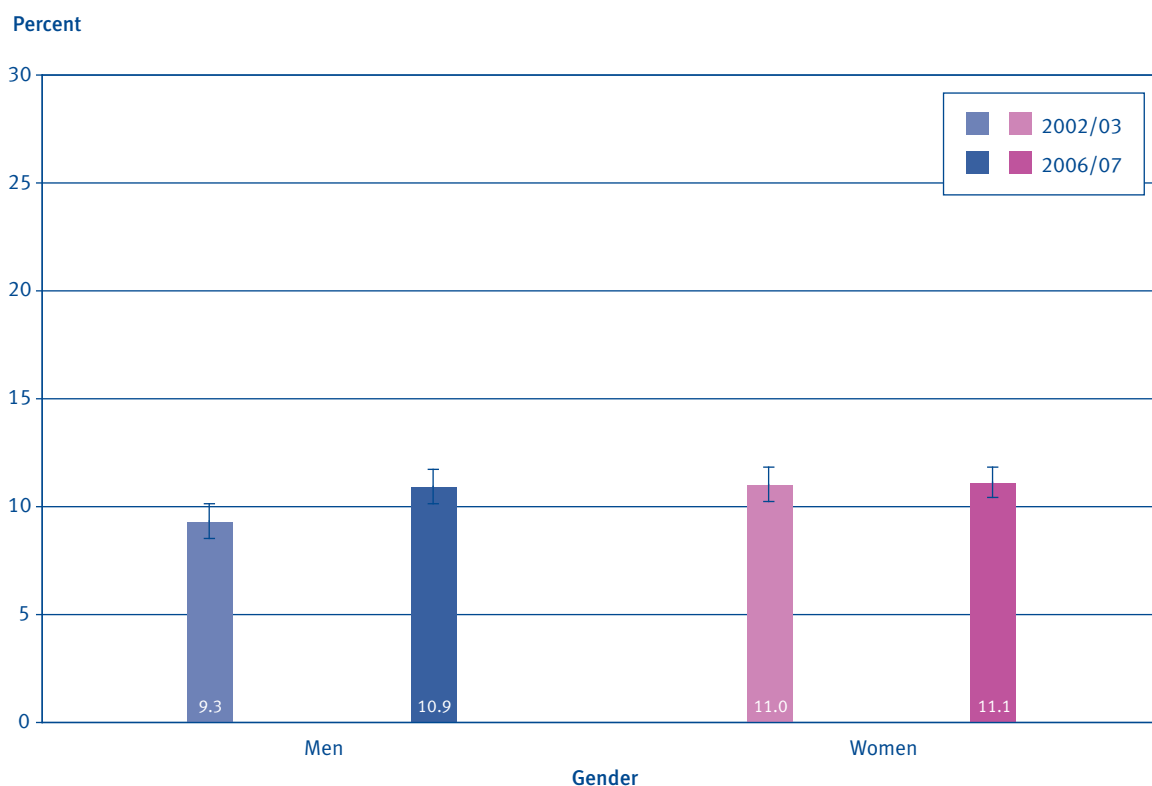


Figure 3.3: Medicated high blood pressure for adults, by gender, 2002/03 and 2006/07 (age standardised prevalence)



Source: 2002/2003 and 2006/07 New Zealand Health Surveys

Note: Data from previous years have been reanalysed to allow for comparability.

High cholesterol

Introduction

High cholesterol is an important risk factor for cardiovascular disease, particularly ischaemic heart disease. Modifiable determinants of blood cholesterol include diet, body weight and physical activity levels. Dietary fat intake is an important modifiable determinant of raised blood cholesterol (Rader and Hobbs 2005).

What were the survey questions?

In the 2006/07 New Zealand Health Survey, adult participants were asked if they had ever been told by a doctor they have high cholesterol levels in their blood, whether they currently take any medication for this condition, and the name of that medication.

High cholesterol usually has no symptoms, and people may not be aware they have the condition unless they have had a blood test. Therefore, the best way to determine the true prevalence of high cholesterol in the community is to take blood samples and measure cholesterol (and other blood lipid and lipoprotein) levels. However, taking blood cholesterol levels was beyond the scope of this survey.

The definition of high cholesterol in this report only includes people currently taking medication for high cholesterol. It is important to note that this definition will underestimate the true prevalence of high cholesterol because:

- not all people with high cholesterol will have been diagnosed, or will remember being diagnosed
- not all people diagnosed with high cholesterol will currently be receiving medication for high cholesterol – some are treated with a change in diet.

Some people do not know whether the medication they are taking is for high cholesterol. The name of cholesterol medication was collected in the 2006/07 survey, so those people who incorrectly believed they were taking medication for high cholesterol, when the medication was not for this condition, were removed from these analyses (3.7% of adults answered this question in error).

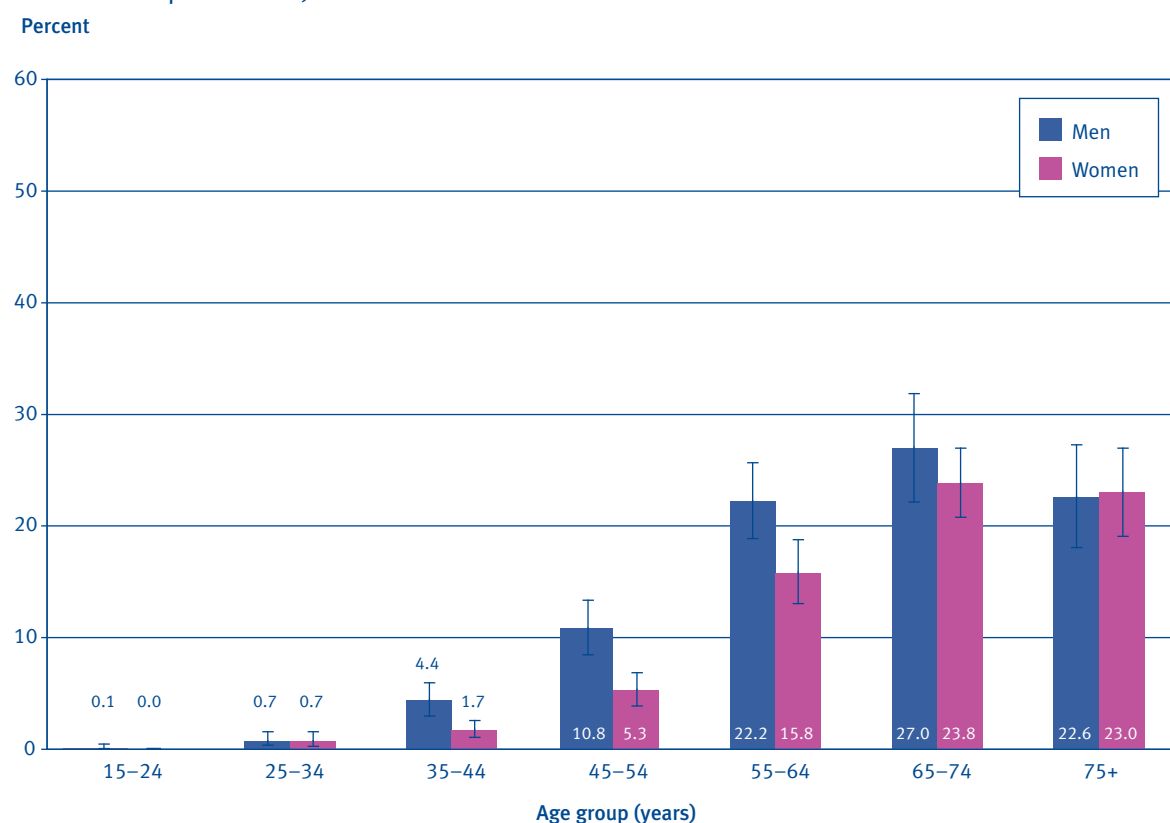
Medicated high cholesterol for adults

One in twelve adults (8.4%, 7.7–9.0) were currently taking medication for high cholesterol. This equates to 260,600 adults. Men (7.9%, 7.2–8.7) were significantly more likely than women (5.7%, 5.1–6.2) to be taking medication for high cholesterol, when standardised for age.

Medicated high cholesterol, by age group

In both men and women the prevalence of taking medication for high cholesterol increased as age increased until 65 years, where it stabilised at just over one in five adults. Men in middle-age groups (35–44, 45–54 and 55–64 years) were significantly more likely than women of the same age to be taking medication for high cholesterol (Figure 3.4).

Figure 3.4: Medicated high cholesterol for adults, by age group and gender (unadjusted prevalence)



Source: 2006/07 New Zealand Health Survey

Medicated high cholesterol, by ethnic group

Table 3.3 gives an indication of the burden of high blood cholesterol in New Zealand's main ethnic population groups.

Table 3.3: Medicated high cholesterol for adults, by ethnic group (unadjusted)

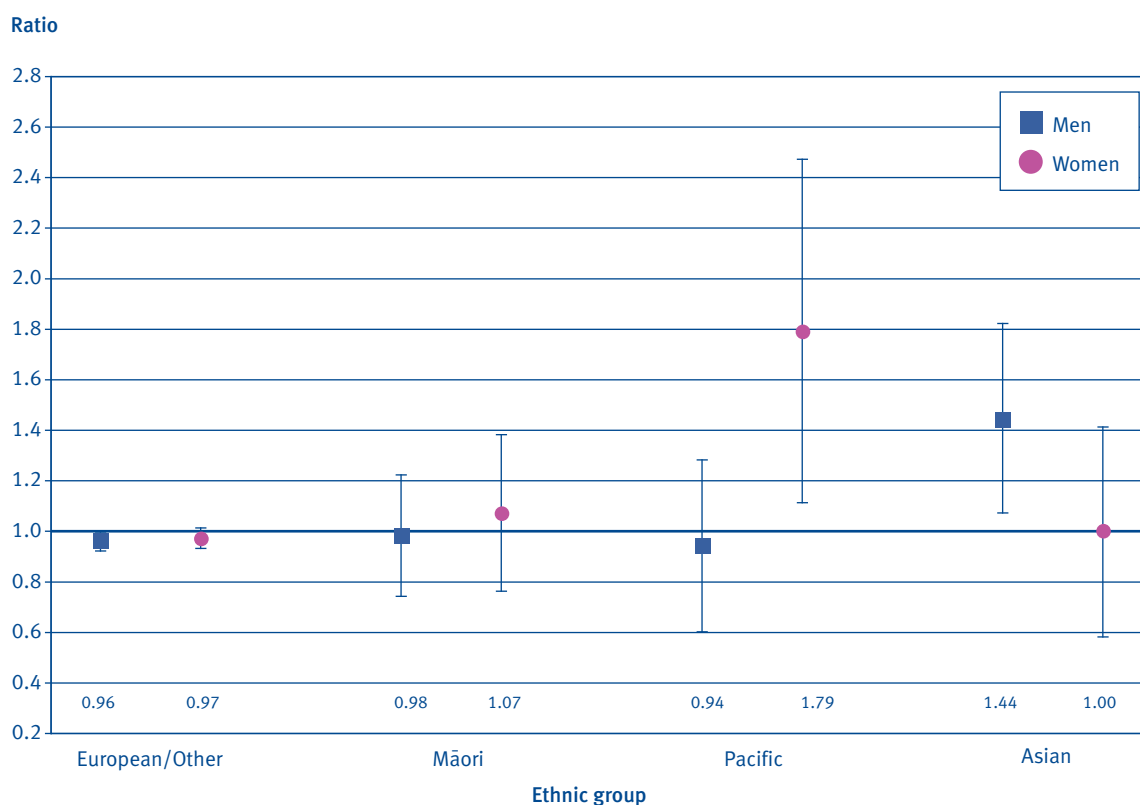
Ethnic group	Prevalence (95% CI)	Number of adults
European/ Other	8.7 (8.0-9.5)	222600
Māori	5.5 (4.5-6.5)	19500
Pacific	6.8 (4.8-8.8)	11200
Asian	6.5 (5.0-8.0)	18300

Source: 2006/07 New Zealand Health Survey

Note: Total response standard output for ethnic groups have been used.

After adjusting for age, Pacific women and Asian men were more likely to be taking medication for high cholesterol compared to women and men in the total population (Figure 3.5).

Figure 3.5: Medicated high cholesterol for adults, by ethnic group and gender (age standardised rate ratio)



Source: 2006/07 New Zealand Health Survey

Notes: Age standardised to the WHO world population. Reference group, with a rate ratio of 1.00 (indicated by the bold line), is the total male or female population aged 15 years and over. Total response standard output for ethnic groups has been used.

Medicated high cholesterol, by neighbourhood deprivation

In both men and women there was no significant difference in the prevalence of taking medication for high cholesterol by neighbourhood deprivation (NZDep2006 quintiles).

Medicated high cholesterol, by DHB area

Adults living in Counties Manukau DHB were significantly more likely than the total adult population to be taking medication for high cholesterol (Table 3.4). There were no other differences by DHB area.

Table 3.4: Medicated high cholesterol for adults, by DHB area (unadjusted)

DHB area	Prevalence (95% CI)	Number of adults
Northland / Tairāwhiti / Hawke's Bay / Lakes / Whanganui	7.5 (6.2–8.8)	28300
Waitemata	8.3 (6.4–10.2)	31600
Auckland	8.7 (6.6–10.7)	28000
Counties Manukau	10.8 (8.7–12.8) +	34700
Waikato	8.2 (6.5–10.0)	21300
Bay of Plenty / Taranaki / MidCentral	8.0 (6.7–9.3)	28200
Wairarapa / Hutt Valley / Capital and Coast	8.3 (6.7–10.0)	28800
Canterbury	7.4 (6.0–8.8)	27500
Nelson Marlborough / West Coast / South Canterbury / Otago / Southland	8.2 (6.3–10.2)	32300
New Zealand total	8.4 (7.7–9.0)	260600

Source: 2006/07 New Zealand Health Survey

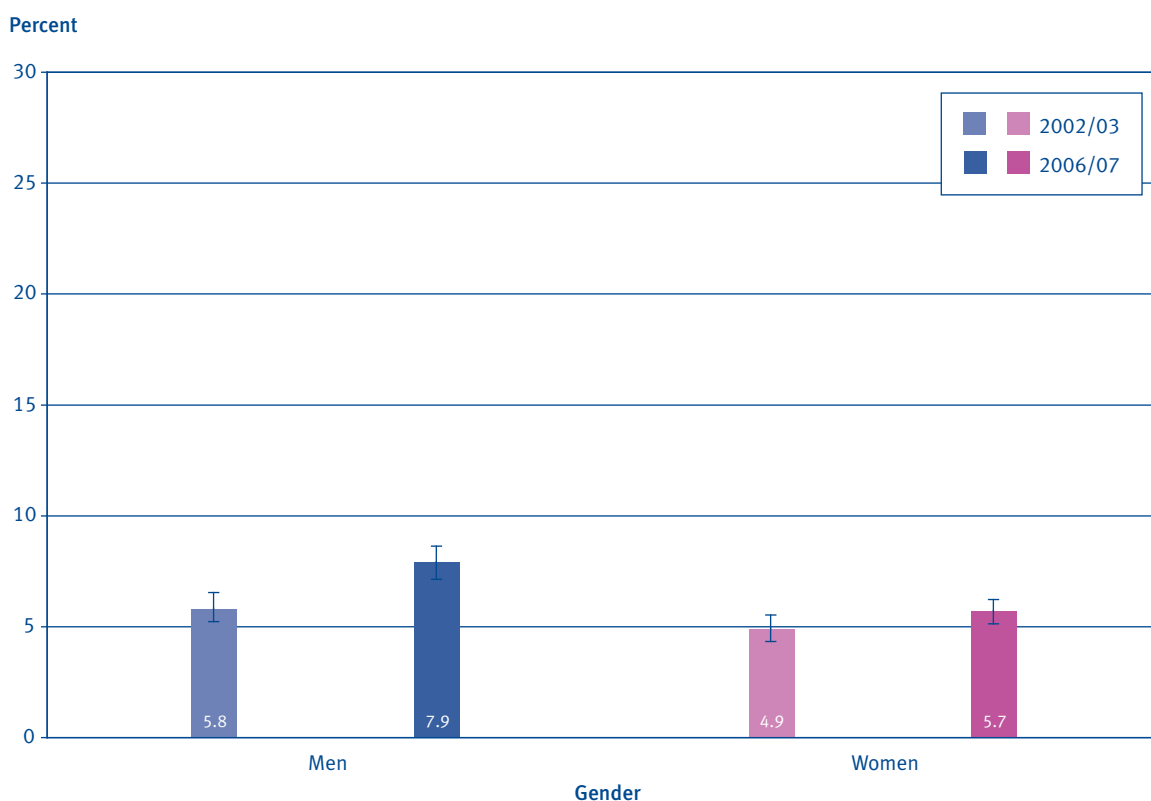
Notes: Estimates indicated with a + are significantly higher than the national rate, and estimates indicated with a – are significantly lower than the national rate. Data are based on direct survey estimates and could be confounded by different population characteristics in each DHB. Due to small sample size, some DHB areas have been combined. Survey population is the estimated resident population living in permanent private dwellings at 31 June 2007.

Time trends in prevalence of medicated high cholesterol

When looking at the time trends, it is important to note that, unlike the 2006/07 survey, the 2002/03 New Zealand Health Survey did not collect the name of cholesterol medication currently being taken. Therefore earlier data may slightly overestimate the prevalence of taking medication for high cholesterol if respondents answered this question in error (ie they incorrectly believed they were taking medication for high cholesterol, when the medication was not for this condition).

Between 2002/03 and 2006/07 there was a significant increase in the prevalence of men taking medication for high cholesterol (p -value < 0.05), adjusted for age (Figure 3.6). For women, there was also a small, but non-significant increase (p -value = 0.05) in the proportion taking medication for high cholesterol. There was no change in the proportion of Māori men or women taking medication for high cholesterol (graph not shown).

Figure 3.6: Medicated high cholesterol for adults, by gender, 2002/03 and 2006/07 (age standardised prevalence)



Source: 2002/03 and 2006/07 New Zealand Health Surveys

Note: Data from previous years have been reanalysed to allow for comparability.

Type of medication for high cholesterol

Nearly all adults who took medication for high cholesterol were taking statins (92.1%, 90.3–94.0). Statins are pills that lower the level of cholesterol in the blood by reducing the production of cholesterol by the liver, and they have been proven to reduce the risk of heart attack, stroke and deaths due to these diseases (Heart Protection Study Collaborative Group 2002; Rader and Hobbs 2005).