

## DESIRED OUTCOMES

All people have the opportunity to enjoy long and healthy lives. Avoidable deaths, disease and injuries are prevented. All people have the ability to function, participate and live independently or appropriately supported in society.

# Health

## INTRODUCTION

Good health is critical to wellbeing. Without good health, people are less able to enjoy their lives to the fullest extent, their options are limited and their general levels of contentment and happiness are likely to be reduced.

Good health has two core dimensions: how long people live and the quality of their lives. The desired outcomes recognise both aspects. As well as enjoying long lives, people want to be free from the pain, suffering and incapacity that injury and illness bring.

The desired outcomes also acknowledge that not all people can live fully independent lives. For some, illness or disability means they need support from families, government agencies or other networks to overcome barriers to their participation in society. Getting this support is an important part of social wellbeing.

People with injuries or illness (both mental and physical) may experience barriers to their participation in education, training and employment, leading to reduced economic standards of living. These barriers can also reduce people's ability to participate in other areas of life, such as family life, socialising with friends, joining community activities and taking part in recreation and leisure pursuits, which can lead to feelings of frustration and isolation.

A range of factors affect and are affected by health outcomes, including genetic predisposition, behaviour, the physical and social environment and the availability of health services. Increasing attention is being paid to the interaction between socio-economic and health outcomes. People with low incomes, poor housing and few qualifications are likely to have disproportionately poorer health.<sup>14</sup>

## INDICATORS

Five indicators are used in this chapter. Taken together, they provide an overall picture of the current state of the nation's health and the likely trends in the future. They cover both the length and quality of life and include both physical and mental health. The indicators are: health expectancy, life expectancy, suicide, the prevalence of cigarette smoking and obesity.

The first three indicators are relevant to the current state of the nation's health. Together, they directly measure the desired outcomes relating to long and healthy lives, and people's ability to participate in society. The last two indicators are strong predictors of future health outcomes.

Health expectancy refers to the number of years a person can expect to live independently, ie free of any functional limitation requiring the assistance of another person or complex assistive device. This is a summary measure of population health integrating both fatal (life expectancy) and non-fatal (disability requiring assistance) health outcomes.

The next indicator, life expectancy, measures the survival experience of the population: how long people live. It is an indicator of fatal health outcomes.

The suicide rate serves as a proxy for the mental health status and social wellbeing of the population. Though the indicator covers the suicide rate for society as a whole, it includes details for subsets of the population. New Zealand's suicide rates are trending down, but our youth suicide rates remain high compared with other OECD countries.

The last two indicators are strong predictors of future health outcomes. The links between cigarette smoking and poor health are widely recognised. For example, cigarette smoking (active and passive) is a risk factor for many cancers, and respiratory and cardiovascular diseases, and has been linked with low birth weight, Sudden Infant Death Syndrome, and other adverse child health outcomes. Obesity is linked with poor health outcomes, such as an increased risk of heart attacks, strokes, type 2 diabetes and some cancers.<sup>15</sup>

# Health expectancy

## DEFINITION

The number of years a person could expect to live in good health if current mortality and morbidity rates persist. The particular measure of health expectancy used here is the number of years a person could expect to live *independently*, ie living without any functional limitation requiring the assistance of another person or complex assistive device. Hence it is also described as independent life expectancy.

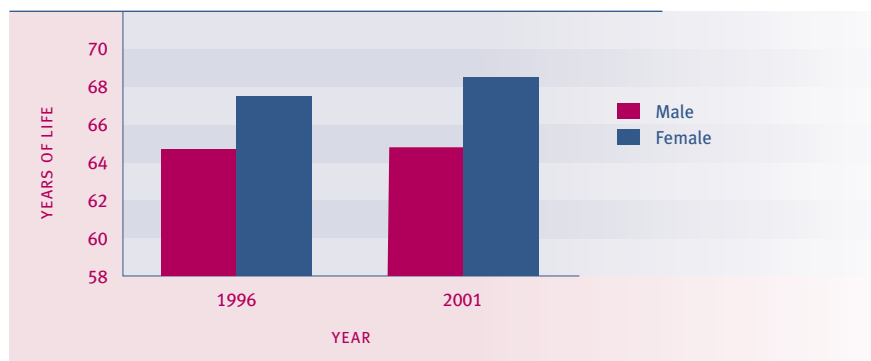
## RELEVANCE

Health expectancy is a summary measure of population health that captures both the “quantity” and “quality” of life dimensions of physical and mental health. Independent life expectancy at birth is a positive measure, capturing expectations of a life free from functional limitation that requires assistance. Improvements in health expectancy reflect changes in social and economic conditions, lifestyle changes, medical advances and better access to health services.

## CURRENT LEVEL AND TRENDS

In 2001, males had an independent life expectancy at birth of 64.8 years. The figure for females was 68.5 years, a difference of 3.7 years. For the total population, independent life expectancy at birth has improved for females since 1996 (67.5 years) but not for males (64.7 years). This has resulted in an increase of almost one year in the overall sex gap in independent life expectancy at birth.

Figure H1.1 Independent life expectancy at birth, by sex, 1996 and 2001



Source: Ministry of Health, revised data

## ETHNIC DIFFERENCES

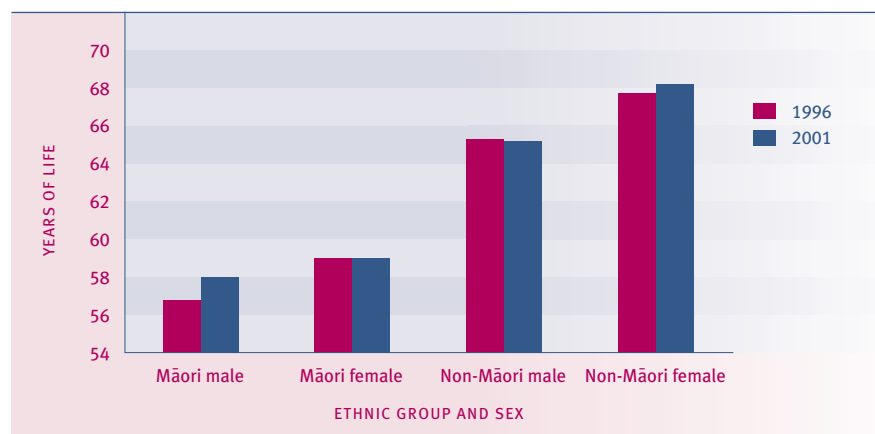
Only partial (0–85 years) independent life expectancy can be estimated for ethnic comparisons because of the small number of Māori aged over 85 years. These ethnic-specific statistics are not comparable with those for the total population.

There are large differences between Māori and non-Māori in their probability of living a long and healthy life. Revised estimates for 2001 indicate a newborn Māori male had a partial (0–85 years) independent life expectancy of 58.0 years, compared to 65.2 years for a non-Māori male, a gap of 7.2 years. The difference is greater for females: a Māori female born in 2001 could expect to have a partial independent life expectancy 9.2 years less than her non-Māori counterpart (59.0 years, compared to 68.2 years for non-Māori females).

Between 1996 and 2001, partial (0–85 years) independent life expectancy improved marginally for Māori males and non-Māori females, but there was no change for non-Māori males and Māori females.

The sex gap in independent life expectancy at birth for Māori narrowed between 1996 and 2001.

Figure H1.2 **Independent life expectancy at birth, Māori and non-Māori, by sex, 1996 and 2001**



Source: Ministry of Health, revised data

Note: These Māori, non-Māori comparisons in independent life expectancy are based on estimates for the 0–85 year age group because of the small number of Māori over 85 years of age

## INTERNATIONAL COMPARISON

In June 2000, the World Health Organisation (WHO) introduced a new health expectancy measure, now called “healthy life expectancy” (HLE). Unlike independent life expectancy, which uses a single disability threshold, HLE uses a continuous scale that includes all levels of disability. The necessary health-state valuations required to construct this measure are not yet available for New Zealand. When these become available, the Ministry of Health intends to replace the independent life expectancy indicator with HLE.

# Life expectancy

## DEFINITION

Life expectancy at birth indicates the total number of years a person could expect to live, based on the mortality rates of the population at each age in a given year.

## RELEVANCE

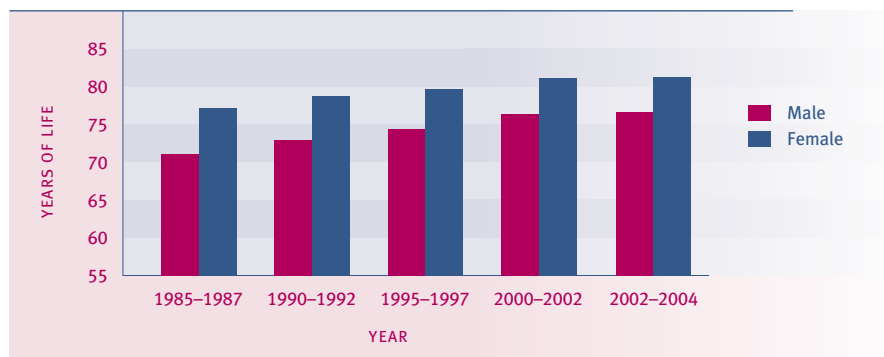
Life expectancy at birth is a key summary indicator of fatal health outcomes, ie the survival experience of the population.

## CURRENT LEVEL AND TRENDS

Based on the mortality experiences of New Zealanders in the period 2002–2004, life expectancy at birth was 77.0 years for males and 81.3 years for females. Since the mid-1980s, gains in longevity have been greater for males than for females. Between 1985–1987 and 2002–2004, life expectancy at birth increased by 5.9 years for males and 4.2 years for females. As a result, the sex gap in life expectancy decreased from 6 years to 4.3 years over this period.

With the decline in the infant mortality rate (from 11.2 deaths per 1,000 live births in 1986 to 5.6 per 1,000 in 2004), the impact of infant death on life expectancy has lessened. The gains in life expectancy since the mid-1980s can be attributed mainly to reduced mortality in middle-aged and older age groups (45–84 years). Reduced mortality rates are due to better living standards and improved public and personal health care.

Figure H2.1 Life expectancy at birth, by sex, selected years, 1985–1987 to 2002–2004



Source: Statistics New Zealand

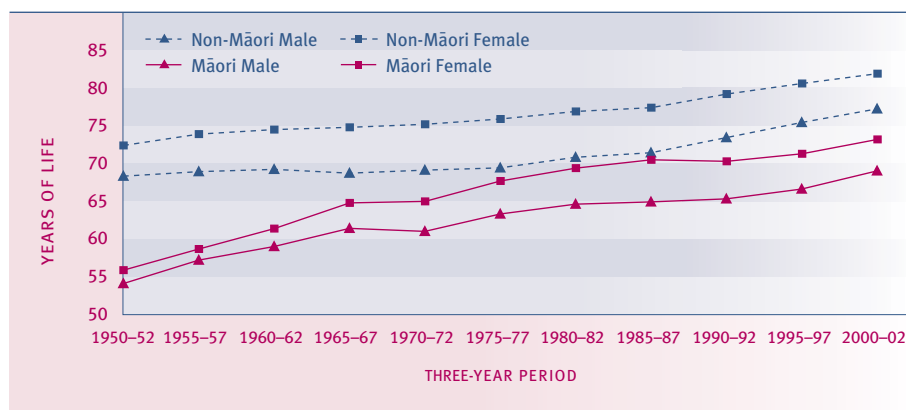
## ETHNIC DIFFERENCES

There are marked ethnic differences in life expectancy. In 2000–2002, male life expectancy at birth was 77.2 years for non-Māori and 69.0 years for Māori, a difference of 8.2 years. Female life expectancy at birth was 81.9 years for non-Māori and 73.2 years for Māori, a difference of 8.8 years.

The pace of improvement in life expectancy has varied by ethnic group. For non-Māori, there was a fairly steady increase in life expectancy at birth over the period from 1985–1987 to 2000–2002, males gaining 5.8 years and females 4.5 years. For Māori, there was little change during the 1980s, but a dramatic improvement in the five years to 2000–2002. While the gain in Māori life expectancy over the whole period 1985–1987 to 2000–2002 (4.1 years for males, 2.7 years for females) was less than that for non-Māori, Māori gained more than non-Māori in the most recent five-year period. As a result, the gap in life expectancy at birth between

non-Māori and Māori, which widened by 2.4 years between 1985–1987 and 1995–1997, reduced by 0.6 years in the five years to 2000–2002.

Figure H2.2 **Life expectancy at birth, by ethnic group and sex, selected years, 1950–1952 to 2000–2002**



Source: Statistics New Zealand, Ministry of Health

Note: Figures for 1981–1996 have been adjusted for undercount, using Statistics New Zealand estimate of Māori life expectancy for 1996

## SOCIO-ECONOMIC DIFFERENCES

There is an association between life expectancy and the level of deprivation in the area where people live. In 1998–2000, males in the least deprived 10th of small areas in New Zealand could expect to live 9.5 years longer than males in the most deprived 10th of small areas. For females, the difference was smaller, but still substantial, at 5.6 years. These figures illustrate the links between socio-economic status and health.<sup>16</sup>

## INTERNATIONAL COMPARISON

In 2001, New Zealanders' life expectancy at birth was 80.9 years for females and 76.0 years for males. This was close to the OECD medians of 80.8 years for females and 75.5 years for males. New Zealand was ranked 15th out of 30 countries for females, and ninth for males. New Zealand's ranking was more favourable than this in 1960 (sixth for males, seventh for females). Over the 1970s and 1980s, longevity improved faster in other OECD countries than in New Zealand. In the 1990s, faster-than-average gains in life expectancy in New Zealand improved its relative position. In 2001, life expectancy at birth was best for females in Japan (84.9 years) and best for males in Iceland (78.3 years). For females, life expectancy was slightly higher in Canada (82.2) and Australia (82.4) than in New Zealand, similar in the United Kingdom (80.4 years) and slightly lower in the United States (79.8 years). The pattern was similar for males: Australia (77 years), Canada (77.1 years), the United Kingdom (75.7 years) and the United States (74.4 years).<sup>17</sup>

# Suicide

## DEFINITION

The number of suicide deaths per 100,000 population.

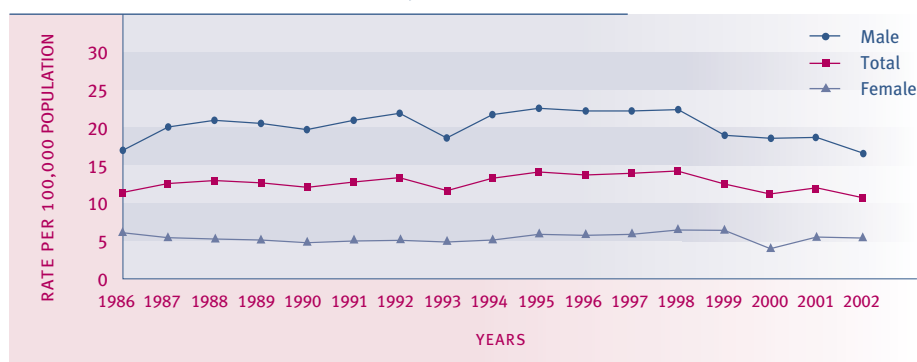
## RELEVANCE

Suicide is an indicator of the mental health and social wellbeing of society and a major cause of injury-related death in the population.

## CURRENT LEVEL AND TRENDS

In 2002, 460 people died by suicide, a decline from 507 in 2001.<sup>18</sup> The age-standardised<sup>19</sup> suicide death rate was 10.7 per 100,000 in 2002, compared with 12.0 per 100,000 in 2001. Over the 1980s and 1990s there was an upward trend in the suicide death rate, which reached a peak of 14.3 per 100,000 in 1998. Since then the rate has fallen by 25 percent and the 2002 rate was below the 1986 rate of 11.5 per 100,000.

Figure H3.1 Age-standardised suicide death rate, by sex, 1986–2002



Source: Ministry of Health, New Zealand Health Information Service

Notes: [1] 2001 and 2002 figures are provisional  
[2] Age-standardised to Segi's world population

## SEX DIFFERENCES

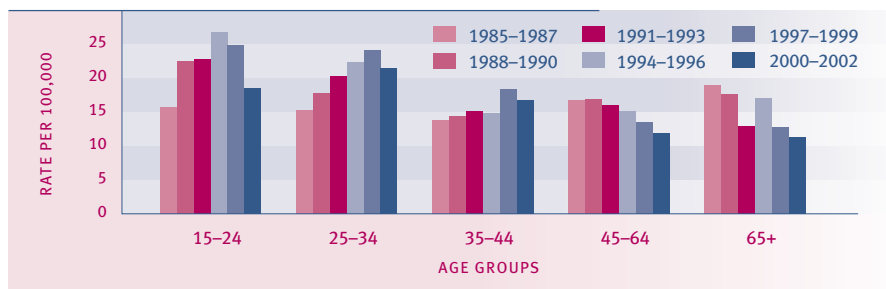
Males have a much higher rate of death by suicide than females, with 16.6 deaths per 100,000 males in 2002, compared with 5.2 deaths per 100,000 females. One of the major factors in the higher male suicide rate is choice of methods.<sup>20</sup> The male suicide rate increased sharply in the late 1980s, declined after 1998, and in 2002 was just below the 1986 rate of 17 deaths per 100,000 males. In comparison, the female rate has been relatively stable, apart from a slight increase during 1996–1999 and a fall in the rate in 2000. Because of the small numbers involved, it is more reliable to consider the trend over several years.

While males account for the most suicide deaths (76 percent in 2002), females account for the majority of recorded suicide attempts (66 percent in 2001/2002).

## AGE DIFFERENCES

People aged 25–34 years had the highest suicide death rate for 10-year age groups in 2002 (19.6 per 100,000, or 107 deaths), followed by people aged 15–24 years (17.0 per 100,000, with 94 deaths). For many decades, the rate of suicide was consistently highest at ages 65 and over but this changed in the late 1980s during a steep increase in youth suicide. The youth suicide rate peaked at 28.7 per 100,000 in 1995 and has fallen by 41 percent since then, but is still higher than the 1986 rate of 15.6 per 100,000. The pattern is similar for 25–34 year olds. Suicide rates have been falling among people over 45 years. These age patterns may reflect, in part, cohort effects.

Figure H3.2 Suicide death rates, by age, 1985–1987 to 2000–2002



Source: Ministry of Health, New Zealand Health Information Service

Notes: [1] Three-year average rates for 10-year age groups calculated by the Ministry of Social Development

[2] 2001 and 2002 figures are provisional

## ETHNIC DIFFERENCES

In 2002, there were 78 Māori deaths from suicide, accounting for 17 percent of all suicides in that year. The age-standardised rate of suicide death was 12.6 per 100,000 for Māori, compared to 10.1 for non-Māori. The suicide rate for Māori youth in 2002 was 31.2 per 100,000, compared with the non-Māori rate of 13.7 per 100,000. Suicide deaths for both Māori and non-Māori were lower in 2000–2002 than in 1997–1999. Because of small numbers, trends in Māori suicide rates should be treated with caution.

Table H3.1 Age-standardised suicide rates and number of suicide deaths, Māori and non-Māori, 1996–2002

Year	Age-standardised rate per 100,000		Number	
	Māori	Non-Māori	Māori	Non-Māori
1996	17.5	12.9	95	445
1997	17.5	13.1	103	458
1998	19.2	13.1	112	465
1999	12.1	12.2	78	438
2000	13.1	10.7	80	378
2001	13.4	11.5	79	428
2002	12.6	10.1	78	382

Source: Ministry of Health, New Zealand Health Information Service

Notes: [1] 2001 and 2002 figures are provisional and the 2001 figures for non-Māori have been revised

[2] Age-standardised to Segi's world population

## INTERNATIONAL COMPARISON

A comparison of age-standardised suicide rates in 13 OECD countries for the years 1999–2002 shows that New Zealand's rate was the sixth worst for both males (16.4 per 100,000) and females (5.2 per 100,000).<sup>21</sup> Finland had the worst male suicide rate (26.5 per 100,000 in 2002), while Japan had the worst female rate (8.8 per 100,000 in 2000). Australia (17.5) had a slightly higher rate of male suicide than New Zealand, while Canada (15.6) and the United States (14.6) had slightly lower rates. The United Kingdom (9.9) fared considerably better. In regards to females, Australia and Canada (each 4.5), the United States (3.4) and the United Kingdom (2.6) all reported better results than New Zealand.

Comparing youth suicide rates in the same 13 OECD countries, New Zealand had the third worst male youth suicide rate, after Finland and Ireland, and the worst female youth suicide rate. New Zealand is one of a small number of countries which have higher suicide rates at the younger ages.<sup>22</sup>



# Prevalence of cigarette smoking

## DEFINITION

The proportion of the population aged 15 and over who currently smoke cigarettes.

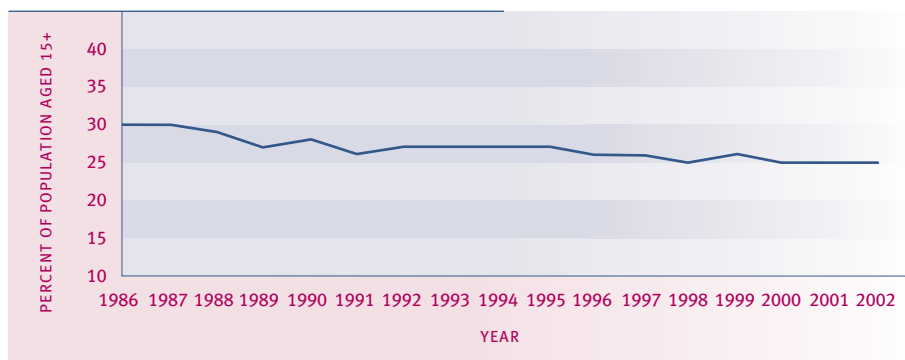
## RELEVANCE

Tobacco smoking is a well-recognised risk factor for many cancers and for respiratory and cardiovascular diseases. In addition, exposure to environmental tobacco smoke (particularly maternal smoking) has been identified as a major risk factor for Sudden Infant Death Syndrome (SIDS) and respiratory problems in children. Internationally, smoking has been identified as the major cause of preventable death in OECD countries.<sup>23</sup>

## CURRENT LEVEL AND TRENDS

In 2002, 25 percent of New Zealanders aged 15 years and over were cigarette smokers. The prevalence of smoking has declined from 30 percent in 1986, with most of the decline occurring between 1987 and 1991.

Figure H4.1 **Prevalence of cigarette smoking, 1986–2002**



Source: Ministry of Health (2003b), Appendix 1, Table 11

## AGE AND SEX DIFFERENCES

Smoking is most prevalent among people aged 25–34 years, followed by those aged 15–24 years and those aged 35–54. Older people aged 55 and over are much less likely to smoke and have experienced the greatest decline in smoking prevalence over the past 15 years.

Smoking prevalence has been similar for both sexes since the mid-1980s. In 2002, the rate was 25 percent for males and 24 percent for females. Females are slightly more likely than males to smoke at ages 15–34, but for those aged 35 and over, smoking has generally been more prevalent among males; over the 1990s, both sexes became less likely to smoke.

## ETHNIC DIFFERENCES

Māori women have the highest smoking prevalence (52 percent), followed by Māori men (39 percent). Among Pacific peoples, smoking is more prevalent among men (35 percent) than among women (29 percent).

Since the early 1990s, smoking prevalence has declined by about three percentage points for European/Other ethnic groups but has remained relatively unchanged for Māori and Pacific peoples.<sup>24</sup>

Table H4.1 Age-standardised prevalence of cigarette smoking, by sex and ethnicity, 2002

	Percentage in each ethnic group who smoke cigarettes			
	Māori	Pacific peoples	European/Other	Total
Male	39.3	34.6	23.8	26.2
Female	51.9	28.5	20.6	25.5
Total	46.4	31.9	22.1	25.8

Source: Ministry of Health (2003b), Table 1

Note: Rates are age-standardised using the WHO world population

## SOCIO-ECONOMIC DIFFERENCES

Smoking is more prevalent among those with lower incomes, beneficiaries and those living in the most deprived areas. An analysis of 1996 Census data shows that the proportion of smokers in the most deprived (decile 10) areas is two to three times the proportion of smokers in the least deprived (decile 1) areas for all age groups, and for both sexes.<sup>25</sup>

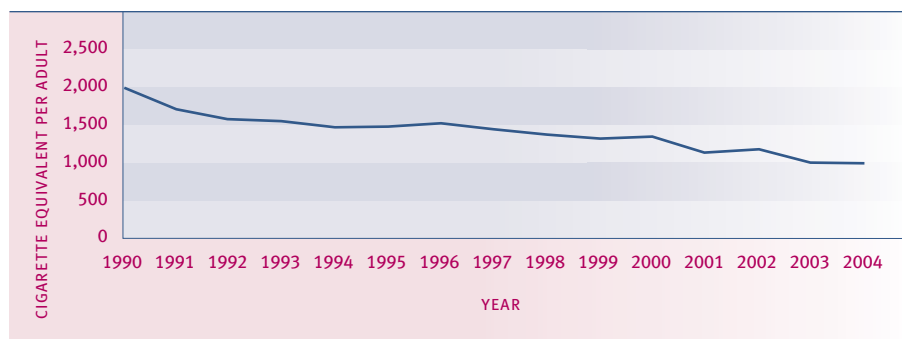
## INTERNATIONAL COMPARISON

In a 2001 comparison of the prevalence of adult smoking, New Zealand had a rate of 25 percent, compared with an OECD median of 27 percent.<sup>26</sup> New Zealand ranked eighth best out of 17 OECD countries. Smoking prevalence was worst in the Netherlands (34 percent). New Zealand's rate was slightly better than that of the United Kingdom (27 percent), but considerably worse than those of Australia (19.8 percent), the United States (18.5 percent) and Canada (18.0 percent). When compared to other developed countries, New Zealand smoking levels are relatively low for males and relatively high for females.<sup>27</sup>

## TOBACCO CONSUMPTION

Tobacco consumption can be measured from customs data or tobacco company returns. This complements the information on smoking prevalence outlined above, so providing a more comprehensive assessment of tobacco use. When expressed as cigarette equivalents per person aged 15 years and over per year, there has been a decrease of 26 percent in tobacco consumption over the last five years, from 1,352 to 999 cigarette equivalents per person. The drop in tobacco consumption has been more rapid than the drop in smoking prevalence.

Figure H4.2 Tobacco consumption, cigarette equivalent per person aged 15 years and over, 1990–2004



Source: Ministry of Health

# Obesity

## DEFINITION

The proportion of the population aged 15 and over who are obese. Obesity is defined as having a Body Mass Index (BMI) greater than 30 for European/Other ethnicities, or greater than 32 for Māori and Pacific peoples.<sup>28</sup> For the population aged under 15, the measure is the proportion of children aged 5–14 years whose BMI met internationally defined thresholds of obesity.<sup>29</sup>

## RELEVANCE

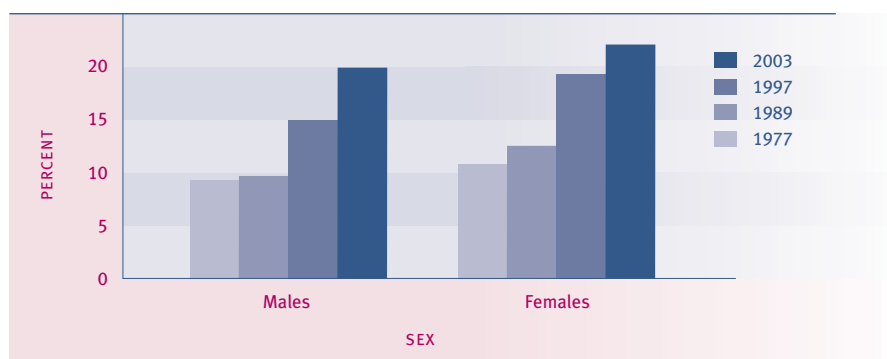
Obesity is associated with heart disease, diabetes, stroke, high blood pressure and some cancers. The increase in the prevalence of obesity has been identified as a major cause of the projected increase in diabetes.<sup>30</sup>

## CURRENT LEVEL AND TRENDS

In 2003, 21 percent of adults aged 15 and over were obese, an increase from 17 percent in 1997. In 2002, 10 percent of children aged 5–14 years were obese.

The prevalence of obesity among New Zealand adults aged 15–74 years doubled between 1977 and 2003, from 9 to 20 percent in males and from 11 to 22 percent in females.<sup>31</sup> The major drivers of the increase in obesity rates have been changing dietary and physical activity patterns, reflecting an environment that promotes the over-consumption of energy-dense foods and drinks and limits opportunities for physical activity.<sup>32</sup>

Figure H5.1 **Prevalence of obesity, total population aged 15–74 years, by sex, 1977–2003**



Source: Ministry of Health (2004b), Table 19, p89

## AGE AND SEX DIFFERENCES

Age-standardised prevalence rates for 2003 showed no significant sex difference in the proportion of adults who were obese (males, 19 percent; females, 21 percent). Obesity increased with age up to the 55–64 year age group (males, 29 percent; females, 31 percent), then declined in the older age groups. This age pattern may reflect in part a cohort effect.<sup>33</sup> Among children aged 7–14 years in 2002, females were more likely than males to be obese.

Table H5.1 **Prevalence (%) of obesity, population aged 15 and over, by age group and sex, 2003**

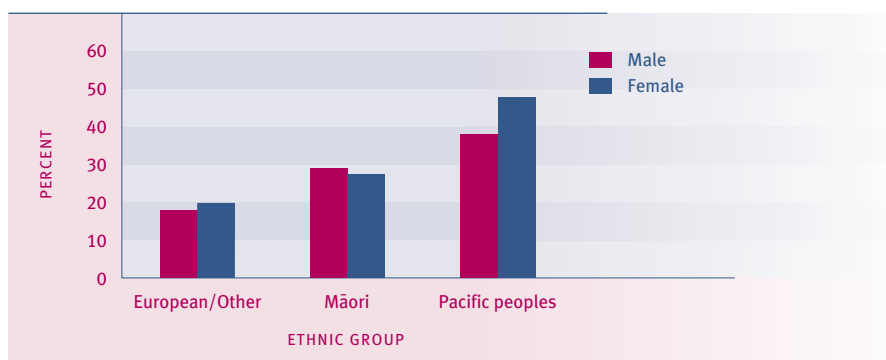
	15–24	25–34	35–44	45–54	55–64	65–74	75+	Total 15+
Males	9.7	16.1	21.0	26.1	29.0	24.0	19.4	19.2
Females	12.4	20.7	22.0	24.6	30.9	27.2	17.1	21.0

Source: Ministry of Health (2004a), pp 85–86

## ETHNIC DIFFERENCES

Obesity is more prevalent among Pacific peoples and Māori than other ethnic groups. Among adults in 2002/2003, the age-standardised obesity prevalence rate was 48 percent for Pacific females and 38 percent for Pacific males. For Māori adults, the figures were 28 percent for females and 29 percent for males. This compares with 20 percent for European/Other females and 18 percent for European/Other males. Among children aged 5–14 in 2002, there was a similar pattern (Pacific children: 31 percent and 26 percent for females and males respectively; Māori children: 17 percent, 16 percent; European/Other: 6 percent, 5 percent).

Figure H5.2 **Age-standardised prevalence of obesity, population aged 15 and over, by ethnic group and sex, 2002/2003**



Source: Ministry of Health (2004a), Tables 13 and 14, pp103–104  
Note: Rates are age-standardised using the WHO world population

Obesity levels have been increasing over time, but from 1997 to 2003 among the Māori population there was a substantial slowing of the rate of change, compared to the total population. The prevalence of obesity for Māori males remained steady over the period at approximately 27 percent and there was a slight decline for Māori females, from 27.9 to 26.5 percent. Between 1997 and 2003 the obesity rate for the total population increased for both males (from 15 to 20 percent) and females (from 19 to 22 percent).

## SOCIO-ECONOMIC DIFFERENCES

The association between socio-economic status and female obesity has been found consistently over time and using different measures of socio-economic status. For example, in 2003, while 28 percent of females living in quintile 5 small areas (the most disadvantaged fifth of small areas in New Zealand) were obese, only 16 percent of those in quintile 1 were obese. However, the link between male obesity and socio-economic status is less well-established.<sup>34</sup>

## INTERNATIONAL COMPARISON

New Zealand has a relatively high prevalence of obesity compared with other OECD countries, with a rate of 21 percent in 2003, compared to an OECD median of 13 percent. New Zealand ranked poorly at 22nd out of 27 countries reporting obesity prevalence in 1999–2003. However, only three other countries base their estimates on actual measurements and New Zealand ranked better than these: the United States (with the worst rate of obesity, at 31 percent in 2002); the United Kingdom (22 percent in 2002) and Australia (22 percent in 1999). Of all countries, Korea had the lowest prevalence of obesity (3 percent in 2001).<sup>35</sup>