185.8	118.6	304.5	126.6	795.6
Consulted other health professional	666.1	413.0	382.1	226.2	608.3	338.9	2 026.3
Days away from work or study	493.6	239.7	191.9	83.5	275.3	—	1 008.6
Other days of reduced activity	535.3	326.6	311.1	231.0	542.2	299.6	1 703.8
None of the above	2 731.8	1 747.9	1 482.3	949.5	2 431.7	978.4	7 889.9
Not applicable	—	—	—	—	—	—	—
Total	**4 588.2**	**2 920.6**	**2 615.6**	**1 800.0**	**4 415.6**	**2 260.3**	**14 184.7**

— nil or rounded to zero (including null cells)
(a) Actions taken in the 2 weeks prior to interview.

Source: ABS data available on request, National Health Survey 2001

Table 4.1 indicates that higher proportions of the 45 years and over age groups consulted with a GP or specialist, were a hospital inpatient, visited outpatients or a day clinic or had days of reduced activity. Mature age persons were slightly more likely to consult a dentist than other age groups, (7% compared with 6% overall). Conversely, proportions of persons having days away from work/study decreased for the mature age groups.

DAYS AWAY FROM WORK DUE TO ILLNESS

Some 11% of employed persons aged 15-64 years reported that they had one or more days away from work in the previous two weeks due to their own illness or injury. These absences from work accounted for around 3.1 million days lost from work. The proportions who had time away from work due to illness decreased with age, from a high of 15% of the 15-24 year age group to a low of 10% for both the 45-54 and 55-64 year age groups. A higher proportion of males (10%) than females (8%) in the 55-64 age group had time away from work due to illness; conversely, in the 45-54 age group, proportionally fewer males (9%) had time away from work than females (11%) (ABS 2002).

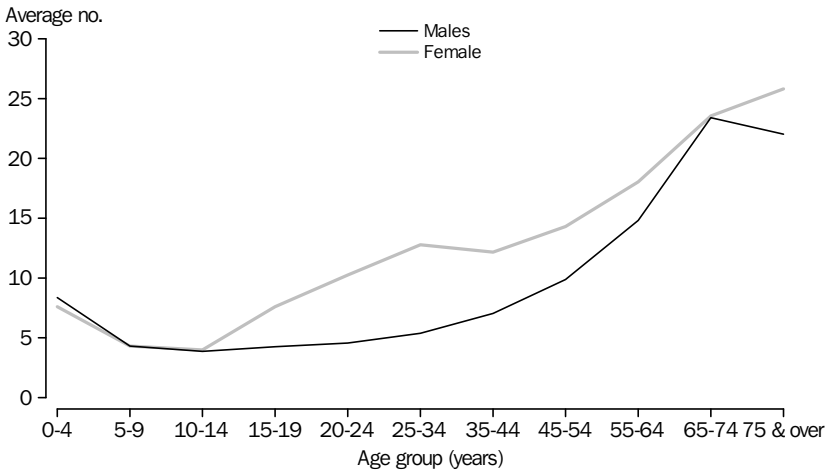
While those in the mature age groups are less likely to have time off work due to illness than younger age groups, they are, on average, away for longer. The average number of days away from work increases with age, from 2.2 days for 15 - 24 year olds to 3.7 days for 45-54 and 5.6 days for the 55-64 year age group. The overall average is 3.1 days (ABS 2002).

MEDICARE SERVICES

The Health Insurance Commission publishes data on Medicare services provided to Australian residents in its Annual Report. Medicare services are those services provided by private medical practitioners, optometrists and some dental practitioners for which a contribution is paid by the Health Insurance Commission. For the financial year 2002-03, an average of 13.1 Medicare services were provided for females compared with 9.1 services for males.

Graph 4.2 shows that for both males and females, the average number of Medicare services increased with age from the age group 10 to 14 years onwards. For mature age females aged 45 to 54 years, an average of 14.3 Medicare services were provided compared with 9.9 services for males. For mature age females aged 55 to 64 years, an average of 18.0 Medicare services were provided compared with 14.8 services for males.

4.2 MEDICARE SERVICES PROVIDED (a), by age and sex: **2002-03 (b)**



(a) Australian residents
(b) Refers to the period of processing

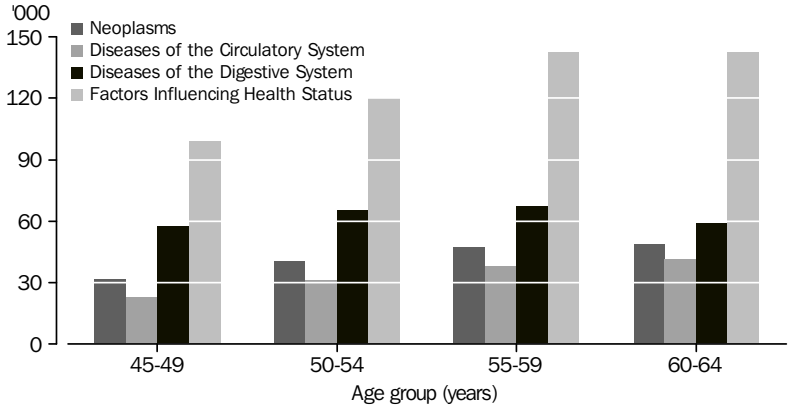
Source: HIC Annual Report 2002 - 2003, Medicare statistical table no 13

HOSPITALISATIONS

The National Hospital Morbidity Database is compiled by the Australian Institute of Health and Welfare (AIHW), from data supplied by the state and territory health authorities. It is a collection of electronic confidentialised summary records for admitted patients separated from public and private hospitals in Australia. Almost all hospitals in Australia are included and details available include principal diagnosis. That is, the diagnosis established after study to be chiefly responsible for occasioning the patient's episode of care in hospital(AIHW 2004).

The mature age population who represented 24% of the total population, accounted for 27% (or 1.8 million) of all hospital separations for the period 2002-2003. Graph 4.3 displays those conditions that are most common in the mature age population.

4.3 SELECTED HOSPITAL SEPARATIONS, by mature age persons: 2002-03



Source: AIHW National Hospital Morbitity Database

Hospital separations for Factors influencing Health status and contact with health services are for circumstances when a person encounters a health service for a specific purpose to receive limited care or service (e.g. admission for chemotherapy or dialysis treatment). Alternatively, a problem is present which influences the persons' health status but it is not in itself a current illness or injury. Factors influencing health status and contact with health services accounted for 28% of total hospital separations for 2002-2003 for the mature age population.

Disorders of the digestive system, including admissions for day surgery for investigative procedures, accounted for 14% of separations for the mature age population. Separations for neoplasms account for 9% of total separations for the mature age population, with circulatory disorders accounting for a further 7% of separations.

LIFE EXPECTANCY

Good health for all brings social and economic benefits to individuals, their families and wider communities. Life expectancy is one of the most widely used indicators of population health. Although it focuses on length of life rather than quality, life expectancy usefully summarises the health of the population.

Increases in life expectancy at birth occurred throughout the twentieth century. Early improvements were largely due to improved living conditions, better public health care, rising incomes and declines in deaths from infectious diseases. Improvements in the latter half of the century have been attributed to improving social conditions and advances in medical technology such as mass immunisation and antibiotics. These factors resulted in an increase of over 20 years expectation of life for both males and females born in 1999-2001 compared with their counterparts born a hundred years earlier. (ABS 2004)

5.1 LIFE EXPECTANCY, at selected ages: **1901-10 to 2000-02**

	AT BIRTH		AT AGE 45		AT AGE 65	
	Males	*Females*	*Males*	*Females*	*Males*	*Females*
Years	expectation of life (years)	expectation of life (years)	expectation of life (years)	expectation of life (years)	expectation of life (years)	expectation of life (years)
1901–10	55.2	58.8	24.8	27.6	11.3	12.9
1920–22	59.1	63.3	26.0	29.0	12.0	13.6
1932–34	63.5	67.1	26.9	29.7	12.4	14.2
1946–48	66.1	70.6	26.8	30.4	12.3	14.4
1953–55	67.1	72.8	27.2	31.4	12.3	15.0
1965–67	67.6	74.2	27.0	32.3	12.2	15.7
1975–77	69.6	76.6	28.3	34.0	13.1	17.1
1985–87	72.7	79.2	30.8	36.0	14.6	18.6
1990–92	74.3	80.4	32.0	37.0	15.4	19.3
1995–97	75.7	81.4	33.2	37.8	16.2	19.9
1997–99	76.2	81.8	33.8	38.2	16.6	20.2
1999–2001	77.0	82.4	34.5	38.8	17.2	20.7
2000–2002	77.4	82.6	34.7	38.9	17.4	20.8

Source: ABS for 1901–1934 and 1995 onwards Deaths, Australia various issues (cat. no. 3302.0) and The Commonwealth (later Government) Actuary for the years 1947–1998.

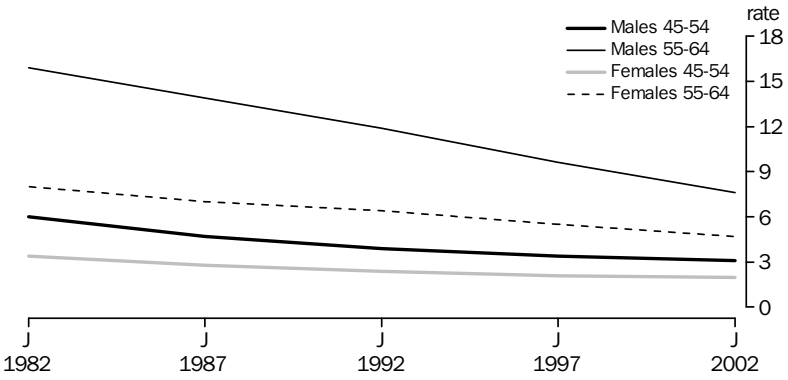
For mature age persons, there has been an increase of around ten years in the expectation of life remaining over the past 100 years. The expectation of life for a 45 year old in 2000-02 was a further 35 years for males and 39 years for females, compared with a further 25 years for males and 28 years for females in 1901-1910.

DEATH RATES

A life table is a statistical model used to represent mortality of a population. In its simplest form, a life table is generated from age-specific death rates and the resulting values are used to measure mortality, survivorship and life expectancy.

The crude death rate (CDR) fell from 7.6 deaths per 1,000 population in 1982 to 6.8 deaths per 1,000 in 2002. The fall in CDR, against the background of an older population, indicates the considerable decline in age-specific death rates (ASDR) over the period. The standardised death rate (which removes the effect of the changing age structure of the population) was 6.7 deaths per 1,000 population in 2002, down by 35% since 1982 (10.3 deaths).

5.2 AGE-SPECIFIC DEATH RATES (a), mature age males and females: **1982-2002**



(a) per 1,000 of same age estimated resident population.

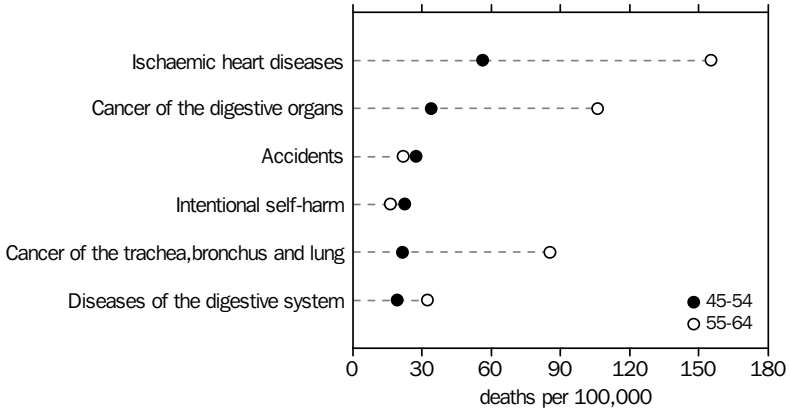
Source: Deaths 2002 (ABS cat. no. 3302.0).

As shown in Graph 5.2, the age-specific death rates for mature age persons have declined between 1982 and 2002. The death rates for males in both age groups have halved between 1982 and 2002. For males aged 45 to 54 years this has meant a decline in death rates from 6.0 to 3.1 deaths per 1,000 males in this age group and for males aged 55 to 64 years the death rates declined from 15.9 to 7.6. For females aged 45 to 54 years there was a slight decline in death rates from 3.4 to 2.0 between 1982 and 2002, however, for females aged 55 to 64 years, the death rates declined from 8.0 to 4.7.

LEADING CAUSES OF DEATH FOR MATURE AGE PERSONS

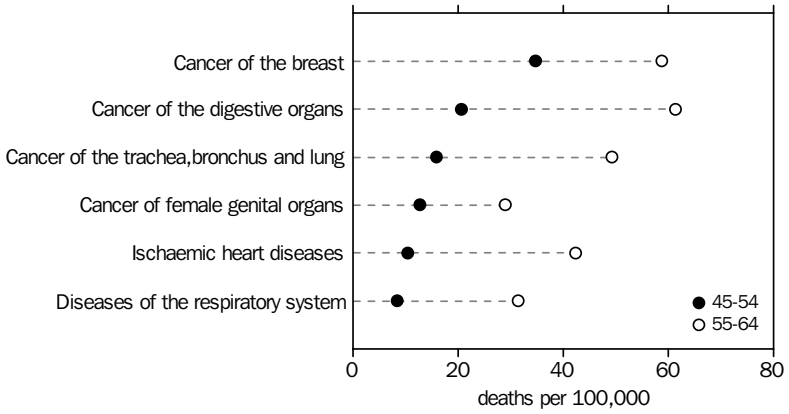
Causes of death reveal much about the health of a population. In 2002, the leading underlying cause of death for both male and female mature age persons was malignant neoplasms (cancers) causing 4,740 male and 4,042 female deaths followed by ischaemic heart diseases (2,273 male and 545 female deaths). External causes (including transport acccidents and intentional self-harm) were also predominant underlying causes of death (1,125 male and 426 female deaths). External causes were more significant for the 45 to 54 years age group being the underlying cause of 17% of male deaths and 9% of female deaths. Graphs 5.3 and 5.4 show the numbers of deaths (per 100,000 of the mid-year population) for males and females, for the most common cancers and other leading causes of death for mature age persons.

5.3 MAJOR UNDERLYING CAUSES OF DEATHS, Mature Age Males: **2002**



Source: Cause of Death 2002 (ABS cat. no. 3303.0).

5.4 MAJOR UNDERLYING CAUSES OF DEATHS, Mature Age Females: **2002**



Source: Cause of Death 2002 (ABS cat. no. 3303.0).

GLOSSARY

Activity In the 2003 Survey of Disability, Ageing and Carers an activity comprised one or more tasks grouped into the following ten activities.

- cognition or emotion
- communication
- health care
- housework
- meal preparation
- mobility
- paperwork
- property maintenance
- self care
- transport.

Age The person's age on their last birthday.

Age-specific death rate Age-specific death rates are the number of deaths (occurred or registered) during the calendar year at a specified age per 1,000 of the estimated resident population of the same age at mid-point of the year (30 June). Pro rata adjustment is made in respect of deaths for which the age of the deceased is not given.

Age-standardisation Some results on disability presented in this publication have been adjusted to account for differences in the age structure between survey years. Age-standardisation has been undertaken using the direct method. An age-standardised rate is calculated to remove the effects of different age structures when comparing population groups or changes over time. A standard age composition is used, in this case the age composition of the 2003 Survey of Disability, Ageing and Carers population. The standard rate is that which would have prevailed if the actual population had the standard age composition. Age-specific disability rates are multiplied by the standard population for each age group. The results are added and the sum calculated as a percentage of the standard population total to give the age standardised percentage rate.

Alcohol risk level In the 2001 National Health Survey adults were classified by 'alcohol risk level' based on their estimated average daily alcohol consumption in the 7 days prior to interview. Average daily consumption in the previous 7 days was estimated using two components:

- the number of days on which the respondent reported consuming alcohol in the previous week
- the quantity consumed on the three most recent days on which they consumed alcohol in that week. For people who drank on no more than 3 days in the last week, their daily average was simply the total consumed divided by 7.

Risk levels are based on the National Health and Medical Research Council (NHMRC), 2001, *Australian Alcohol Guidelines: Health Risks and Benefits* (www.nhmrc.gov.au) risk levels for harm in the long term, and assumes the level of alcohol consumption recorded for the survey period is typical. The average daily consumption of alcohol associated with the risk levels is as follows:

ALCOHOL RISK LEVEL

	Males	*Females*
Low risk	50ml or less	25ml or less
Risky	More than 50 ml, up to 75 ml	More than 25 ml, up to 50ml
High risk	More than 75 ml	More than 50ml

Drinking status information was also collected for those who did not consume any alcohol in the 7 days prior to interview:

- last consumed more than one week to less than 12 months ago
- last consumed 2 months or more ago
- never consumed.

Body Mass Index (BMI) In the 2001 National Health Survey BMI was calculated from self-reported height and weight information, using the formula weight (kg) divided by the square of height (m). To produce a measure of the prevalence of overweight or obesity in adults, BMI values are grouped according to the table below which allows categories to be reported against both WHO and NHMRC guidelines.

BMI RANGE

	2001
Underweight	Less than 18.5
Normal range	18.5 to less than 20.0
Normal range	20.0 to less 25.0
Overweight	25.0 to less than 30.0
Obese	30.0 and greater

Cardiovascular conditions See Circulatory problems/diseases.

Circulatory problems/diseases In the 2001 National Health Survey circulatory problems/diseases covers all diseases and related problems of the circulatory system. It includes specific conditions such as hypertension, angina, tachycardia, oedema, haemorrhoids, varicose veins and cardiac murmurs.

Core-activity limitation In the 2003 Survey of Disability, Ageing and Carers the four levels of core-activity limitation are determined based on whether a person needs help, has difficulty, or uses aids or equipment with any of the core activities (communication, mobility or self care). A person's overall level of core-activity limitation is determined by their highest level of limitation in these activities.

The four levels of limitation are:

- profound: the person is unable to do, or always needs help with, a core-activity task
- severe: the person
  - sometimes needs help with a core-activity task
  - has difficulty understanding or being understood by family or friends
  - can communicate more easily using sign language or other non-spoken forms of communication.
- moderate: the person needs no help but has difficulty with a core-activity task
- mild: the person needs no help and has no difficulty with any of the core-activity tasks, but
  - uses aids and equipment
  - cannot easily walk 200 metres
  - cannot walk up and down stairs without a handrail
  - cannot easily bend to pick up an object from the floor
  - cannot use public transport
  - can use public transport but needs help or supervision
  - needs no help or supervision but has difficulty using public transport.

Crude death rate The crude death rate is the number of deaths registered during the calendar year per 1,000 estimated resident population at 30 June. For years prior to 1992, the crude death rate was based on the mean estimated resident population for the calendar year.

Death Death is the permanent disappearance of all evidence of life after birth has taken place. The definition excludes deaths prior to live birth. For the purposes of the Deaths and Causes of Death collections conducted by the ABS, a death refers to any death which occurs in, or en route to Australia and is registered with a state or territory Registry of Births, Deaths and Marriages.

Death rates See Standardised death rates, Age-specific death rates

Disability

In the context of health experience, the International Classification of Functioning, Disability and Health (ICF) defines disability as an umbrella term for impairments, activity limitations and participation restrictions. It denotes the negative aspects of the interaction between an individual (with a health condition) and that individual's contextual factors (environment and personal factors). In the 2003 Survey of Disability, Ageing and Carers, a person has a disability if they report that they have a limitation, restriction or impairment, which has lasted, or is likely to last, for at least six months and restricts everyday activities. This includes:

- loss of sight (not corrected by glasses or contact lenses)
- loss of hearing where communication is restricted, or an aid to assist with, or substitute for, hearing is used
- speech difficulties
- shortness of breath or breathing difficulties causing restriction
- chronic or recurrent pain or discomfort causing restriction
- blackouts, fits, or loss of consciousness
- difficulty learning or understanding
- incomplete use of arms or fingers
- difficulty gripping or holding things
- incomplete use of feet or legs
- nervous or emotional condition causing restriction
- restriction in physical activities or in doing physical work
- disfigurement or deformity
- mental illness or condition requiring help or supervision
- long-term effects of head injury, stroke or other brain damage causing restriction
- receiving treatment or medication for any other long-term conditions or ailments and still restricted any other long-term conditions resulting in a restriction.

Disability rate

In the 2003 Survey of Disability, Ageing and Carers disability rate is the proportion of people with a reported disability, in any given population or sub-population (e.g. age group).

Disability status

In the 2003 Survey of Disability, Ageing and Carer disability status comprises whether a person has a disability, the level of core-activity limitation, and whether they have a schooling or employment restriction.

Estimated resident population

The concept of estimated resident population (ERP) links people to a place of usual residence within Australia. Usual residence is that place where each person has lived or intends to live for six months or more in a reference year.

The ERP is an estimate of the Australian population obtained by adding to the estimated population at the beginning of each period the components of natural increase (on a usual residence basis) and net overseas migration. For the states and territories, account is also taken of the estimated interstate movements involving a change of usual residence.

Estimates of the resident population are based on census counts by place of usual residence, to which are added the estimated net census undercount and Australian residents estimated to have been temporarily overseas at the time of the census.

Overseas visitors in Australia are excluded from this calculation.

After each census, estimates for the preceding intercensal period are revised by incorporating an additional adjustment (intercensal discrepancy) to ensure that the total intercensal increase agrees with the difference between the ERPs at the two respectivecensus dates.

Exercise level In the 2001 National Health Survey, exercise level was based on frequency, intensity (i.e. walking, moderate exercise and vigorous exercise) and duration of exercise (for recreation, sport or fitness) in the 2 weeks prior to interview. From these components, an exercise score was derived using factors to represent the intensity of the exercise. Scores were grouped for output as follows:

EXERCISE LEVEL

	2001
Physically inactive	Less than 100 (includes no exercise)
Low	100 to less than 1,600
Moderate	1,600-3,200, or more than 3,200 but less than two hours of vigorous exercise
High	More than 3,200 and two hours or more of vigorous exercise

Health care In the 2003 Survey of Disability, Ageing and Carers, this activity comprised:

- foot care
- other tasks, such as:
  - taking medication, or administering injections
  - dressing wounds
  - using medical machinery
  - manipulating muscles or limbs.

Hypertension An arterial disease of which the elevation of blood pressure is the outstanding sign.

Impairment In the 2003 Survey of Disability, Ageing and Carer, in the context of health experience, an impairment is defined by the the INTERNATIONAL CLASSIFICATION OF FUNCTIONING, DISABILITY AND HEALTH (ICF) as a loss or abnormality in body structure or physiological function (including mental functions). Abnormality is used to

refer to a significant variation from established statistical norms.

Examples of impairment are loss of sight or a limb, disfigurement or deformity, impairment of mood or emotion, impairments of speech, hallucinations, loss of consciousness and any other lack of function of body organs.

Life expectancy Life expectancy refers to the average number of additional years a person of a given age and sex might expect to live if the age-specific death rates of the given period continued throughout his/her lifetime.

Life table death rate The life table death rate represents the annual number of deaths (per 1,000 population) that would occur based on the death rates and population structure of the life table. It is calculated as 1,000/expectation of life at birth.

Long term condition In the 2001 National Health Survey, long term condition is one which was current at the time of the survey and which, in the respondent'sopinion, had lasted for 6 months or more, or which he or she expected will last for 6months or more. Some conditions reported were assumed to be long term conditions: these included asthma, cancer, diabetes insipidus, diabetes mellitus types 1 and 2, rheumatic heart disease, heart attack and stroke.

Main health condition In the Survey of Disabilit, Ageing and Carers, the main health condition is the long-term condition causing the most problems. Where only one long-term condition is reported, this is the main long-term condition.

Mobility In the 2003 Survey of Disability, Ageing and Carers, mobility comprised the following tasks:

- getting into or out of a bed or chair
- moving about the usual place of residence
- going to or getting around a place away from the usual residence
- walking 200 metres
- walking up and down stairs without a handrail
- bending and picking up an object from the floor
- using public transport.

The first three tasks contribute to the definitions of profound and severe core-activity limitation.

Physical activity In the 2001 National Health Survey, physical activity refers to exercise undertaken in the two weeks prior to interview through sport, recreation or fitness (including walking). Incidental exercise undertaken for other reasons, such as for work or while engaged in domestic duties was excluded. See exercise level.

Quintile When persons (or any other units) are ranked from the lowest to the highest on the basis of some characteristic such as their household income, they can then be divided into equal sized groups. When the population is divided into five equally sized groups, the groups are called quintiles.

Self assessed health status Refers to respondent's general assessment of own health, against a 5 point scale from excellent through to poor.

Separations In the National Hospital Morbidity Database, a separation occurs when an admitted patient is:

- discharged;
- is transferred to another institution;
- leaves against medical advice;
- dies whilst in care;
- changes status,for example from acute to nursing home type;
- leaves hospital for a period of seven or more days.

A person can record more than one separation during the reference period.

Sex ratio The sex ratio relates to the number of males per 100 females. The sex ratio is defined for total population, at birth, at death and among age groups by appropriately selecting the numerator and denominator of the ratio.

Smoker status In the 2001 National Health Survey, smoker status refers to the smoking status of adults at the time of the survey, and incorporates the notion of (regular) smoking, as reported by respondents.

Categories are:

- current regular (i.e. daily) smoker
- current smoker not regular
- ex-regular smoker;
- never smoked regularly.

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.

Standardised death rate (SDR)

Standardised death rates enable the comparison of death rates between populations with different age structures by relating them to a standard population. The ABS standard populations relate to the years ending in 1 (e.g. 2001). The current standard population is all persons in the 2001 Australian population. Standardised death rates are expressed per 1,000 or 100,000 persons.

There are two methods of calculating standardised death rates:

The direct method—this is used when the populations under study are large and the age-specific death rates are reliable. It is the overall death rate that would have prevailed in the standard population if it had experienced at each age the death rates of the population under study.

The indirect method—this is used when the populations under study are small and the age-specific death rates are unreliable or not known. It is an adjustment to the crude death rate of the standard population to account for the variation between the actual number of deaths in the population under study and the number of deaths which would have occurred if the population under study had experienced the age-specific death rates of the standard population.

Standardised mortality ratio (SMR)

The ratio of the actual number of deaths in the population under study and the number of deaths which would have occurred if the population under study had experienced the age-specific death rates of the standard population (see also—Standardised death rate, The indirect method).

Underlying cause of death

The disease or injury which initiated the train of morbid events leading directly to death. Accidental and violent deaths are classified according to the external cause, that is, to the circumstances of the accident or violence which produced the fatal injury rather than to the nature of the injury.

Year of registration

Data presented on year of registration basis relate to the date the death was registered.

BIBLIOGRAPHY

Armstrong, T, Bauman, A & Davies, J 2000, *Physical activity patterns of Australian adults. Results of the 1999 National Physical Activity Survey*, Australian Institute of Health and Welfare, Canberra.

Australian Bureau of Statistics, *Australian Demographic Statistics*, *March 2004*, cat. no. 3101.0

Australian Bureau of Statistics, *Australian Standard Geographical Classification (ASGC)*, 2002, cat. no. 1216.0

Australian Bureau of Statistics, *Births, Australia*, *2002* cat. no. 3301.0

Australian Bureau of Statistics ABS data available on request, *Census of Population and Housing*, 1996 and 2001

Australian Bureau of Statistics, *Deaths, Australia*, *2002* cat. no. 3302.0

Australian Bureau of Statistics, *Demography, Australia,2002* cat. no. 3311.0.55.001

Australian Bureau of Statistics, *Disability, Ageing and Carers, Australia, 2003* cat. no. 4430

Australian Bureau of Statistics, *Health Risk Factors, Australia, 2002* cat. no. 4430.0

Australian Bureau of Statistics, *Measures of Australia's Progress, 2004* cat. no. 1370.0

Australian Bureau of Statistics, *National Health Survey*, *2001* cat.no. 4364.0

Australian Bureau of Statistics, *Participation in Sport and Physical Activities 2001,* cat.no. 4177.0

Australian Bureau of Statistics, Australian Historical Population Statistics, data available on request

Department of Health and Aged Care 2001, *National Strategy for an Ageing Australia*, <http://www.ageing.health.gov.au/ofoa/agepolicy/nsaa/nsaa.htm>, accessed 1 July 2004.

Department of the Treasury 2002, *Intergenerational Report 2002-03, Budget Paper No. 5,* Department of the Treasury, Canberra.

Department of the Treasury 2004, *Australia's Demographic Challenges*, Department of the Treasury, Canberra.

HIC Annual Report 2002 -2003, <http://www.hic.gov.au/abouthic/our_organisation/annual_report/02_03/statistics.htm> accessed 9 November 2004.

Mathers, C, Vos, T & Stevenson, C 1999, *The burden of disease and injury in Australia*, AIHW, Canberra.

McCallum, J. et al. 1994, *Self-rated health and survival: a 7-year follow-up study of Australian elderly,* American Journal of Public Health, vol. 84, 1994, pp 1100-1105.

National Hospital Morbidity Database, Australian Institute of Health and Welfare, <http://www.aihw.gov.au/hospitaldata/datacubes/index.html> accessed 11 November 2004

Riddolfo, B & Stevenson, C 2001, *The quantification of drug-caused mortality and morbidity in Australia*, 1998, AIHW, Canberra.

WHO (World Health Organisation) 2000, *Obesity: preventing and managing the global epidemic*, WHO Technical Series: No. 894, WHO, Geneva.

WHO 2002, *The World Health Report 2002*, WHO, Geneva. Body Mass Index

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