

# 10 Risk factors

There are many risk factors that contribute to the onset of certain conditions. With a longitudinal view of patient health becoming increasingly popular,<sup>103</sup> the importance of monitoring risk factors in the older population cannot be underestimated. BEACH measures three risk factors shown to be important in the prevention of chronic conditions—alcohol intake, smoking status and BMI.

## Objectives

The objectives of this chapter are to:

- describe the impact of these risk behaviours in the general practice population aged 65 years and over
- determine whether there are differences between younger (65–74) and older (75+) patients in the prevalence of these risk behaviours
- describe sex differences in the relative rates of these risk factors for this population.

## Methods

Data on alcohol intake, smoking habits and BMI were collected on the SAND section of the BEACH encounter form. These questions were asked during 40 of every 100 encounters recorded (see Chapter 2 Methods).

## 10.1 Alcohol

### Background

The 2001 National Drug Strategy Household Survey found that almost half of adult Australians consumed alcohol at least once per week. One in four people aged 60 years and over did not drink alcohol (27.1%), while only 6.0% consumed alcohol at levels regarded as 'risky' or 'high risk'.<sup>44</sup> Similarly, the National Health Survey 2001 reported that the vast majority of older Australians either do not consume alcohol, or do so at moderate levels, with only 8.0% of 65–74 year olds, and 4.6% of those aged 75 years or more, drinking at at-risk levels.<sup>45</sup> Overall, it has been shown that alcohol consumption decreases with age.<sup>43,44</sup>

Both the positive and negative effects of alcohol consumption have been well documented. Consumption of excessive amounts of alcohol are related to multiple chronic conditions, including various cancers (liver, breast and colorectal), liver cirrhosis, stroke and coronary heart disease.<sup>5</sup> Older people reporting a drinking problem have also been shown to report poorer health status.<sup>51</sup>

In terms of disease burden, the responsible consumption of alcohol outweighs the negative effects, with overall alcohol consumption preventing 3% of the disease burden in Australia.<sup>47</sup> Responsible levels of alcohol consumption are related to improved cardiovascular health, particularly in older people. In particular, moderate consumption of wine has been associated with maintaining health during the older ages.<sup>46</sup> In contrast, the outcomes of at-risk use of alcohol are seen across all age groups.<sup>40</sup>

While conditions related to high-risk levels of alcohol consumption decline with age,<sup>12</sup> it has also been shown that the body's resistance to alcohol decreases with age, due to changes in body structure related to the loss of muscle. Therefore, 'excessive drinking' may involve the consumption of less alcohol in the older age groups and may not be easily identified by doctors, or may be overlooked due to other problems under management for the patient.<sup>104</sup> Identification of excessive consumption of alcohol may be complicated by the form of presentation of such problems to doctors. Common presentations of alcohol-related conditions in older people include falls, hypertension, cognitive problems and depression.<sup>104,105</sup> Doctors should therefore be aware of the possibility of alcohol related conditions occurring in older patients.<sup>104</sup>

## Method

Three items from the WHO Alcohol Use Disorders Identification Test (AUDIT)<sup>106</sup> were modified for use in the BEACH survey to measure alcohol intake. These three questions measure at-risk alcohol use, by means of a score for each question. A total score of 5+ for males or 4+ for females suggests that the person's alcohol consumption is placing them at risk.

The questions patients are asked to determine their alcohol intake are:

- How often do you have a drink containing alcohol?
  - Never
  - Monthly or less
  - Once a week
  - 2–4 times a week
  - 5+ times a week
- How many standard drinks do you have on a typical day when you are drinking?
- How often do you have 6 or more standard drinks on one occasion?
  - Never
  - Monthly or less
  - Once a week
  - 2–4 times a week
  - 5+ times a week

A standard drinks chart was provided to each GP to help the patient identify the number of standard drinks consumed.

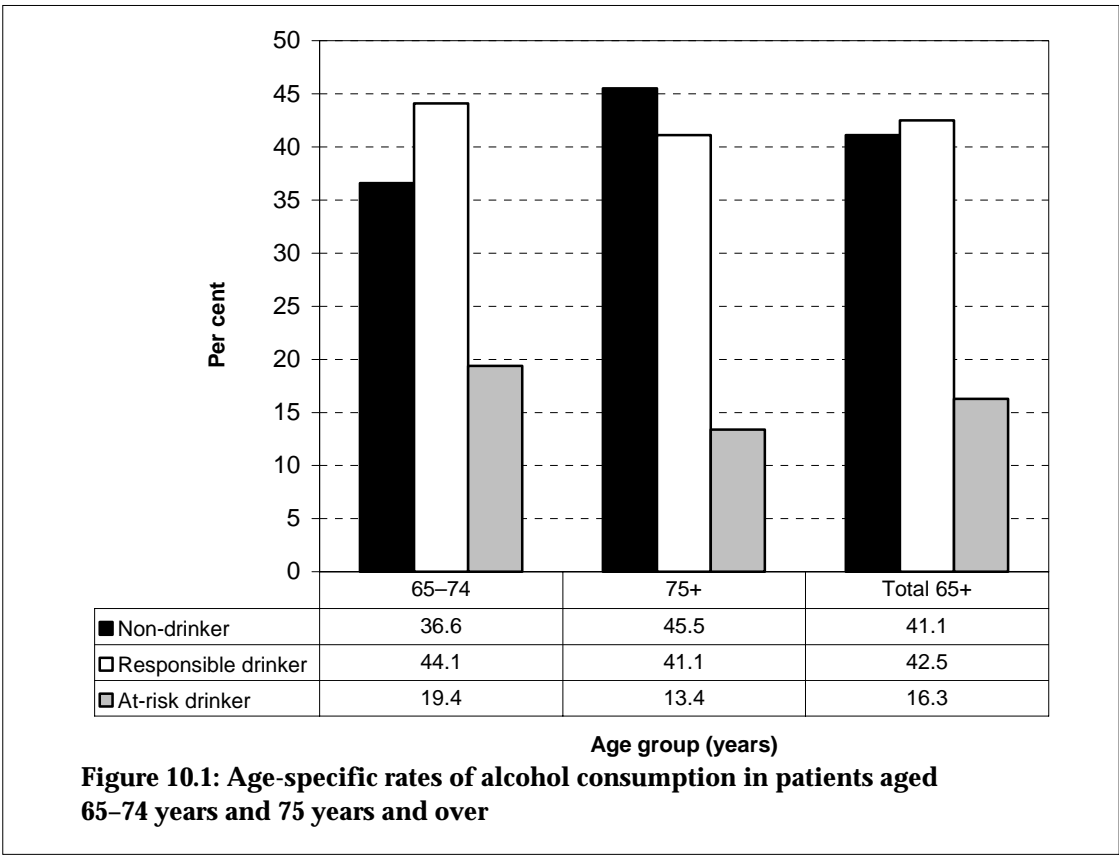
## Results

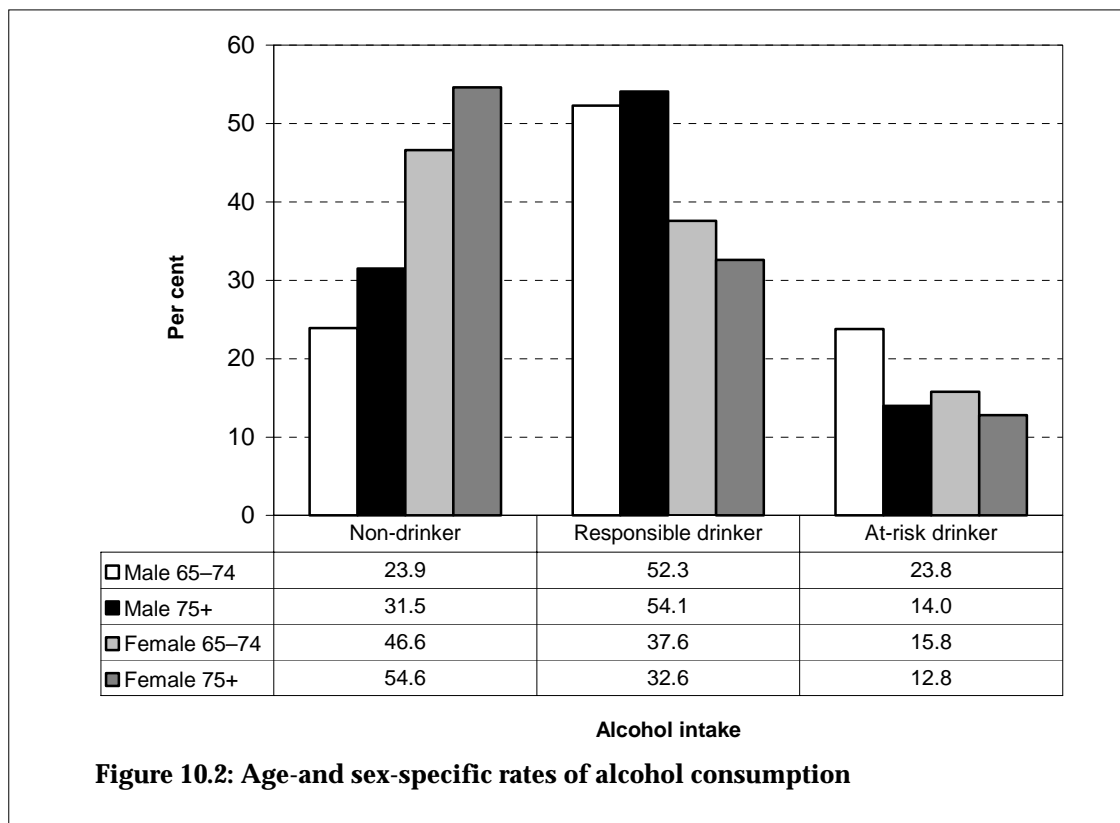
During the period between 2000 and 2002, 18,469 patients aged 65 years and over answered questions relating to their alcohol intake, 7,702 of these being male (41.7%), and 10,767 females (58.3%). Patients reported relatively low levels of at-risk drinking—only 16.3% reported consuming alcohol at levels that were regarded as at-risk (Figure 10.1). Over 40% of patients aged 65+ stated they did not drink alcohol, while 42.5% reported responsible levels of alcohol intake.

Of the 18,469 older respondents, 9,032 were aged between 65 and 74 years (48.9%), while the remaining 9,437 (51.1%) were aged 75+. There were marked differences in consumption patterns based on patient age. Patients aged 65–74 years were significantly more likely to

report consuming alcohol at at-risk levels (19.4%, 95% CI: 17.7–21.0) than those aged 75+ (13.4%, 95% CI: 10.6–16.3), and significantly less likely to be non-drinkers (36.6%, 95% CI: 34.5–38.7 compared with 45.5%, 95% CI: 42.2–48.8). There was no difference found between the age groups in the proportion of patients purporting to consume responsible levels of alcohol (44.1%, 95% CI: 42.1–46.0 in the younger group and 41.1%, 95% CI: 37.8–44.3 of patients aged 75 years and over) (Figure 10.1).

There were no significant differences between the sexes in terms of at-risk alcohol consumption. Men were more likely to report responsible alcohol consumption than women in both the 65–74 years age group (52.3%, 95% CI: 48.2–56.3 compared with 37.6%, 95% CI: 35.5–39.6) and in the 75 years and over group (54.1%, 95% CI: 48.6–59.7 compared with 32.6%, 95% CI: 29.0–36.3). Figure 10.2 also shows that females aged 75 years and over were the group most likely to be non-drinkers (54.6%, 95% CI: 50.6–58.6), and men aged 65–74 years were the least likely to be non-drinkers (23.9%, 95% CI: 20.4–27.4).





## 10.2 Smoking

### Background

Smoking accounts for almost 10% of the disease burden related to risk factors,<sup>40</sup> and smoking alone is responsible for the greatest burden of disease in older Australians, 16% in older men and 9% in older women.<sup>47</sup> The National Drug Strategy Household Survey found that in 2001, 8.9% of Australians aged 60 years or more smoked, while almost 40% of people in this age group were past smokers.<sup>44</sup>

Smoking is associated with numerous chronic conditions, including various cancers (especially lung cancer), chronic obstructive pulmonary disease, coronary heart disease and stroke.<sup>103</sup> An Australian study has shown that older smokers were less likely than younger smokers to heed the health risks associated with their smoking status. They were less likely to believe that smoking was harmful, and that smoking had a negative impact on their health.<sup>107</sup> However, benefits can still be achieved through smoking cessation among older people. A number of studies have shown that increased duration of life could be expected by cessation of smoking,<sup>49</sup> and that people who cease smoking are more likely to report good health than those who continue smoking,<sup>50</sup> including those in older age groups.<sup>46,51</sup>

While less than one in ten Australians aged 60 years or more smoke, the actual number of older smokers is increasing as the older population increases.<sup>48</sup> General practitioners have been identified as having a role to play in educating older people about the health benefits of smoking cessation,<sup>107</sup> as have nurses.<sup>48</sup>

## Method

To determine the smoking status of patients, GPs asked the following single question:

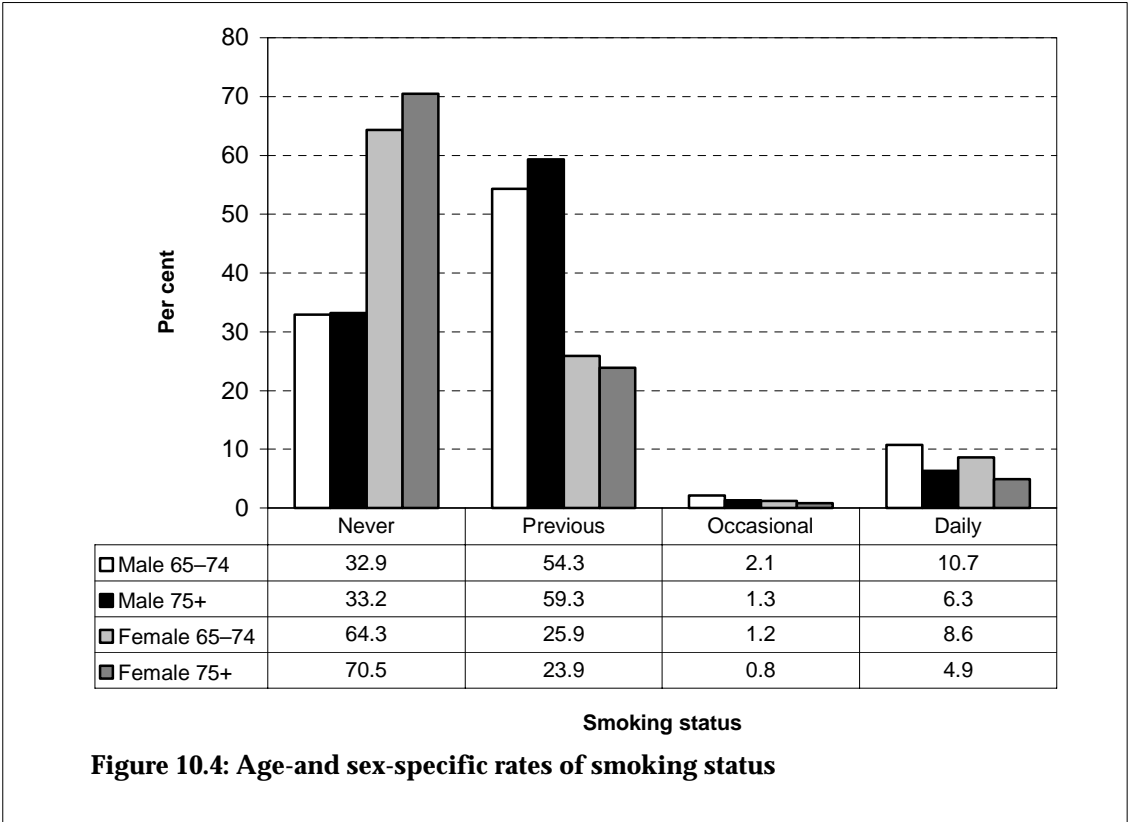
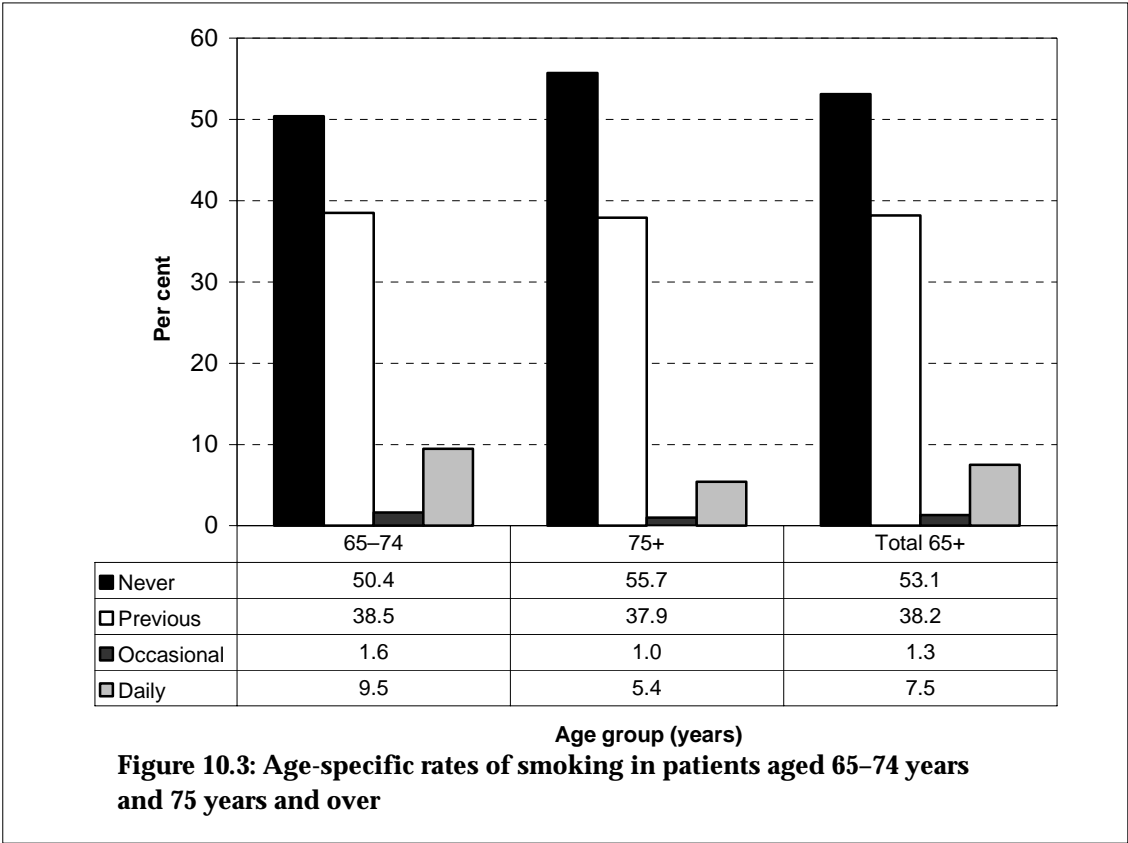
- What best describes your smoking status?
  - Smoke daily
  - Occasional smoker
  - Previous smoker
  - Never smoked

## Results

Of the 18,709 patients aged 65 years and over who reported their smoking status, only 7.5% of patients reported smoking cigarettes daily. Over half the patients surveyed stated they had never smoked (53.1%), while over one-third reported they had smoked in the past (38.2%) (Figure 10.3).

A comparison of patients aged between 65 and 74, and those aged 75 years and over showed that the proportion of those smoking daily declined with age. A significantly greater proportion of the 9,179 patients aged between 65 and 74 years (9.5%, 95% CI: 8.2–10.8) stated they were daily smokers, compared with 5.4% (95% CI: 3.9–7.0) of the 9,530 aged 75 years and over. Patients aged 75+ were more likely to have never smoked (55.7%, 95% CI: 54.4–56.9) than patients aged 65–74 (50.4%, 95% CI: 49.2–51.6). Almost 40% of patients in both groups reported they were previous smokers (38.5% of patients in the 65 to 74 group, and 37.9% in the 75 years and over group) (Figure 10.3).

Figure 10.4 shows the age–sex-specific rates for the patients' self-reported smoking status. In both age groups, significantly more males than females indicated they had smoked in the past. In the 65–74 year age group, 54.3% (95% CI: 52.6–56.0) of the 4,028 males stated they had previously smoked, compared with only 25.9% (95% CI: 24.2–27.6) of the 5,055 females. Almost 60% of the 3,762 males (59.3%, 95% CI: 57.4–61.1) aged 75 years and over reported they were previous smokers, compared with 23.9% (95% CI: 22.1–25.6) of the 5,679 females. There were no sex-related differences in the proportion who stated they were daily smokers.



## 10.3 Body mass index

### Background

The health risks associated with a high BMI (overweight and obesity) are widely recognised.<sup>103</sup> Overall, the burden of disease attributed to obesity in Australia is 4.3%, with the burden increasing with age. Obesity is related to various chronic conditions, in particular cardiovascular disease. It is commonly believed that excess weight is an indicator for increased mortality, with overweight and obesity responsible for 4.5% of deaths in Australia.<sup>40</sup> In addition, a study conducted in the United States found that white men and women have greater years of life lost with increasing BMI.<sup>108</sup>

However, recent research has shown that in older people levels of overweight and obesity may not be as significant an indicator of mortality as underweight. Newman et al. (2001) found that weight loss was associated with increasing age and high mortality, while weight gain did not significantly impact on mortality but did increase the amount of disability experienced.<sup>52</sup> Likewise, Grabowski and Ellis (2001) found that underweight older people had the highest mortality rate, followed by obese older people.<sup>53</sup> Harris et al. (1997) found that older people who either lost or gained 10% of total body weight over a ten-year period had an increased risk of coronary heart disease.<sup>54</sup> These studies suggest that the promotion of weight loss in older adults may be inappropriate. Grabowski and Ellis (2001) stated that weight loss in older people should be 'sustained and gradual' to ensure health is maintained.<sup>53</sup>

### Method

GPs asked patients the following questions to determine their BMI:

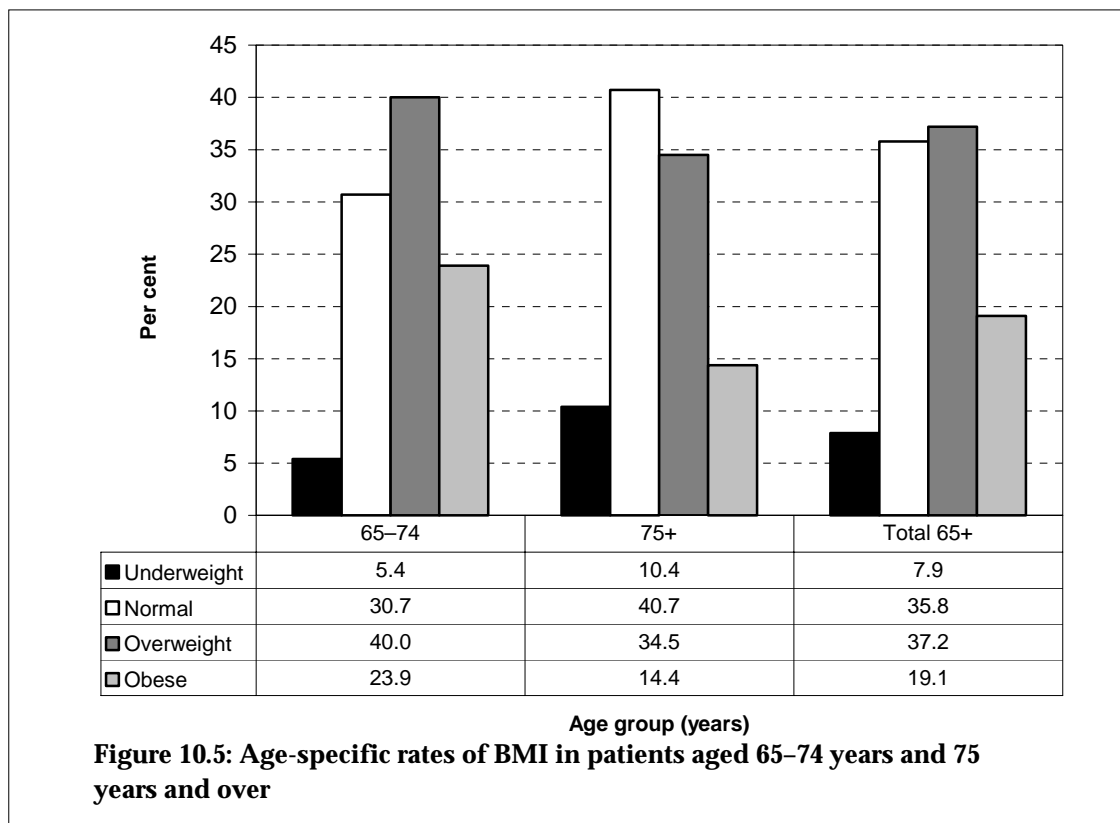
- What is your height in centimetres?
- What is your weight in kilograms?

Metric conversion tables (feet and inches; stones and pounds) were provided to the GP.

BMI was then calculated by dividing weight (kilograms) by height squared (metres<sup>2</sup>). A person with a BMI of less than 20 is considered to be underweight, while a BMI of 20–24 is normal. A person is considered overweight if their BMI falls within the range of 25–29, and a person with a BMI of 30 or more is considered obese.

### Results

There were 19,430 patients aged 65 years and over who responded to questions about their height and weight. Of these patients, almost one in five were obese (19.1%, 95% CI: 18.4–19.9), and a further 37.2% were overweight. As a result more than half these patients (56%) were either overweight or obese. Only one-third of patients fell within the normal weight range (35.8%, 95% CI: 34.9–36.6), while 7.9% (95% CI: 7.2–8.6) of patients were underweight (Figure 10.5).



Of the 19,430 respondents, 9,463 were aged 65–74 years (48.7%) and 9,967 were aged 75 years or older (51.3%). The rate of obesity in the older age group (75+) was almost half that of the younger (65–74 years) (14.4%, 95% CI: 13.3–15.5 compared with 23.9%, 95% CI: 22.8–25.0). Similarly, the prevalence of overweight was significantly higher in patients aged 65–74, than in those 75 years and over (40.0%, 95% CI: 39.0–41.0 compared with 34.5%, 95% CI: 33.5–35.5) (Figure 10.5).

It is interesting to note the overall decreasing trend in the prevalence of overweight and obesity in patients aged 75 years and over, while the rate of underweight almost doubled in this age group compared to those aged between 65 and 74 (10.4%, 95% CI: 9.1–11.6 compared with 5.4%, 95% CI: 3.8–7.0) (Figure 10.5).

Figure 10.6 shows age- and sex-specific rates of BMI. The high numbers of patients in both age groups who were either overweight or obese must be noted. In both age groups, males were significantly more likely than females to be classed as overweight. Almost half of the 4,171 males aged between 65 and 74 were overweight (45.2%, 95% CI: 43.6–46.8) compared with 35.8% (95% CI: 34.4–37.3) of the 5,292 females. Conversely, significantly more females than males in this age group were obese (26.8%, 95% CI: 25.2–28.5 compared with 20.3%, 95% CI: 18.0–22.5). In the group aged 75 years and over, 39.5% (95% CI: 37.8–41.2) of the 3,936 males were overweight, compared with 31.1% (95% CI: 29.7–32.5) of the 6,031 females. However, there were no significant differences between the sexes for the prevalence of obesity.

It was noted previously that rates of underweight increased considerably when the patient was in the older age group. Figure 10.6 shows that this difference was primarily in female patients. Females aged 75 years and over were significantly more likely to be underweight than males in the same age group (13.7%, 95% CI: 11.8–15.5 compared with 5.5%, 95% CI: 1.4–9.6).

There were no significant differences between the sexes in the rates of people in the normal weight range in either age group (Figure 10.6).



**Summary**

A relatively low proportion of respondents aged 65 years and over consume alcohol at at-risk levels. While less than 10% of respondents aged 65 years or more smoke cigarettes daily, almost 40% had smoked in the past. In terms of BMI, two areas of concern emerged. Firstly, over 50% of those aged between 65 and 74 years were either overweight or obese. In contrast, in the 75 years and over age group, the high proportion of patients who are underweight is the dominating feature. These issues will be discussed in further detail in Chapter 14—Discussion.