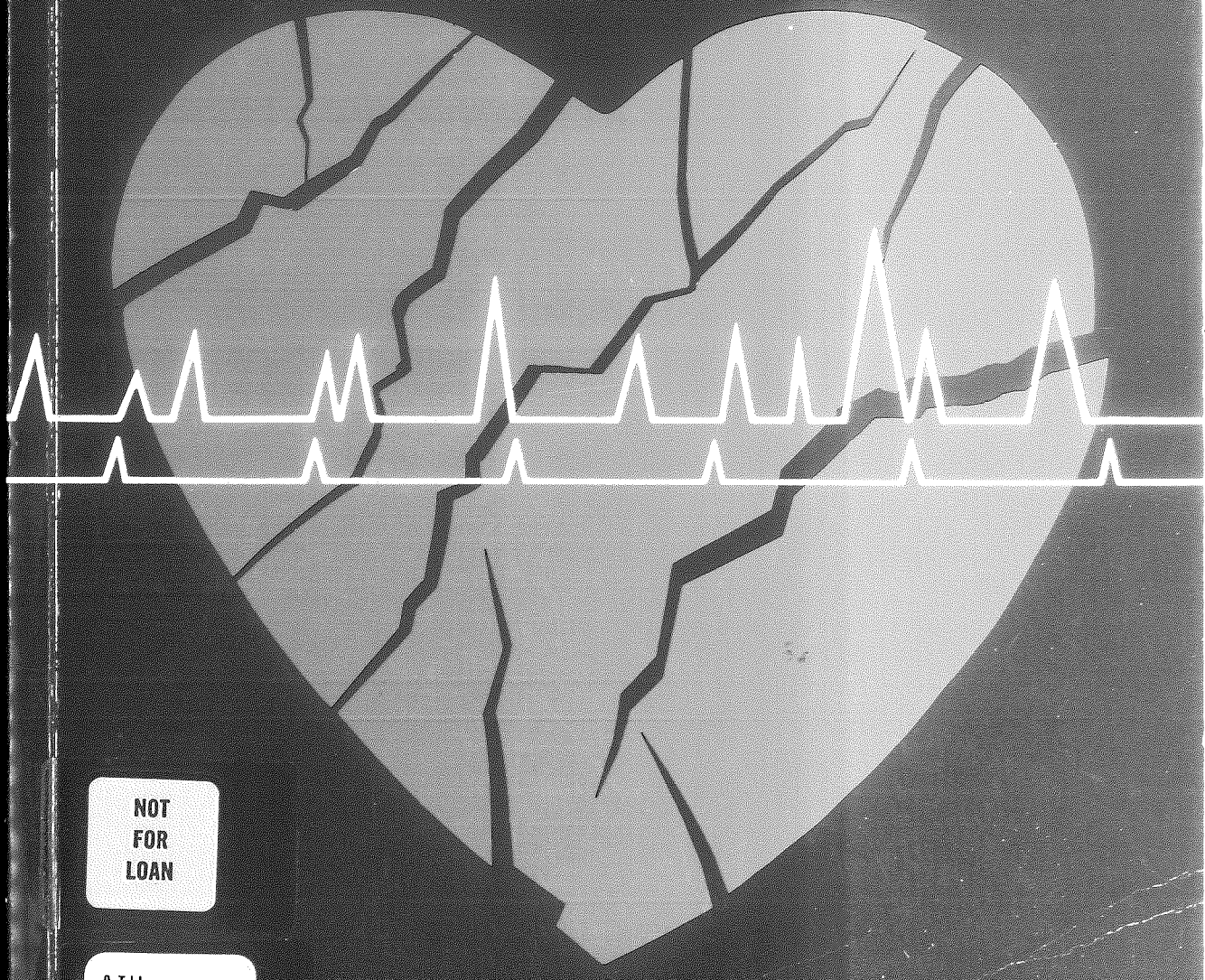
National Heart Foundation of Australia

RISK FACTOR PREVALENCE STUDY



Survey No 3 1989

Risk Factor Prevalence Study
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Management Committee

National Heart Foundation of Australia and
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Preface

The past two decades have seen great improvements in the heart health of Australians. Since the second half of the 1960s death rates from heart attack have more than halved among middle-aged men and women. Among older Australians there has also been a marked benefit.

During this period there have been big advances in tackling heart attack — better emergency ambulance services, wider use of heart-lung resuscitation, the establishment of coronary care hospital units and new drugs to treat high blood pressure and high blood cholesterol. There has also been a great increase in knowledge by the community about the factors which increase the risk of heart attack, such as cigarette smoking, high blood pressure and high blood cholesterol. Other structured changes directed at the reduction of heart attacks particularly addressing non-smoking, healthier eating and regular exercise have also occurred.

The Heart Foundation planned its Risk Factor Prevalence Study (RFPS) surveys to give a picture of the level of risk factors in Australia and how they might be changing over time. The first survey in 1980 included 5,600 Australian men and women aged 25-64 living in the state capital cities. The second in 1983 assessed a further 7600 Australians of the same age-range. Each survey was summarised in a special report. The surveys were conducted in collaboration with the Commonwealth Department of Community Services and Health (DCSH).

This information has been used widely in Australia and overseas. The surveys have become the benchmark for comparisons with other population studies and a basis for many community-wide health programs. We have already learnt much about the level, distribution and inter-relationships of coronary risk factors in Australia. The RFPS is certainly one of the most important health research initiatives in Australia.

This present report summarises the third RFPS Survey, conducted in 1989. Along with the DCSH, we were pleased to be joined by the Australian Institute of Health (AIH) which played a large part in the planning, administration and analysis of the survey. Although this is a stand-alone report limited to 1989, this third survey is of great interest because data from the three surveys now span almost ten years. After a full statistical comparison of the three surveys has been undertaken we should be able to address the crucial question of whether there has been a fall in risk factor levels to accompany that in cardiovascular deaths. This may help explain our success in reducing heart disease and guide us in future efforts.

Again I thank the DCSH for its financial assistance and for help in planning. I am especially grateful to the AIH for its great contribution. My continued thanks to the RFPS Management Committee, the Study Director Dr Paul Magnus, and the staff in the survey centres. Most of all I say thank you to the many Australians who went out of their way to attend our survey centres.

R.L. Hodge
Chairman, Risk Factor Prevalence Study
Management Committee, National Heart Foundation of Australia

Acknowledgements

The Management Committee for the Study thanks everybody who contributed to the survey and to the production of this report, particularly staff in the National and State Offices of the National Heart Foundation (NHF) and the Australian Institute of Health (AIH).

The report was written and produced by Stan Bennett (AIH), Paul Magnus (NHF), Elizabeth Hall (NHF), John Berzins (AIH) and Peter Wright (AIH).

Anne-Marie Waters and Ruth Penm of the Statistical Services Section, Department of Community Services and Health, were heavily involved in the development stage including pilot testing and sample selection.

The data collection teams in the survey centres showed great commitment and enthusiasm. They were:

Sydney South	Linda Portus, Christine Rumble and Geraldine Brennan
Sydney North	Patricia Koff, Meredith Webster and Valerie Andrews
Melbourne	Tracey Marriner, Katrina Campion, Jan Edmonds and Lyn Read
Brisbane	Lyn Oliver, Marcia Casey and Barbara Bosschieter
Adelaide	Cheryl Wright, Melissa Hall, Joan Lynch, Jill Barclay, Di Fitzsimmons, Helen Wilby, Julie White, Libby Davis, Melanie Wakefield, Anne-Marie Twisk and David Wilson
Perth	Pip Alder, Geraldine Buchanan, Fiona Bush, Christina Spadaccini, Yvonne Van Dongen, Maxine Croot, Katherine Devlin, Debra Clackson and Richard Parsons
Hobart	Max Meaney, Jan Rowell, Diane Hayes
Darwin	Pat Hallagan, Tracey Varney and Christine Harris
Canberra	Pam Usher, Poppy Knapp, Connie Thomas, Genevieve Hetherington, Anne Moore, Joanne Cole, Carol Sweetapple and Maura Metherway

A special thanks is due to Stan Sobecki and the workers at the central analytical laboratory, Institute of Medical and Veterinary Science, Adelaide, who processed all the blood specimens.

An invaluable role was played by the data processing team within the Australian Institute of Health led by John Berzins and including Peter Leviton, Helen Daley and Susan Butcher.

The committee also records its gratitude to the following people for their advice and assistance:

professional staff in the Nutrition Section of the Department of Community Services and Health for advice on the anthropometric measures;

staff within the Health Promotion and Development Branch of the Department of Community Services and Health;

staff within the Commonwealth Electoral Office for assistance with sample selection; and

staff at the Australian Bureau of Statistics for advice on some aspects of questionnaire design and its coding.

Most importantly, the Management Committee thanks all those people who gave up so much of their time to take part as subjects in the survey.

Summary of Preliminary Analysis

The 1989 Survey has collected a wealth of information on the demographic and physical characteristics, health and associated behaviour of people aged 20-69 years living in the State and Territory capital cities. This summary highlights a number of points of interest in the report.

Blood pressure and hypertension

- About 1 in 6 men and 1 in 8 women were found to be hypertensive: they either said that they were on tablets for blood pressure or had a diastolic blood pressure of 95mmHg or more. A diastolic blood pressure of 95mmHg or more was found in 11% of men and 5% of women, whether or not they were on tablets for raised blood pressure.
- 53% of men and 77% of women found to be hypertensive were currently taking tablets for raised blood pressure. Of those who said they were on tablets for blood pressure, 1 in 3 men and 1 in 6 women had a diastolic pressure of 95mmHg or more. 8% of men and 3% of women had diastolic blood pressures of 95mmHg or more and were not on tablets.
- The proportion of men and women found to be hypertensive increased steadily with age. In the oldest age group, 65-69 years, 37% of men and 54% of women were hypertensive.

Blood cholesterol and triglycerides

- 47% of men and 39% of women (not taking the oral contraceptive pill) had plasma cholesterol levels of 5.5mmol/L or more, the level which the National Heart Foundation regards as higher than desirable. 16% of men and 14% of women had levels of 6.5mmol/L or more.
- 17% of men and 7% of women (not taking the oral contraceptive pill) had plasma triglycerides of 2.0mmol/L or more.

Smoking behaviour

- 24% of men and 21% of women said they were current cigarette smokers.
- 55% of men and 48% of women who had smoked regularly said they were no longer smoking.
- The average amount smoked daily was 18 cigarettes for male smokers and 15 for female smokers.

Multiple major risk factors:

High blood pressure, high blood cholesterol and cigarette smoking

- 42% of men and 35% of women had at least one of the three major risk factors.
- 8% of men and 5% of women had two or three major risk factors, the prevalence increasing to age 50-54 and decreasing thereafter.

Overweight and obesity

- About 60% of men and 50% of women aged 45 years and over were overweight or obese.
- Generally, men had a higher prevalence of overweight or obesity than women. This difference was more marked in the younger than in the older age groups. Overall, however, obesity was more prevalent among women than men, particularly in the older age groups.
- The prevalence of women defined as underweight was especially high (29%) among women aged 20-24.

Exercise for recreation, sport or health fitness

- About 27% of men and women had no exercise of any kind during leisure time in the preceding two weeks. They did not walk for recreation or exercise or take part in vigorous or less vigorous exercise.
- 52% of men and 59% of women said they had walked for recreation or exercise during the preceding two weeks. 7 6% of men and 4% of women exercised regularly at a vigorous level i.e. at least 3 sessions a week at an average of at least 20 minutes each session.

Alcohol intake

- 87% of men and 75% of women said they drank alcohol. The proportion of drinkers was lower in the older age groups.
- When younger adults drank they did so more heavily than the older age groups, although they were likely to drink less frequently.
- 6% of all men and 5% of all women were classified as intermediate or high risk drinkers.

Dietary behaviour

- 20% of men and 27% of women followed some kind of special diet.
- A fat-modified diet to lower blood fat was reported by 11% of men and almost 13% of women. In both sexes the prevalence of this diet increased with age, being around 20% for men and 23% for women at older ages.
- At all ages, women were less likely than men to add salt to their food. Overall, 58% of women rarely or never added salt to their food compared with 49% of men.

Oral contraceptive use

- 86% of women aged 25-39 had taken oral contraceptives at some time, the proportion decreasing with age to 33% of women aged 60-64.
- 56% of women in the age group 20-24 who had taken the oral contraceptive pill at some time were current users.

Chapter 1: Introduction

1.1 Background

This survey is the third in a series of cross-sectional surveys which together comprise the national Risk Factor Prevalence Study (RFPS).

The first RFPS survey was conducted in 1980 and 5617 men and women aged 25-64 years from the State capital cities took part. The second survey, conducted in 1983, included 7640 participants. The third survey, the subject of this report, was conducted in 1989. It covered an expanded age range of 20-69 years and included Canberra and Darwin in addition to the State capitals. Total respondents numbered 9328.

One of the main purposes of the RFPS is to investigate whether, over the 1980s, there has been a favourable trend in the level of factors which increase the risk of heart and blood vessel disease, such as cigarette smoking, high blood cholesterol and high blood pressure. This may help to explain the large and continuing fall in cardiovascular death rates in Australia since the peak in 1966-67.

The established or suggested risk factors which are subject to modification and therefore may have been reduced in recent decades are:

- raised blood cholesterol and triglyceride levels
- raised blood pressure
- cigarette smoking
- overweight
- diabetes mellitus
- physical inactivity
- psychological stress

The measurement of these factors and their associated behaviour has been the subject of the RFPS.

1.2 Objectives of the Study

The objectives of the study are:

1. To determine the prevalence of cardiovascular risk factors in adult Australians living in State and Territory capital cities.
2. To compare the prevalence of risk factors between geographical regions and population groups and to correlate this prevalence with mortality from cardiovascular disease.
3. Using repeated surveys, to assess the degree to which trends in cardiovascular disease mortality are associated with changes in risk factor prevalence.

The surveys provide data which can be used in the planning and monitoring of community prevention programs and research into the treatment of cardiovascular disease.

1.3 Organisation and administration

The study is administered by the Risk Factor Prevalence Study Management Committee. This Committee is chaired by the Director of the National Heart Foundation and also comprises the RFPS Director, Regional Study Directors and representatives from the Australian Institute of Health and the Commonwealth Department of Community Services and Health.

Members of the Committee for the 1989 Risk Factor Prevalence Survey were:

Chairman	Dr R.L.Hodge Director, National Heart Foundation
Study director	Dr P.Magnus Medical Associate, National Heart Foundation
Study statistician	Mr S.A.Bennett Senior Research Fellow, Australian Institute of Health
Operations managers	Mr J.Berzins Australian Institute of Health
	Ms E.Hall National Office, National Heart Foundation
	Mrs A-M.Waters Statistical Services Section Department of Community Services and Heath

Local study directors:

Sydney North	Dr R.Edwards Royal North Shore Hospital, Sydney
Sydney South	A/Professor L. Simons St Vincent's Hospital, Sydney
Melbourne	Dr S.Gourlay and Professor J.McNeil Monash University, Melbourne
Brisbane	Dr R.Swannell Department of Health, Brisbane
Adelaide	Dr P.Ryan University of Adelaide, Adelaide
Perth	Dr K.Jamrozik University of Western Australia, Perth
Hobart	Dr J.Curran Department of Health, Hobart
Darwin	Dr A.Walker Royal Darwin Hospital, Darwin
Canberra	Dr S.O'Connor Cardiologist, Canberra

The survey was co-ordinated by the National Office of the National Heart Foundation. The Statistical Services Section of the Department of Community Services and Health were responsible for survey development and sample selection. Data were collected by survey centres within each capital city between June 1989 and December 1989. A

special data processing unit within the Australian Institute of Health directed the data collection and was also responsible for data processing and preliminary analysis.

Ethical clearance for the survey was provided by the Australian Institute of Health Interim Ethics Committee. The Commonwealth Privacy Commissioner was also consulted before the survey commenced.

1.4 Comparison between surveys

Differences between estimates from this survey and those from the 1980 and 1983 surveys are of major interest. However, the comparison of estimates from each survey requires great care. **Inferences should not be made without appropriate analysis and direct comparisons based on the three reports could be misleading.** The Australian Institute of Health will be undertaking an appropriate analysis of the data on behalf of the National Heart Foundation.

In comparing statistics from the three surveys it should be recognised that:

(a) for each survey, estimates are based on the population distribution at the time the survey was conducted. Thus differences between surveys may partly reflect changes in the demographic structure of the study population (see Section 2.5.3).

(b) in each survey, around 25 per cent of those selected and eligible to take part declined to do so. If these non-respondents differ from respondents with respect to the variables under study, then estimates will be affected by non-response bias. The magnitude of this effect is unknown and if it differs between surveys it will confuse inter-survey comparisons.

(c) under various assumptions, it is possible to estimate the precision of statistics from each survey and to assess the statistical significance of any differences observed. Some difference may be expected to have arisen purely by chance simply because estimates are based on a sample survey.

(d) changes between surveys may be affected by differences in how the data were collected, either differences in the wording of questions, in the collection methods, or in the processing procedures. These effects are difficult to estimate.

(e) in addition, the 1989 survey included Darwin and Canberra for the first time and covered a broader age range, namely 20-69 years (previously 25-64 years).

All these aspects require careful consideration and assessment in drawing any conclusions from differences between survey estimates. **Superficial comparisons may be misleading.**

Chapter 2: Survey Methods

2.1 The sampling frame

The sample was selected by the DCSH from defined catchment areas using Commonwealth electoral rolls. Access to these rolls was granted after discussion with the Commonwealth Privacy Commissioner and officers of the Electoral Office. Information on the rolls was current as at 31 December 1988.

Certain groups are under-represented on the electoral roll and this may lead to biases in the sample. Compensation has been made for this in the estimation procedure (see Section 2.5).

2.2 Catchment areas

The nine catchment areas were in Sydney North, Sydney South, Melbourne, Brisbane, Adelaide, Perth, Hobart, Darwin and Canberra.

For the State capital cities, catchment areas were the same as for the 1980 and 1983 risk factor surveys. Their original definition was influenced by geographical accessibility to the National Heart Foundation centres in each city and the desire to draw a representative sample. Generally, all electoral divisions and subdivisions within a radius of 16 km of the National Heart Foundation centre were included in the study.

Darwin and Canberra were included in the main study for the first time. Darwin conducted a prevalence survey in 1985 using RFPS methods. (Copies of the report on that survey are available from the Menzies School of Health Research in Darwin.) The catchment area used in that survey included Palmerston and this was duplicated for Darwin's participation in the 1989 RFPS.

Catchment areas, in terms of electoral divisions, subdivisions and postcodes, are defined in Appendix D.

2.3 Sample size

The standard sample size in the 1983 survey was 1500 in each catchment area. This was estimated to be the initial sample size required to give estimates of acceptable accuracy and to provide adequate statistical power for comparisons between surveys. The sample size was maintained at 1500 per centre for the 1989 survey despite an expansion in the age range from 25-64 years to 20-69 years. The effect on comparisons between surveys for the core age range 25-64 years is a marginal decrease in accuracy and power.

Adelaide was allocated an initial sample size of 3000 to satisfy the requirements of a related study conducted by the South Australian Department of Health. The Darwin sample was increased slightly (by 164) to include the additional area of Palmerston. This permits comparison with the survey conducted in Darwin in 1985.

2.4 Sample selection

For each catchment area, the names and addresses of all people who were on the electoral roll and aged 20-69 years inclusive on 30 June 1989 were sorted by sex and 5-year age groups. Systematic sampling was used to select the required number of people

in each of the nine catchment areas. This provided a representative sample of electors in the catchment area by age, sex and electoral division.

2.5 Estimation

2.5.1 *Reduction of bias*

The extent to which people listed on the electoral rolls represent the wider community is of particular importance for this study. It is known that samples selected from the rolls cannot be fully representative because people who are ineligible to vote or who have failed to register have no chance of selection. If these people differ from those listed on the rolls with respect to the characteristics being studied then a bias will be introduced. In addition, people who are registered on the roll but have failed to notify the Electoral Office of their latest change of address do not have the opportunity to respond.

For this survey the rolls were up-to-date as at 31 December 1988. New enrolments, changes of address and deaths notified to the Electoral Office after that date were not included in the sampling frame.

These factors result in migrants and the young and more mobile being under-represented in the sample. Both undercoverage and non-response lead to imbalance in the sample and hence can potentially introduce bias into the survey estimates. However, the estimation procedure uses post-stratification to reduce any bias from these factors (see Section 2.5.3).

2.5.2 *Level of estimation*

Because of the way in which catchment areas were defined non-metropolitan voters had no chance of selection. Since urban and rural dwellers may have different risk factor levels it is inadvisable to produce estimates for a whole State or for Australia. The most appropriate level of estimation, and the one used in this report, is the capital city statistical division.

2.5.3 *Estimation procedure*

The amount of information that can be usefully incorporated into the estimation procedure is limited by the sample size. This restricts the degree to which the sample can be post-stratified. The variables which can best be used to minimise the effects of undercoverage and non-response are age, sex and country of birth. The sample has thus been post-stratified by capital city statistical division, age group and country of birth as follows.

Variable	*Strata*	*Description*
Sex	2	Men and women
City	8	State and Territory capital cities
Age	10	5-year age groups for Australian born
	5	10-year age groups for Overseas born
Country of birth	2	Australian born (includes New Zealand)
		Overseas born

This makes a total of 240 post-strata. Post-strata weights to adjust for imbalance in the sample were calculated from the 1988 estimates of the age and sex distribution for each statistical division, and the 1986 Population Census estimates of persons born overseas (see Appendix F).

The formulas used for calculating estimates of total, average and percentage for the variables collected in the survey have been detailed in previous reports. The formulas are equivalent to calculating weighted estimates. An example of the weights used to derive estimates are given in Appendix F. Weights were recalculated for estimates based on sub-sets of the sample, for example, blood chemistry estimates are based on data for fasting respondents only.

2.5.4 *Reliability of estimates*

Estimates from the survey are subject to two types of error:

a) Sampling errors. The estimates are based only on a sample of people so it is likely they will differ from the figures obtainable from surveying all people within the scope of the survey. These differences are the sampling errors. One measure of the likely difference is the standard error. There are about two chances in three that a sample estimate will fall within one standard error of the figure that would have been obtained from a complete collection; and there are nineteen chances in twenty that it will differ by less than two standard errors. Estimates of standard error are provided for means and proportions.

b) Non-sampling errors. Many other errors can occur in survey or census results because of:

   (i) non-response;

   (ii) errors on the part of respondents due to misunderstanding questions, faulty recall, an unwillingness or inability to provide accurate information, or the deliberate provision of incorrect information;

   (iii) errors in data processing, e.g. in recording or coding information and errors in data entry; and

   iv) errors due to the collection of data over an extended period.

Every effort was made to minimise non-sampling errors in this study. For instance, the questionnaire was pilot-tested, staff engaged in the study was supplied with a manual and instructed in standard procedures, and intensive efforts were made to minimise non-response.

2.6 Design of questionnaire and forms

The questionnaire (Appendix B) collected information on demographic and socio-economic characteristics, physical measurements, blood pressure, blood chemistry, medical conditions and treatment, oral contraceptive use, alcohol use, smoking behaviour, dietary behaviour and exercise patterns. As in previous surveys, the questionnaire included a detachable front page which was retained at each clinic. This contained all the information necessary for reporting results to participants or their doctors as requested.

In designing the 1989 questionnaire, the 1980 and 1983 versions were carefully reviewed. Some questions were added, some omitted, and some others changed.

However the main principle was to maintain comparability between the three surveys by introducing as few changes as possible.

The question on marital status was supplemented by a question on living arrangements. The number of dependents was also collected. The occupation question used in the previous two surveys was replaced by the two census questions which enable coding to the Australian Standard Classification of Occupations (ASCO). Information on gross income and the main source of that income was sought for the first time, both for the respondent and their partner (e.g. spouse) if applicable.

The 1989 survey introduced other new questions which asked respondents when they had last had their blood pressure and blood cholesterol measured. Some questions on dietary behaviour, last asked in 1980, were reinstated.

The questionnaire also collected self-reported height and weight. This can be compared with height and weight measured as part of the physical examination. The physical examination also included waist and hip circumferences for the first time.

Questions asked in previous surveys but which were excluded from the 1989 survey were those from the General Health Questionnaire, a question on low alcohol beer and a question relating to personality type.

As well as data on total blood cholesterol, HDL cholesterol and triglycerides, the blood analysis form (Appendix C) also collected data on ferritin, iron and transferrin as part of a supplementary iron status study for the Commonwealth Department of Community Services and Health.

2.7 Pilot tests

Pilot tests were conducted on 14-15 February in Melbourne and on 27-28 February 1989 in Brisbane. These assessed the design and operation of the survey and helped to train staff.

Chapter 3: Survey Operations

3.1 Location of centres

In Adelaide, Hobart, Darwin and Canberra, the survey was conducted from the National Heart Foundation's Divisional offices. In Sydney North, centres were set up at Turramurra, Manly and North Ryde. In Melbourne the survey was conducted from 8 satellite centres. In Sydney South the clinic was run from Concord Hospital, in Perth from the Royal Perth Hospital and in Brisbane the survey centre was established in Fortitude Valley, close to the Divisional Office.

3.2 Staffing of centres

Each centre had a local survey director (see Section 1.3). The core staff in each centre consisted of a clerk-receptionist and a nursing sister. Additional staff were employed by most centres as required.

3.3 Duration of survey

The data collection phase of the survey extended from June to December 1989.

3.4 Training of staff

All centres were visited by the National Study Director and the Operations Manager before data collection began. Before the visit, a manual with full details of all coding and survey procedures was distributed to all staff. The purpose of the visits was to familiarise staff with the study protocol and to promote uniform methods. Particular emphasis was given to blood pressure measuring techniques, using special training tapes.

Adherence to the protocol was monitored by the National Study Director and the special data processing unit within the Australian Institute of Health. The AIH monitored all data as they were received and provided regular feedback to centre staff.

3.5 Invitation to attend the centre

3.5.1 *Initial invitation*

Letters of invitation giving a specific appointment were posted to prospective participants about two weeks before the appointment date (Appendix A is an example of such a letter). Directions were included on preparing for the visit, such as fasting. Those invited were asked to inform the centre whether or not they would attend, either by telephoning or by mailing back their reply on a tear-off section of the direction sheet.

Where possible, those invited were also telephoned the day before their appointment date as a reminder.

3.5.2 *Follow-up action*

Those who failed to respond to the letter of invitation were either re-invited by telephone where possible or sent a second letter of invitation, depending upon the preferences and staffing at each centre. Those who failed to respond to the letters of

invitation and could not be telephoned were visited by experienced interviewers. In some centres home examinations by the nursing sister were available if necessary. Centres also opened outside normal working hours.

3.6 Procedure on visit to survey centre

3.6.1 *Questionnaire*

Those arriving at the centre were greeted and identified by the clerk-receptionist, who then outlined the purpose and procedures of the assessment and handed the participant a questionnaire to fill in. A notice at the reception desk reminded those attending that their participation was entirely voluntary. The respondent signed a consent form on the front page of the questionnaire which outlined the conditions of participation (see Appendix B).

The clerk assisted with the questionnaire only if necessary. The questionnaire took about 10-15 minutes to complete, after which the clerk checked and coded it in the presence of the participant so that clarification could be sought as necessary.

After completing the questionnaire, participants were referred to the nursing sister for the following physical and blood pressure measurements and the collection of a blood sample.

3.6.2 *Physical measurements*

Height was measured to the nearest centimetre and weight to the nearest tenth of a kilogram. Participants were measured in socks, stockings or bare feet and light street clothing (no coats or jumpers). In the analysis of weight in this report, 1 kg has been deducted from the recorded weight as an allowance for clothing.

Waist and hip circumferences were measured twice to the nearest centimetre with belts or sashes removed.

3.6.3 *Blood pressure*

Two consecutive blood pressure measurements were taken from the right arm, 5 minutes apart, with the subject seated. Systolic and diastolic phase V pressures were measured to the nearest 2 mmHg. The average of the two successive readings of systolic and diastolic pressure was used in the analysis.

Normal mercury sphygmomanometers and standard-sized cuffs (12-14 cm wide) were generally used. Large and small cuffs were available for participants who had very large or thin arms.

3.6.4 *Blood sampling*

The Lipid Research Clinics (LRC,)[1] procedures were followed, with the exceptions noted below. All participants were asked to fast for at least 12 hours before their visit, during which they could take only water or unsweetened black tea or coffee. Venepuncture was performed after blood pressure readings, with participants seated. After blood was taken, the fasting status was determined by inquiry and then recorded.

3.7 Blood processing and analysis

The specimens were analysed at the central analytical laboratory in the Division of Clinical Chemistry, Institute of Medical and Veterinary Science, Frome Road, Adelaide. This laboratory is the World Health Organisation Collaborating Laboratory for blood lipids in the Asian Pacific Region.

As in the previous two risk factor prevalence studies, solid EDTA was used as the anticoagulant. Plasma was separated from the cells by centrifugation (10 mins at 2000g) within 3 hours of venepuncture and maintained at 4 C until dispatch. The plasma was transported to the analytical laboratory on a weekly basis in insulated foam containers with cold-freezer packs to maintain a cool temperature. Where possible the specimens were analysed on the day of arrival or stored at 4 C until analysis the next day.

Plasma total cholesterol and triglyceride were determined on the Olympus Reply Automated Chemistry Analyser, with Boehringer-Mannheim enzymatic colorimetric methods[2-5]. HDL cholesterol was measured following the precipitation of Apolipoprotein-B containing lipoproteins in an aliquot from all samples, by the means of Polyethylene glycol (PEG-6000), in a final concentration of 100g/L[6]. HDL cholesterol in the supernatant was determined using the same chemistry as for the total cholesterol.

The central analytical laboratory met the criteria for precision and accuracy as specified for standardisation by The Centres For Disease Control (CDC), National Heart, Lung and Blood Institute Standardisation Programme. CDC provided calibration material with assigned values for cholesterol and triglyceride for the survey.

3.8 Reporting results to participants and their doctors

Participants recorded on the questionnaire whether they wished their results to be mailed to them, their doctor, both or neither. Centres retained the tear-off front section of each questionnaire, on which measurements taken at the centre were recorded. After blood lipid results were obtained from the central analytical laboratory, a standard results letter was posted to participants and their doctors as requested, with attention drawn to those results needing follow-up. Examples of these letters are included in Appendix A.

3.9 Processing of questionnaires

Centres dispatched completed questionnaires each week to the processing centre at the Australian Institute of Health in Canberra. The processing centre handled all aspects of the registration and clerical examination of questionnaires, coding, editing and transfer of data to computer. An automated computer-assisted coding system from the Australian Bureau of Statistics was used to code responses to the occupation questions. Questionnaires were processed in weekly batches and extensive validation ensured high quality data. Regular contact was maintained with each centre.

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Chapter 4: Response Analysis

Response rate

The following measures were taken to maximise the response rate:

- suggesting that employers be shown the letter of invitation, to facilitate leave being granted to attend the centre
- follow-up letters of invitation
- opening satellite or 'after-hours' centres as necessary
- telephone calls and home visits

Of the 15,164 persons selected from the electoral rolls, 2,694 were either no longer living at the address, were outside the study area for the duration of the study, in prison or had died leaving 12,470 potential respondents. Of these, 9,309 actually participated in the survey, giving an overall response rate of 74.7 per cent. Response rates for each centre, age-group and sex are given in Table 4.1. Age-group and sex are based on electoral roll information.

The response rate was a little higher for men than women and higher in the middle age-groups. Response was noticeably lower in the 20-24 year age-group and somewhat lower in the 65-69 year age-group (Table 4.1). Allowance is made for imbalance in the respondent's age-sex structure in the estimation procedure (Section 2.5.3).

Table 4.1
RESPONSE RATES BY CENTRE, BY AGE AND BY SEX

	Sample selected (a)	*Ineligible* (b)*	*Potential respondents (c)=(a)-(b)*	*Respondents (d)*	*Response rate (e)=(d)/(c)*
	(Number)	(Number)	(Number)	(Number)	(Per cent)
Centre					
Sydney North	1,500	234	1,266	985	77.8
Sydney South	1,500	350	1,150	698	60.7
Melbourne	1,500	284	1,216	848	69.7
Brisbane	1,500	285	1,215	815	67.1
Adelaide	3,000	342	2,658	1,935	72.8
Perth	1,500	211	1,289	963	74.7
Hobart	1,500	201	1,299	1,084	83.4
Darwin	1,664	537	1,127	1,000	88.7
Canberra	1,500	250	1,250	981	78.5
Age (years)					
20-24	1,800	553	1,247	780	62.6
25-29	1,919	569	1,350	998	73.9
30-34	1,840	424	1,416	1,066	75.3
35-39	1,870	320	1,550	1,221	78.8
40-44	1,835	242	1,593	1,250	78.5
45-49	1,446	177	1,269	980	77.2
50-54	1,208	125	1,083	824	76.1
55-59	1,112	115	997	745	74.7
60-64	1,123	95	1,028	773	75.2
65-69	1,011	74	937	672	71.7
Sex					
Male	7,454	1,395	6,059	4,569	75.4
Female	7,710	1,299	6,411	4,740	73.9
Total	**15,164**	**2,694**	**12,470**	**9,309**	**74.7**

* Includes people no longer living at the address, people outside the study area for the duration of the study, people in prison and people who had died.

Table 4.2
COMPARISON OF RESPONDENTS AND NON-RESPONDENTS

	Respondents		*Non-respondents*	
	(Number)	*(Per cent)*	*(Number)*	*(Per cent)*
Sex				
Male	4,569	49.1	1,490	47.1
Female	4,740	50.9	1,671	52.9
Age (years)				
20-24	780	8.4	467	14.8
25-29	998	10.7	352	11.1
30-34	1,066	11.5	350	11.1
35-39	1,221	13.1	329	10.4
40-44	1,250	13.4	343	10.9
45-49	980	10.5	289	9.1
50-54	824	8.9	259	8.2
55-59	745	8.0	252	8.0
60-64	773	8.3	255	8.1
65-69	672	7.2	265	8.4
Total	**9,309**	**100.0**	**3,161**	**100.0**

Chapter 5: Description of Sample

Comments

The demographic and socio-economic data collected by the 1989 questionnaire enable the prevalence of risk factors to be measured for particular groups as defined by:

- age
- sex
- area of residence
- marital status
- number of dependents
- living arrangements
- country of birth
- period of time in Australia
- highest level of education completed
- occupation (based on ABS ASCO coding, see Appendix E)
- employment status of self and partner
- gross income of self and partner
- main source of income of self and partner

The following tables provide an overview of the respondents' characteristics. This is a useful guide for planning possible analyses of specific sub-groups. The numbers in these tables are unadjusted sample counts and should not be used directly to calculate estimates for the total population. This requires the application of sample weights and is discussed in detail in Section 2.5.3.

Table 5.1 includes the age-sex sample numbers which form the basis for many of the tables in Chapter 6. Data for the few respondents found to be outside the age range 20-69 years or respondents who completed the questionnaire but declined to participate in the physical examination have been excluded from the analyses.

Respondents

5.1 OBSERVED FREQUENCIES, AGE, SEX

City	Age										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Sydney											
Men	69	86	64	91	105	77	87	77	89	68	813
Women	63	85	77	111	115	97	87	73	80	81	869
Melbourne											
Men	36	42	51	52	42	41	36	44	38	41	423
Women	31	38	48	49	51	39	45	41	43	36	421
Brisbane											
Men	31	44	50	47	51	38	24	31	43	25	384
Women	37	45	41	50	57	45	41	43	40	32	431
Adelaide											
Men	80	100	114	111	118	102	79	79	89	72	944
Women	87	112	118	113	122	95	74	77	84	85	967
Perth											
Men	39	53	55	58	62	49	44	46	37	40	483
Women	42	44	58	62	61	55	49	40	38	31	480
Hobart											
Men	42	55	57	70	69	55	47	36	50	42	523
Women	44	65	72	78	68	46	49	39	52	47	560
Darwin											
Men	34	53	66	89	87	67	45	20	20	10	491
Women	45	68	79	99	82	58	32	19	18	9	509
Canberra											
Men	55	51	55	70	80	53	39	34	32	22	491
Women	43	51	62	67	83	55	42	35	31	21	490
All cities											
Men	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Marital status

5.2 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Maritan status	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Never married	353	246	104	74	50	36	24	17	24	13	941
Now married	31	221	375	458	513	395	345	305	334	266	3,243
Separated but not divorced	1	11	10	18	17	21	7	13	2	9	109
Divorced	-	6	21	36	34	28	23	26	19	13	206
Widowed	1	-	2	1	-	2	2	6	19	19	52
Not stated	-	-	-	1	-	-	-	-	-	-	1
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Never married	318	199	101	69	39	26	22	16	13	23	826
Now married	70	273	405	475	508	387	318	273	271	199	3,179
Separated but not divorced	4	15	18	27	19	14	10	10	9	3	129
Divorced	-	20	29	49	66	52	47	34	26	21	344
Widowed	-	1	1	8	7	11	22	34	67	96	247
Not stated	-	-	1	1	-	-	-	-	-	-	2
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Living arrangements

5.3 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Living arrangements	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Living with legal spouse	31	217	368	453	505	390	344	308	335	266	3,217
Partner (defacto)	31	50	40	36	31	17	8	12	7	2	234
Other persons	301	176	69	45	36	27	13	9	14	9	699
Alone	23	41	35	54	42	47	36	38	42	43	401
Not stated	-	-	-	-	-	1	-	-	-	-	1
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Living with legal spouse	70	272	398	469	502	381	317	273	267	196	3,145
Partner (defacto)	45	54	34	32	25	17	7	3	3	1	221
Other persons	255	155	82	80	69	61	58	41	32	36	869
Alone	22	26	41	47	43	31	37	50	83	108	488
Not stated	-	1	-	1	-	-	-	-	1	1	4
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Country of birth

5.4 OBSERVED FREQUENCIES, AGE, SEX

Region	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Australia	341	391	411	450	410	303	241	221	260	206	3,234
Other Oceania	3	9	15	6	9	10	4	6	5	5	72
United Kingdom	18	32	41	53	78	73	60	54	44	42	495
Northern Europe	2	6	5	16	38	24	23	29	41	31	215
Southern Europe	3	14	12	17	33	37	46	39	32	24	257
Asia	16	25	19	34	32	23	21	16	11	6	203
Africa	2	6	8	7	8	9	2	2	3	6	53
North & South America	1	1	1	5	6	3	4	-	2	-	23
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Australia	346	414	448	475	424	343	266	252	280	251	3,499
Other Oceania	6	10	10	12	10	13	3	3	4	4	75
United Kingdom	19	41	35	37	72	62	58	36	40	36	436
Northern Europe	2	6	15	23	39	20	20	18	27	26	196
Southern Europe	5	11	12	28	44	28	47	42	23	14	254
Asia	12	22	32	41	33	18	20	11	9	5	203
Africa	-	1	3	7	7	3	3	4	1	5	34
North & South America	2	3	-	6	10	3	2	1	2	1	30
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Education level

5.5 OBSERVED FREQUENCIES, AGE, SEX

Highest level completed	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Never attended school	-	-	2	1	-	1	2	2	2	3	13
Primary school	2	3	3	5	22	33	52	66	97	84	367
Some high school	99	155	144	169	182	172	145	124	135	120	1,445
Completed high school	184	171	159	187	174	121	96	87	83	60	1,322
Tertiary institution	101	155	204	226	236	155	106	88	81	53	1,405
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Never attended school	1	-	-	-	1	2	5	1	-	3	13
Primary school	3	1	9	17	45	40	56	72	94	92	429
Some high school	94	178	150	246	236	214	188	165	163	154	1,788
Completed high school	167	168	187	168	171	115	99	75	91	66	1,307
Tertiary institution	127	161	209	198	186	119	71	54	38	27	1,190
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Employment status

5.6 OBSERVED FREQUENCIES, AGE, SEX

Current status	Age 20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	All ages
						(Number)					
Men											
Working full time	268	430	482	546	567	435	346	252	163	30	3,519
Working part time only	65	28	9	15	14	24	15	26	42	28	266
Not working (but not retired)	13	16	13	13	17	10	10	17	16	9	134
Total	**346**	**474**	**504**	**574**	**598**	**469**	**371**	**295**	**221**	**67**	**3,919**
Women											
Working full time	245	291	207	247	296	224	146	79	29	1	1,765
Working part time only	75	88	167	209	195	146	97	60	38	12	1,087
Not working (but not retired)	13	23	22	14	18	11	11	11	2	4	129
Total	**333**	**402**	**396**	**470**	**509**	**381**	**254**	**150**	**69**	**17**	**2,981**

Occupation (a)

5.7 OBSERVED FREQUENCIES, AGE, SEX

Occupation group (b)	Age 20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	All ages
						(Number)					
Men											
Managers and administrators	20	42	75	119	141	125	87	53	32	12	706
Professionals	50	103	121	123	144	80	66	38	30	19	774
Para-professionals	27	48	59	63	53	34	35	21	12	1	353
Tradespersons	79	91	89	103	77	77	56	45	44	7	668
Clerks	46	50	49	48	44	35	28	25	20	5	350
Salespersons & personal service workers	50	49	30	31	37	29	24	33	16	7	306
Plant & machine operators, & drivers	22	29	40	30	51	29	32	25	22	-	280
Labourers & related workers	39	45	24	42	29	46	29	33	23	2	312
Not stated	-	1	4	2	5	4	4	5	6	5	36
Total	**333**	**458**	**491**	**561**	**581**	**459**	**361**	**278**	**205**	**58**	**3,785**
Women											
Managers and administrators	8	14	25	37	48	26	17	16	5	-	191
Professionals	41	98	90	107	106	62	47	21	11	-	583
Para-professionals	30	33	36	44	35	34	15	7	2	-	236
Tradespersons	8	13	9	8	11	13	8	6	2	1	79
Clerks	136	134	125	151	161	133	76	49	29	7	1,001
Salespersons & personal service workers	80	56	48	60	76	50	37	18	5	3	433
Plant & machine operators, & drivers	2	4	8	12	9	7	8	3	1	1	55
Labourers & related workers	14	26	30	33	42	37	32	16	14	1	245
Not stated	1	1	3	4	3	8	3	3	3	-	29
Total	**320**	**379**	**374**	**456**	**491**	**370**	**243**	**139**	**67**	**13**	**2,852**

(a) Employed full time or part time

(b) Australian standard classification of occupation, major groups (see Appendix E).

Annual gross income (a)

5.8 OBSERVED FREQUENCIES, AGE, SEX

Gross income	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
No income	12	-	3	4	4	1	2	4	1	2	33
$1-$7,000	62	23	11	12	11	14	17	37	71	109	367
$7,001-$9,000	16	7	5	3	6	4	11	10	27	45	134
$9,001-$11,000	8	2	3	7	4	11	5	10	23	26	99
$11,001-$13,000	11	10	12	4	6	10	7	13	26	20	119
$13,001-$15,000	27	13	2	8	9	11	9	13	13	10	115
$15,001-$17,000	34	23	12	20	19	13	13	17	17	10	178
$17,001-$19,000	30	21	16	27	24	27	22	21	30	10	228
$19,001-$21,000	42	39	26	35	23	25	19	34	40	19	302
$21,001-$23,000	29	53	37	35	34	33	31	28	15	7	302
$23,001-$30,000	73	125	136	109	101	76	58	43	50	25	796
$30,001-$40,000	29	110	147	158	160	99	84	54	29	13	883
$40,001-$50,000	5	32	51	74	104	64	54	24	16	5	429
$50,001+	4	23	43	84	101	86	56	43	24	11	475
Not stated	4	3	8	8	8	8	13	16	16	8	92
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
No income	29	53	95	85	85	60	79	81	47	24	638
$1-$7,000	63	77	105	113	89	68	79	93	144	140	971
$7,001-$9,000	9	20	41	35	48	19	29	31	50	59	341
$9,001-$11,000	16	20	29	46	31	29	26	19	28	38	282
$11,001-$13,000	26	17	27	43	36	33	27	16	17	27	269
$13,001-$15,000	31	21	21	21	25	21	16	11	10	8	185
$15,001-$17,000	27	22	23	31	42	30	13	16	7	1	212
$17,001-$19,000	37	28	25	20	35	26	26	17	11	3	228
$19,001-$21,000	42	33	31	33	19	38	15	12	8	2	233
$21,001-$23,000	53	39	23	23	40	29	16	14	9	4	250
$23,001-$30,000	51	118	55	69	75	53	32	19	10	6	488
$30,001-$40,000	4	43	50	70	68	42	31	14	11	3	336
$40,001-$50,000	1	9	13	10	12	11	9	5	2	-	72
$50,001+	-	-	10	10	12	7	3	3	1	-	46
Not stated	3	8	7	20	22	24	18	16	31	27	176
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

(a) Annual gross income of respondent.

Main source of income (a)

5.9 OBSERVED FREQUENCIES, AGE, SEX

Source of income	Age										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Wages or salary	315	408	420	465	478	351	287	218	141	27	3,110
Own business or partnership	20	44	71	93	97	103	68	46	50	22	614
Government pension	28	24	14	18	21	19	25	48	97	181	475
Superannuation	-	-	-	1	1	4	6	26	64	51	153
Investment interest	3	3	3	2	7	2	6	25	40	37	128
Other	7	4	-	5	6	3	6	1	4	-	36
No income	10	-	3	4	4	-	2	2	1	2	28
Not stated	3	1	1	-	-	-	1	1	1	-	8
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Wages or salary	309	362	331	376	403	304	196	111	45	6	2,443
Own business or partnership	7	13	42	73	82	66	32	20	14	9	358
Government pension	42	67	71	71	51	34	68	94	190	220	908
Superannuation	-	1	1	1	3	-	4	15	24	29	78
Investment interest	6	5	16	20	14	21	39	48	59	53	281
Other	4	5	6	6	7	5	5	3	5	2	48
No income	24	51	86	79	77	58	74	76	45	20	590
Not stated	-	4	2	3	2	2	1	-	4	3	21
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

(a) Main source of income of respondent.

Chapter 6: Preliminary Survey Analysis

Explanatory notes

This survey has provided extensive data and opportunities for analysis. However, in order to make some basic information available as soon as possible, and to present an overview of the data collected, the tables in this chapter have been limited to cross-tabulations by age and sex for each variable.

Comments have been made on each of the sections which draw attention to some of the more significant features of the tables. These comments have been made on data from a cross-sectional survey which in essence provides a 'snapshot' of the population at a point in time. Differences between age-groups cannot necessarily be used to infer trends with age. To do so ignores the fact that different age cohorts of the population may have been subject to different social and environmental experiences. In order to produce reliable information on age-trends over time it would be necessary to conduct a cohort or longitudinal study, in which the same group of individuals are followed over time and periodically re-examined.

Level of estimation

The most appropriate level of estimation is the Capital City Statistical Division since these most closely correspond to the catchment areas used in the survey (see Section 2.5.2). The sum of the estimates for each of the catchment areas in the survey are 'all cities' estimates. All tables in this chapter relate to 'all cities'; no comparisons between cities have been made in this report.

Tables

There are two basic tables for each variable considered:

a) *Observed frequencies*

This table presents the number of respondents classified by the categories of the variable concerned, by five year age-groups and sex.

b) *Estimates (percentages)*

This table gives for each age and sex combination, the percentage distribution over the categories of the question. These percentages are based on the statistical division estimates and not on the observed numbers, since the latter are affected by response rates and sampling biases.

Summary statistics

For continuous variables such as blood pressure and height, the tables also provide means and their standard errors, 5th centiles, medians and 95th centiles. Summary statistics are provided for both the observed frequencies and the estimates. Summary statistics based on estimates are adjusted for imbalance in the responding sample and do not reflect the biases in those based on observed frequencies.

Standard errors

Standard errors for unweighted and weighted estimates of mean values are shown in the tables.

For a proportion (p) of a sample of n cases the standard error may be estimated as:

$$se(p) = \sqrt{p(1-p)/n}$$

The standard error of the difference between two proportions or means (a and b) for different subgroups of the sample may be estimated as:

$$se(a-b) = \sqrt{[se(a)]^2 + [se(b)]^2}$$

Not stated

Tables include a 'not stated' category where this is appropriate. This means that for most tables the total observed frequencies for each age and sex combination are as given in Table 5.1. The exceptions are tables which relate to specific sub-groups of the sample, for example women who have ever taken the oral contraceptive pill, and in such instances the totals are supplied.

Symbols

The symbol '-' in a table means that no person in the sample responded in that particular cell. 0.0 in percentage tables means less than 0.05 but not zero. The symbols $\geq$ and $\leq$ denote greater than or equal to and less than or equal to respectively.

6.1 Blood pressure and 'hypertension'

Comments

For the purpose of this report, all people who stated they were taking tablets for blood pressure, plus all people not on tablets but with a diastolic blood pressure of 95mmHg or more were defined as 'hypertensive' — see also Section 6.4.

It should be noted that the aggregate figures below are derived from readings taken at a single visit. Many people whose blood pressure is high at the first visit to a doctor have lower levels at subsequent visits. However, the proportions given do indicate those who need further evaluation by their doctors for possible high blood pressure.

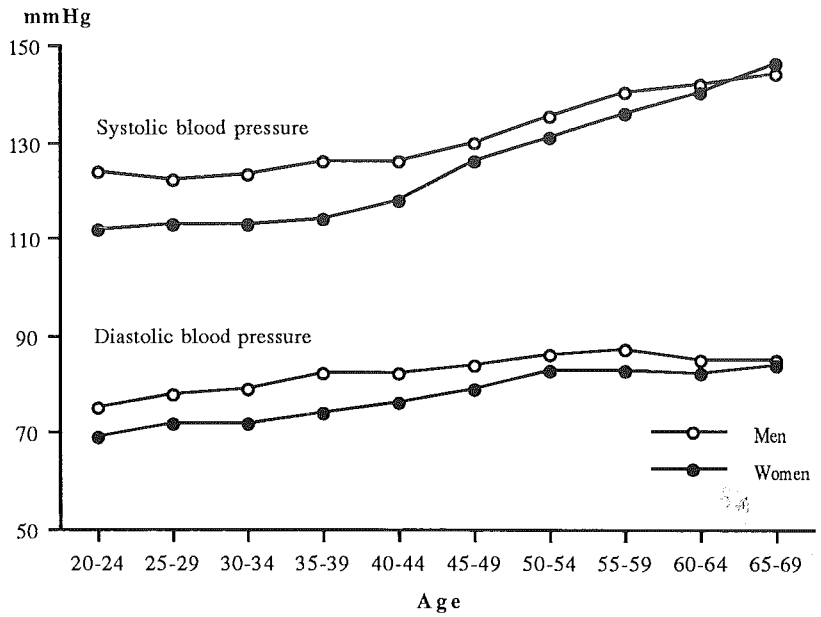
The findings for men and women aged 20-69 can be summarised as follows:

- The average systolic blood pressure was 129mmHg for men and 122mmHg for women, and the average diastolic pressure was 82mmHg for men and 76 mmHg for women. These figures include readings for people taking tablets for high blood pressure.
- 17% of men and 13% of women were 'hypertensive': they either said they were on tablets for blood pressure or had a diastolic blood pressure of 95mmHg or more.
- 11% of men and 5% of women had diastolic blood pressures of 95mmHg or more, whether on tablets or not.
- Of those on tablets, 34% of men and 17% of women had a diastolic blood pressure of 95mmHg or more.
- For the age group 20-24 years, 2% of men and 1% of women were 'hypertensive'.

This proportion increased steadily with age in both sexes, being 37% in men aged 65-69 and 54% in women of the same age.

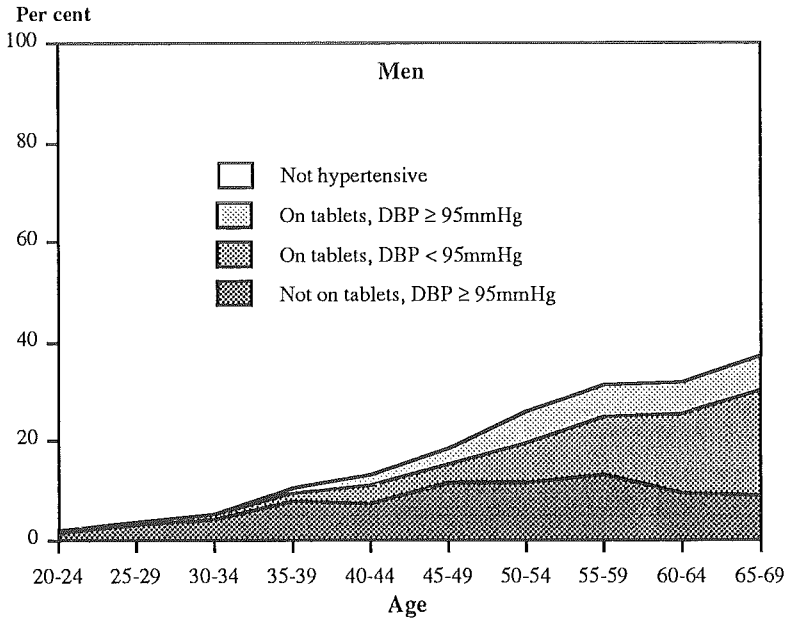
- As a proportion of all 'hypertensives', 47% (7.9 of 16.7) of men and 23% (2.9 of 12.7) of women were not on tablets and had diastolic blood pressures of 95mmHg or more; 18% of men and 13% of women had similarly raised diastolic blood pressure and were on tablets; 35% of men and 64% of women had diastolic blood pressures below 95mmHg and were on tablets (Table 6.1.5).
- If the definition of 'hypertension' is expanded to include those whose systolic blood pressure is 160mmHg or more (Table 6.1.6), then 18% of men and 14% of women were 'hypertensive'.
- Whether on tablets or not, 13% of men and 7% of women had either a diastolic pressure of 95mmHg or more or a systolic pressure of 160mmHg or more, or both. This proportion increased with age from 2% of men and 0% of women aged 20-24 years to 27% of men and 29% of women aged 65-69 years.

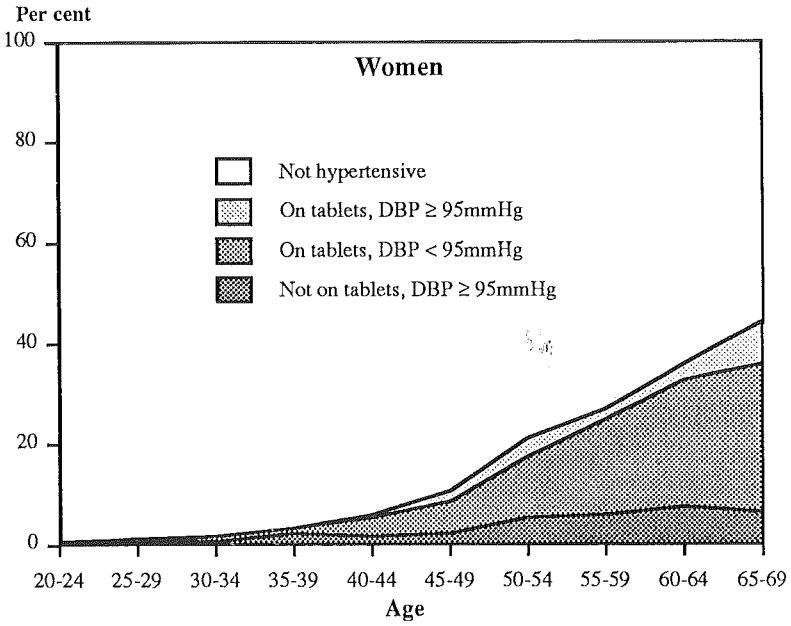
Average blood pressure



Hypertensives

(Diastolic blood pressure ≥ 95mmHg and/or on tablets)





Systolic blood pressure (a)

6.1.1 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Systolic blood pressure (mmHg)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Less than 100	5	4	8	6	8	3	-	2	1	1	38
100-109	46	56	56	45	59	34	16	8	7	1	328
110-119	117	141	143	171	160	98	59	35	36	13	973
120-129	121	156	158	173	165	121	107	78	72	42	1,193
130-139	55	89	99	122	139	112	108	70	94	76	964
140-149	31	31	34	44	45	65	48	73	72	71	514
150-159	8	6	10	19	27	30	30	48	52	60	290
160-169	2	1	4	3	10	16	18	28	31	34	147
170 or more	1	-	-	5	1	3	15	25	33	21	104
Not stated	-	-	-	-	-	-	-	-	-	1	1
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
						(mmHg)					
Mean	122	123	123	125	125	129	133	139	141	144	129
5th centile	105	106	105	107	105	107	110	113	114	120	107
Median	121	122	122	123	124	128	131	138	138	143	127
95th centile	146	144	143	149	152	157	168	176	180	174	160
Standard error of mean	0.6	0.5	0.5	0.5	0.6	0.7	0.9	1.0	1.0	1.0	0.2
						(Number)					
Women											
Less than 100	39	42	57	59	35	11	5	2	3	1	254
100-109	132	166	194	166	124	63	41	22	10	11	929
110-119	143	187	179	212	203	121	77	43	41	21	1,227
120-129	63	85	90	113	163	117	97	65	71	45	909
130-139	11	22	29	54	65	98	83	100	73	57	592
140-149	4	5	5	12	36	51	64	58	76	72	383
150-159	-	1	1	7	10	18	23	41	59	56	216
160-169	-	-	-	3	3	8	15	14	25	34	102
170 or more	-	-	-	3	-	3	14	22	28	45	115
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**
						(mmHg)					
Mean	111	112	112	115	118	125	130	136	140	146	123
5th centile	96	96	96	95	99	103	105	108	111	111	99
Median	110	111	110	113	116	124	129	135	139	144	119
95th centile	128	130	130	138	143	152	162	174	172	186	158
Standard error of mean	0.5	0.5	0.5	0.5	0.5	0.7	0.9	1.0	1.0	1.2	0.3

(a) The average of two readings taken 5 minutes apart.

Systolic blood pressure (a)

6.1.2 ESTIMATES, AGE, SEX

	Age										
Systolic blood pressure (mmHg)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Less than 100	1.5	1.4	2.5	1.3	1.0	0.4	-	0.9	0.1	0.0	1.1
100-109	9.8	14.1	12.0	7.9	10.7	7.5	2.2	2.2	1.4	0.2	8.2
110-119	26.1	28.2	27.4	27.3	23.9	19.7	12.6	7.3	7.1	5.0	21.1
120-129	31.3	28.5	29.2	26.4	25.1	20.8	26.9	19.9	16.0	14.7	25.2
130-139	15.5	18.9	18.6	23.0	22.9	24.7	30.8	22.6	27.9	22.1	21.9
140-149	11.8	7.1	7.5	8.3	8.9	15.6	13.4	21.0	19.8	22.7	12.1
150-159	2.6	1.8	2.2	3.5	5.2	7.6	4.8	10.7	11.8	16.0	5.4
160-169	1.1	0.0	0.6	0.2	2.1	3.0	3.6	7.2	6.2	12.4	2.7
170 or more	0.2	-	-	1.9	0.2	0.6	5.7	8.3	9.7	6.7	2.4
Not stated	-	-	-	-	-	-	-	-	-	0.1	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(mmHg)					
Mean	124	122	123	126	126	130	135	140	142	144	129
5th centile	105	105	104	105	105	108	112	115	116	119	106
Median	123	122	122	124	125	130	132	137	139	144	127
95th centile	147	145	143	152	153	156	175	179	180	174	160
Standard error of mean	0.8	0.7	0.6	0.6	0.5	0.6	0.8	0.9	0.8	0.8	0.2
						(Per cent)					
Women											
Less than 100	8.6	8.6	9.1	10.3	5.0	2.6	1.4	1.0	0.5	0.1	5.8
100-109	31.1	29.0	34.3	29.7	20.8	12.8	8.2	6.0	2.3	2.1	21.0
110-119	42.3	37.6	30.8	31.7	30.8	26.0	17.6	11.6	9.8	5.6	27.6
120-129	15.2	17.2	17.7	15.2	24.9	19.3	23.5	14.8	18.3	13.5	18.0
130-139	2.3	6.4	7.0	9.4	11.4	19.4	20.4	29.2	20.9	16.8	12.3
140-149	0.5	0.9	1.0	2.5	6.0	11.7	16.3	18.8	18.0	20.6	7.4
150-159	-	0.2	0.0	0.8	0.9	5.0	6.6	10.1	16.8	17.2	4.1
160-169	-	-	-	0.3	0.2	2.3	3.1	3.0	7.1	11.4	1.9
170 or more	-	-	-	0.1	-	0.9	2.9	5.6	6.2	12.7	1.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(mmHg)					
Mean	112	113	113	114	118	126	131	136	140	146	122
5th centile	97	96	97	95	100	103	107	109	111	114	99
Median	111	112	111	113	116	125	129	135	139	146	118
95th centile	125	131	134	138	140	153	161	171	170	182	155
Standard error of mean	0.6	0.5	0.5	0.5	0.5	0.6	0.8	0.9	0.9	1.0	0.3

(a) The average of two readings taken 5 minutes apart.

Diastolic blood pressure (a)

6.1.3 OBSERVED FREQUENCIES, AGE, SEX

Diastolic blood pressure (mmHg)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Less than 60	29	15	11	5	6	1	3	-	1	1	72
60-64	35	37	20	22	21	14	3	3	5	7	167
65-69	53	59	41	44	34	22	11	13	15	18	310
70-74	83	100	87	88	84	63	40	32	41	36	654
75-79	72	89	106	114	113	80	56	46	53	42	771
80-84	57	85	120	132	145	85	92	77	95	70	958
85-89	33	53	63	78	70	76	75	62	77	42	629
90-94	17	29	39	51	81	68	48	61	47	52	493
95-99	6	13	20	25	34	41	38	33	34	23	267
100-104	-	4	3	13	14	14	18	20	15	19	120
105-109	1	-	2	6	6	9	8	6	12	4	54
110 or more	-	-	-	10	6	9	9	14	3	5	56
Not stated	-	-	-	-	-	-	-	-	-	1	1
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
						(mmHg)					
Mean	74	76	79	81	82	84	85	86	85	84	81
5th centile	57	60	64	65	65	66	70	70	68	66	64
Median	74	76	79	80	81	83	84	86	84	83	81
95th centile	90	94	94	100	99	102	101	108	102	102	100
Standard error of mean	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.5	0.6	0.2
						(Number)					
Women											
Less than 60	49	50	50	28	12	7	2	2	5	4	209
60-64	86	89	87	82	67	26	20	10	8	11	486
65-69	79	109	104	104	85	53	23	23	31	16	627
70-74	81	103	126	147	147	83	62	49	53	38	889
75-79	52	77	88	105	115	103	61	63	61	49	774
80-84	34	58	56	93	109	90	103	83	82	73	781
85-89	9	12	30	34	62	67	60	61	58	57	450
90-94	1	7	9	20	27	40	50	46	48	44	292
95-99	-	3	5	7	9	13	13	16	21	26	113
100-104	1	-	-	6	4	8	16	10	12	10	67
105-109	-	-	-	1	1	-	6	3	5	8	24
110 or more	-	-	-	2	-	-	3	1	2	6	14
Not stated	-	-	-	-	1	-	-	-	-	-	1
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**
						(mmHg)					
Mean	68	70	71	73	75	78	82	82	82	83	76
5th centile	55	55	56	60	60	63	64	66	65	65	60
Median	68	70	70	73	75	78	81	81	82	83	75
95th centile	83	84	86	91	90	93	100	98	100	101	94
Standard error of mean	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.6	0.2

(a) The average of two readings taken 5 minutes apart.

Diastolic blood pressure (a)

6.1.4 ESTIMATES, AGE, SEX

	Age										
Diastolic blood pressure (mmHg)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Less than 60	5.9	1.2	1.0	0.2	0.5	0.0	0.8	-	0.1	0.3	1.2
60-64	7.9	5.2	3.7	2.2	2.4	1.8	0.2	0.5	1.0	1.6	3.1
65-69	11.3	12.3	6.6	4.4	5.6	3.7	1.2	2.7	3.0	4.1	6.3
70-74	19.9	16.4	19.1	12.7	15.1	12.1	7.4	8.8	9.0	11.7	14.2
75-79	20.9	22.3	21.4	21.3	18.0	15.9	15.3	10.8	13.5	12.8	18.3
80-84	15.2	17.3	22.8	23.8	22.0	20.8	23.2	21.0	23.3	21.2	20.8
85-89	11.4	13.4	12.9	14.7	13.0	19.3	18.4	16.0	19.4	13.3	14.7
90-94	4.9	7.7	7.7	8.8	12.6	10.5	16.0	20.5	12.8	16.3	10.7
95-99	2.1	3.2	3.5	5.5	6.0	9.9	8.8	8.9	10.0	8.9	5.9
100-104	-	1.0	1.1	3.4	3.5	2.7	3.7	4.7	3.4	7.1	2.6
105-109	0.3	-	0.2	0.6	0.6	1.6	1.3	2.5	2.9	0.5	0.9
110 or more	-	-	-	2.2	0.7	1.7	3.7	3.6	1.6	1.9	1.3
Not stated	-	-	-	-	-	-	-	-	-	0.1	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(mmHg)					
Mean	75	78	79	82	82	84	86	87	85	85	82
5th centile	58	63	65	68	68	69	72	72	70	68	65
Median	75	78	79	81	81	83	85	87	85	84	81
95th centile	91	94	94	101	99	101	104	108	102	102	99
Standard error of mean	0.6	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.5	0.2
						(Per cent)					
Women											
Less than 60	8.2	5.2	4.9	1.8	1.8	0.4	0.5	0.2	1.0	1.4	3.1
60-64	17.3	13.9	12.3	13.4	8.6	4.2	2.4	1.5	1.3	1.9	9.3
65-69	27.1	23.2	20.1	14.6	12.9	11.8	5.3	7.4	7.2	4.8	15.3
70-74	22.3	19.6	23.7	23.3	22.7	13.3	13.2	9.5	12.6	9.8	18.5
75-79	15.0	20.0	20.0	17.8	18.8	21.2	14.6	18.5	15.0	14.9	17.8
80-84	7.5	11.1	8.7	15.6	17.1	21.1	25.0	23.2	26.7	21.9	16.1
85-89	2.1	3.8	6.9	7.0	11.3	14.5	18.1	17.1	11.6	18.6	9.6
90-94	0.2	2.4	2.7	4.9	4.5	9.7	10.8	13.5	13.6	12.1	6.1
95-99	-	0.7	0.7	0.8	1.3	2.8	2.7	5.8	5.5	8.3	2.2
100-104	0.2	-	-	0.5	0.4	1.1	4.9	1.9	3.7	3.1	1.2
105-109	-	-	-	0.2	0.6	-	1.4	1.2	1.4	1.7	0.5
110 or more	-	-	-	0.0	-	-	1.0	0.2	0.4	1.7	0.2
Not stated	-	-	-	-	0.0	-	-	-	-	-	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(mmHg)					
Mean	69	72	72	74	76	79	83	83	82	84	76
5th centile	56	59	60	61	62	65	67	67	68	68	61
Median	69	71	72	74	75	79	82	83	83	83	75
95th centile	82	86	88	90	90	93	101	98	100	100	94
Standard error of mean	0.5	0.4	0.4	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.1

(a) The average of two readings taken 5 minutes apart.

Hypertensives—defined by diastolic blood pressure and treatment

6.1.5 ESTIMATES, AGE, SEX

	Age										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Hypertensive											
DBP >= 95 mmHg	1.8	3.3	4.5	8.0	7.7	11.8	11.5	13.4	9.8	9.1	7.9
On tablets for blood pressure											
DBP < 95 mmHg	0.5	0.4	0.6	1.7	3.4	3.7	8.0	11.7	15.8	21.3	5.8
DBP >= 95 mmHg	-	0.2	0.4	1.2	2.1	3.3	6.7	6.5	6.3	6.9	3.0
Total hypertensive	2.3	3.9	5.5	10.9	13.2	18.8	26.2	31.6	31.9	37.3	16.7
Not hypertensive											
Not on tablets for blood pressure											
DBP < 95 mmHg	97.7	96.1	94.5	89.1	86.8	81.1	73.8	68.4	68.1	62.7	83.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
Hypertensive											
DBP >= 95 mmHg	0.3	0.4	0.7	2.2	1.6	2.0	5.5	6.0	7.3	6.4	2.9
On tablets for blood pressure											
DBP < 95 mmHg	0.3	0.2	0.9	0.8	3.8	6.3	11.9	18.5	25.4	29.5	8.1
DBP >= 95 mmHg	-	0.2	0.2	0.3	0.6	2.2	3.6	2.2	3.1	8.2	1.7
Total hypertensive	0.6	0.8	1.8	3.3	6.0	10.5	21.0	26.7	35.8	54.2	12.7
Not hypertensive											
Not on tablets for blood pressure											
DBP < 95 mmHg	99.5	99.2	98.2	96.7	94.0	89.4	79.0	73.3	64.2	55.8	87.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Hypertensives—defined by diastolic and systolic blood pressure and treatment

6.1.6 ESTIMATES, AGE, SEX

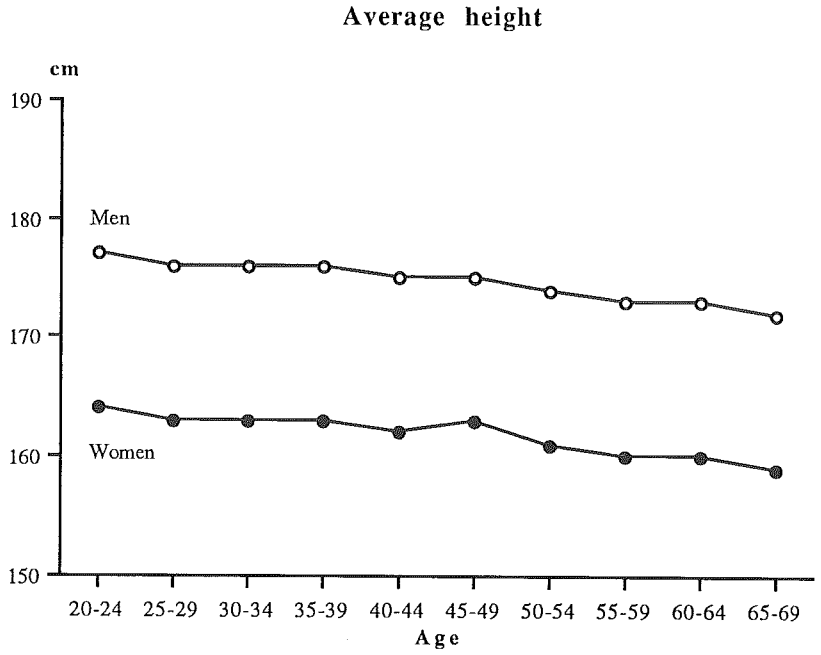
	Age										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Hypertensive											
DBP >= 95 mmHg &/or											
SBP >= 160 mmHg	2.3	3.5	5.1	8.0	8.1	12.9	12.5	16.9	15.1	15.4	9.5
On tablets for blood pressure											
DBP < 95 mmHg &											
SBP < 160 mmHg	0.5	0.4	0.6	1.7	3.3	3.7	7.5	10.1	12.8	16.9	5.0
DBP >= 95 mmHg &/or											
SBP >= 160 mmHg	-	0.2	0.4	1.2	2.3	3.3	7.2	8.2	9.3	11.3	3.8
Total hypertensive	2.8	4.1	6.1	10.9	13.7	19.9	27.2	35.1	37.2	43.6	18.3
Not hypertensive											
Not on tablets for blood pressure											
DBP < 95 mmHg &											
SBP < 160 mmHg	97.2	95.9	93.9	89.1	86.3	80.1	72.8	64.9	62.8	56.4	81.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
Hypertensive											
DBP >= 95 mmHg &/or											
SBP >= 160 mmHg	0.3	0.4	0.7	2.4	2.0	2.7	6.9	9.8	13.0	13.7	4.4
On tablets for blood pressure											
DBP < 95 mmHg &											
SBP < 160 mmHg	0.3	0.2	0.9	0.8	3.8	6.3	10.5	15.3	22.3	22.5	7.0
DBP >= 95 mmHg &/or											
SBP >= 160 mmHg	-	0.2	0.2	0.3	0.6	2.2	5.0	5.4	6.2	15.2	2.9
Total hypertensive	0.6	0.8	1.8	3.5	6.4	11.2	22.4	30.5	41.5	51.5	14.3
Not hypertensive											
Not on tablets for blood pressure											
DBP < 95 mmHg &											
SBP < 160 mmHg	99.5	99.2	98.2	96.5	93.6	88.8	77.6	69.5	58.5	48.5	85.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

6.2 Height, weight, waist and hip circumference

Comments

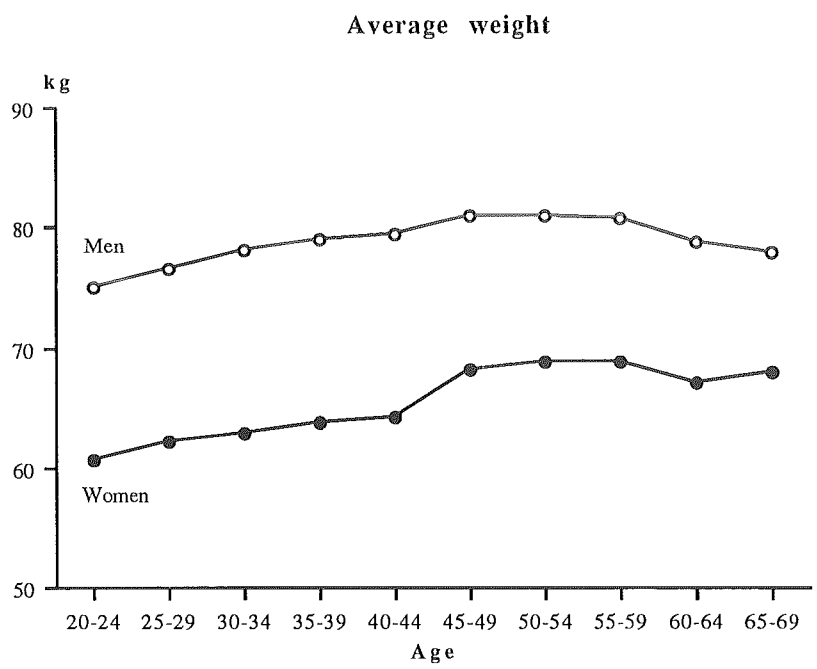
Height

- The average height of men was 175cm and of women 162cm. Average height was 5cm less in the age-group 65-69 years than in the age-group 20-24 years. This may reflect a true loss of height with age or it may reflect a secular trend to an increase in height — a cohort effect.



Weight

- The average weight of men was 78kg and of women 65kg. Average weight was highest in the age range 45-59 for both men and women.



Overweight and obesity

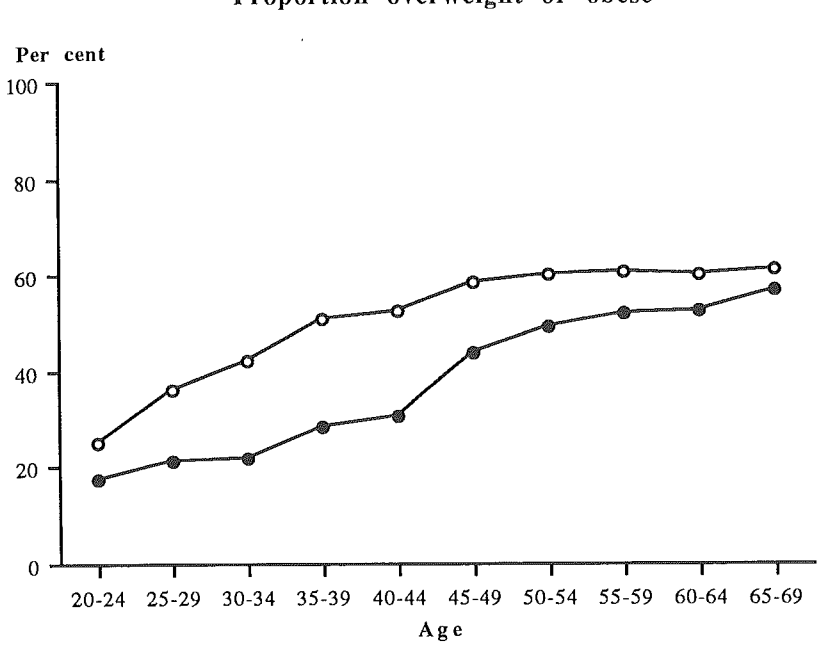
The proportions of the study population which were underweight, of acceptable weight, overweight or obese are shown in Table 6.2.6. The estimates are based on Quetelet's body mass index (BMI), which is calculated as weight (in kilograms) divided by the square of height (in metres). The following criteria were applied.

Descriptive term	*BMI (kg/m²)*
Underweight	less than 20
Acceptable weight	20 to 25 inclusive
Overweight	greater than 25 and up to and including 30
Obese	greater than 30

The classification of acceptable weight, overweight and obesity is based on recommendations of the National Health and Medical Research Council[1,2]. The classification differs from that used in the 1980 and 1983 risk factor prevalence surveys.

- Average BMI was 25.3 for men and 24.3 for women and generally increased with age.
- The prevalence of overweight or obese men increased from 25% at age 20-24 and levelled out at about 60% of men older than 45.
- In women, the prevalence of those overweight or obese increased from 17% at age 20-24 to 57% at age 65-69. At all ages the prevalence was less in women than in men.

- Overall, obesity was more prevalent among women (11%) than men (9%), particularly in the older age-groups.



Underweight

- Overall, 4% of men and 15% of women were underweight, the prevalence being especially high among younger women (29% at age 20-24).

Waist and hip circumference

- Average waist circumference was 89cm for men and 76cm for women. Hip measurement averaged 100cm for both men and women.

References

1. National Health and Medical Research Council. Report of the ninety-eighth session. Canberra: AGPS, 1984.
2. National Health and Medical Research Council. Report of the one hundredth session. Canberra: AGPS, 1985.

Height (a)

6.2.1 OBSERVED FREQUENCIES, AGE, SEX

Height (cm)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Less than 160	3	11	5	3	7	9	9	15	4	12	78
160-169	50	61	66	88	96	81	101	96	133	87	859
170-179	197	238	284	315	320	274	200	185	197	177	2,387
180-189	124	159	140	164	177	109	87	65	61	41	1,127
190 or more	8	10	13	13	13	4	4	3	2	-	70
Not stated	4	5	4	5	1	5	-	3	1	3	31
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
						(cm)					
Mean	177	177	176	176	176	175	174	173	173	172	175
5th centile	166	164	167	165	164	164	162	160	162	160	163
Median	177	177	176	176	176	175	174	173	172	172	175
95th centile	188	187	187	187	186	186	185	185	185	182	186
Standard error of mean	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.4	0.1
						(Number)					
Women (b)											
Less than 150	3	11	9	8	12	11	11	20	14	19	118
150-159	78	129	128	163	170	135	134	134	169	164	1,404
160-169	229	257	303	353	378	273	232	189	186	142	2,542
170-179	67	77	80	78	74	64	38	21	12	14	525
180 or more	3	-	1	4	3	2	1	-	-	-	14
Not stated	1	5	-	6	-	4	2	3	4	3	28
Total	**381**	**479**	**521**	**612**	**637**	**489**	**418**	**367**	**385**	**342**	**4,631**
						(cm)					
Mean	164	163	163	163	162	163	161	160	160	159	162
5th centile	155	152	152	153	152	152	151	149	151	149	151
Median	164	163	163	163	162	162	161	160	160	159	162
95th centile	174	173	172	173	172	172	171	170	169	169	172
Standard error of mean	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1

(a) Height in stockinged feet.
(b) Excludes pregnant women.

Height (a)

6.2.2 ESTIMATES, AGE, SEX

Height (cm)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Less than 160	0.9	3.4	2.8	1.0	2.1	3.0	3.8	4.3	0.9	4.6	2.5
160-169	10.9	12.8	12.5	17.9	18.5	19.7	24.9	25.3	33.9	26.5	18.4
170-179	56.6	47.8	54.0	51.1	50.6	51.7	49.2	51.1	48.6	56.5	51.6
180-189	27.4	31.5	25.2	27.1	24.9	21.3	20.4	16.6	15.3	11.9	23.9
190 or more	1.9	1.5	3.1	1.4	3.3	0.9	1.7	0.7	0.4	-	1.7
Not stated	2.3	3.0	2.4	1.6	0.7	3.4	-	2.0	0.8	0.4	1.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(cm)					
Mean	177	176	176	176	175	175	174	173	173	172	175
5th centile	166	162	164	163	163	162	161	160	162	160	162
Median	177	177	176	176	175	175	174	173	173	172	175
95th centile	188	187	187	186	187	185	185	184	185	182	186
Standard error of mean	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.1
						(Per cent)					
Women (b)											
Less than 150	1.3	2.4	2.0	1.9	2.3	2.4	3.4	5.8	4.1	5.9	2.8
150-159	21.3	26.0	25.3	28.1	25.4	22.7	32.7	36.0	42.3	49.9	29.1
160-169	59.3	53.5	55.0	54.1	60.3	57.1	53.6	51.5	49.7	39.8	54.3
170-179	17.0	15.5	17.4	12.4	11.7	14.3	9.0	5.9	2.6	3.3	12.2
180 or more	0.1	-	0.3	0.2	0.3	0.3	0.0	-	-	-	0.1
Not stated	1.0	2.6	-	3.4	-	3.2	1.3	0.8	1.3	1.2	1.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(cm)					
Mean	164	163	163	163	162	163	161	160	160	159	162
5th centile	153	152	152	152	151	153	150	149	150	149	151
Median	164	163	163	163	163	163	161	160	160	159	162
95th centile	174	174	172	173	172	173	171	170	168	169	172
Standard error of mean	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.1

(a) Height in stockinged feet.
(b) Excludes pregnant women.

Weight (a)

6.2.3 OBSERVED FREQUENCIES, AGE, SEX

Weight (kg)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Less than 50	3	2	1	1	1	2	1	3	-	3	17
50-59	20	24	12	16	17	13	11	11	11	13	148
60-69	109	109	90	88	77	53	63	47	66	44	746
70-79	131	142	177	199	228	148	117	127	140	123	1,532
80-89	70	129	138	169	170	124	120	97	103	85	1,205
90-99	28	47	65	70	78	95	50	53	58	37	581
100-109	10	16	16	26	28	29	25	14	10	9	183
110 or more	9	13	7	12	11	11	12	9	5	3	92
Not stated	6	2	6	7	4	7	2	6	5	3	48
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
						(kg)					
Mean	75.5	77.9	78.8	79.8	80.2	82.2	81.1	80.1	79.2	78.1	79.4
5th centile	58.0	59.1	61.2	62.0	62.7	61.8	62.1	60.4	62.1	59.0	61.0
Median	73.5	76.5	77.6	78.7	78.5	81.0	80.0	78.8	77.7	77.3	78.2
95th centile	99.8	101.1	99.2	100.4	101.5	104.5	104.5	102.2	97.9	96.9	101.0
Standard error of mean	0.67	0.59	0.52	0.50	0.50	0.59	0.63	0.66	0.60	0.63	0.19
						(Number)					
Women (b)											
Less than 50	27	38	40	45	36	12	7	12	12	13	242
50-59	152	180	187	192	183	128	85	90	89	79	1,365
60-69	130	152	185	185	244	181	150	118	139	120	1,604
70-79	49	64	60	97	107	87	90	80	86	73	793
80-89	16	22	22	52	34	47	52	40	32	29	346
90-99	3	9	11	21	17	18	19	17	12	16	143
100-109	2	4	6	9	8	9	6	4	8	5	61
110 or more	1	3	5	2	5	2	4	3	3	3	31
Not stated	1	7	5	9	3	5	5	3	4	4	46
Total	**381**	**479**	**521**	**612**	**637**	**489**	**418**	**367**	**385**	**342**	**4,631**
						(kg)					
Mean	61.5	62.5	62.8	64.9	64.8	66.8	69.1	68.4	67.2	67.8	65.4
5th centile	48.5	47.6	48.3	48.0	49.2	50.9	51.3	51.3	51.0	51.0	49.2
Median	60.0	60.0	60.8	62.8	62.9	64.1	66.9	65.5	65.0	65.7	63.2
95th centile	80.9	85.3	88.9	90.4	89.0	90.9	94.0	92.9	91.6	92.4	89.9
Standard error of mean	0.52	0.56	0.54	0.52	0.48	0.57	0.64	0.78	0.65	0.72	0.19

(a) Weight in stockinged feet and light street clothing.
(b) Excludes pregnant women.

Weight (a)

6.2.4 ESTIMATES, AGE, SEX

	Age										
Weight (kg)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Less than 50	1.0	0.2	0.1	0.1	0.3	0.0	0.0	1.3	-	0.2	0.3
50-59	5.1	6.1	3.9	2.8	2.4	4.2	3.0	2.8	1.9	5.4	3.9
60-69	31.3	25.2	17.9	17.5	15.4	12.9	17.2	12.1	17.0	16.6	19.2
70-79	32.2	31.4	35.2	34.7	39.6	30.8	28.6	35.0	38.5	36.2	34.1
80-89	14.9	22.1	26.5	27.4	23.8	26.3	29.4	25.7	24.5	27.6	24.3
90-99	6.8	9.4	9.5	10.2	10.3	15.4	12.4	12.2	12.6	9.6	10.5
100-109	2.1	1.7	2.9	3.5	3.4	5.5	4.9	5.2	0.9	2.3	3.1
110 or more	2.2	2.5	0.7	1.0	2.0	1.3	3.4	2.7	0.9	0.9	1.8
Not stated	4.5	1.4	3.4	2.8	2.7	3.6	1.1	3.2	3.6	1.2	2.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(kg)					
Mean	74.9	76.6	78.1	78.9	79.3	80.9	81.0	80.8	78.7	77.9	78.4
5th centile	58.0	59.2	60.8	61.0	62.7	60.5	60.9	61.8	63.8	58.3	60.5
Median	72.7	75.5	77.0	78.5	77.7	80.0	80.1	79.1	77.3	77.6	77.3
95th centile	98.0	98.5	97.2	99.9	101.0	103.9	103.0	104.0	95.8	99.0	100.0
Standard error of mean	0.79	0.67	0.52	0.47	0.45	0.53	0.58	0.65	0.46	0.55	0.18
						(Per cent)					
Women (b)											
Less than 50	10.7	8.7	5.9	7.4	5.6	3.0	2.5	3.6	4.0	3.5	6.1
50-59	39.8	40.2	36.8	33.0	29.8	24.3	20.5	24.0	25.0	24.4	31.6
60-69	32.4	29.3	35.3	30.0	40.2	30.1	35.7	30.1	33.3	34.9	33.0
70-79	12.9	9.7	13.1	14.1	15.5	19.6	22.4	21.1	21.1	22.0	16.0
80-89	2.3	4.3	2.7	4.1	4.5	11.5	9.7	12.8	8.9	7.7	6.0
90-99	0.5	2.3	1.6	2.8	1.3	5.2	3.3	5.1	4.2	3.3	2.6
100-109	0.2	1.1	1.4	1.8	0.6	2.1	1.8	1.2	1.6	1.5	1.3
110 or more	0.0	0.5	1.1	0.4	0.8	0.1	1.0	0.4	0.2	0.7	0.5
Not stated	1.0	3.9	2.2	6.5	1.6	4.0	3.1	1.6	1.8	1.8	2.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(kg)					
Mean	60.6	62.2	62.9	63.8	64.1	68.2	68.8	68.7	67.1	68.0	64.7
5th centile	46.5	47.6	49.0	48.0	49.3	51.0	51.1	51.5	51.1	51.4	49.0
Median	59.4	59.7	60.8	62.2	63.0	65.8	67.1	66.0	64.3	66.0	62.6
95th centile	77.1	88.5	87.3	90.0	84.5	92.0	94.0	93.0	91.5	91.7	88.9
Standard error of mean	0.63	0.65	0.54	0.50	0.40	0.51	0.57	0.65	0.59	0.66	0.18

(a) Weight in stockinged feet and light street clothing.
(b) Excludes pregnant women.

Body mass index (a)

6.2.5 OBSERVED FREQUENCIES, AGE, SEX

BMI (kg/m²)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Underweight	43	32	18	19	17	11	10	8	9	13	180
Acceptable weight	229	252	255	259	271	153	142	131	138	113	1,943
Overweight	82	156	195	248	255	240	185	169	198	152	1,880
Obese	25	39	38	54	67	70	62	53	48	38	494
Not stated	7	5	6	8	4	8	2	6	5	4	55
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
						(kg/m²)					
Mean	23.8	24.6	25.0	25.4	25.6	26.4	26.5	26.4	26.2	26.0	25.6
5th centile	19.0	19.5	20.2	20.4	20.8	21.1	21.1	21.4	21.1	20.5	20.3
Median	23.4	24.3	24.7	25.1	25.2	26.2	26.1	26.0	25.9	25.8	25.2
95th centile	31.0	31.8	30.7	31.5	31.3	32.5	33.5	32.9	32.2	32.3	32.0
Standard error of mean	0.18	0.17	0.15	0.14	0.15	0.16	0.19	0.20	0.17	0.20	0.05
						(Number)					
Women											
Underweight	94	104	110	96	79	35	24	16	21	19	598
Acceptable weight	217	258	287	299	352	257	181	157	155	129	2,292
Overweight	55	71	83	136	148	125	126	118	142	121	1,125
Obese	14	39	36	72	55	67	82	72	62	69	568
Not stated	1	7	5	9	3	5	5	4	5	4	48
Total	**381**	**479**	**521**	**612**	**637**	**489**	**418**	**367**	**385**	**342**	**4,631**
						(kg/m²)					
Mean	22.5	23.2	23.2	24.1	24.2	24.9	26.2	26.3	25.9	26.5	24.6
5th centile	17.8	18.3	18.4	18.3	18.9	19.4	19.8	20.1	19.8	19.9	18.7
Median	21.8	22.2	22.2	23.1	23.3	24.0	25.0	25.2	25.2	25.7	23.6
95th centile	29.1	32.4	32.9	33.0	33.1	33.7	36.6	35.5	34.9	36.0	33.8
Standard error of mean	0.18	0.21	0.19	0.19	0.17	0.21	0.26	0.29	0.25	0.28	0.07

(a) One kilogram was deducted from the measured weight, as a correction for the weight of clothing in computation of the body mass index.

(b) Excludes pregnant women.

Body mass index (a)

6.2.6 ESTIMATES, AGE, SEX

BMI (kg/m^2)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Underweight	11.1	7.6	3.4	3.9	3.3	1.1	1.2	2.6	2.0	3.9	4.5
Acceptable weight	58.9	53.2	51.2	42.6	41.8	36.1	37.6	33.7	34.4	33.7	44.5
Overweight	19.0	30.3	36.3	42.9	42.9	46.2	44.6	44.6	49.0	49.5	38.6
Obese	6.4	5.9	5.8	7.9	9.3	12.1	15.4	16.0	10.9	11.5	9.3
Not stated	4.5	3.0	3.4	2.8	2.7	4.5	1.1	3.2	3.6	1.3	3.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(kg/m^2)					
Mean	23.6	24.4	24.8	25.3	25.5	26.1	26.5	26.7	26.1	26.0	25.3
5th centile	18.8	19.2	20.2	20.3	20.8	21.3	21.3	21.4	21.3	20.6	20.1
Median	23.3	24.1	24.5	25.2	25.3	25.8	26.1	26.2	25.8	25.9	25.0
95th centile	31.2	30.7	30.2	31.1	31.0	32.4	33.8	33.5	32.4	32.0	31.8
Standard error of mean	0.22	0.19	0.14	0.13	0.12	0.14	0.17	0.20	0.14	0.17	0.05
						(Per cent)					
Women (b)											
Underweight	29.4	24.7	20.2	15.2	11.2	6.3	6.0	5.4	4.8	5.8	15.1
Acceptable weight	52.1	50.3	55.5	49.8	56.7	45.9	41.6	41.2	41.0	35.6	48.6
Overweight	13.1	13.3	14.5	20.6	23.6	29.0	30.0	28.8	37.2	36.3	22.4
Obese	4.4	7.8	7.7	8.0	6.8	14.9	19.3	23.0	15.2	20.6	11.1
Not stated	1.0	3.9	2.2	6.5	1.6	4.0	3.1	1.6	1.8	1.8	2.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(kg/m^2)					
Mean	22.3	23.0	23.3	23.8	24.0	25.4	26.3	26.3	26.0	26.6	24.3
5th centile	17.4	18.1	18.5	18.4	19.0	19.5	19.7	19.8	20.0	20.0	18.6
Median	21.6	22.0	22.2	22.6	23.2	24.6	25.1	25.2	25.2	26.1	23.3
95th centile	29.7	32.6	32.9	33.0	31.5	33.7	36.5	36.2	34.8	35.6	33.5
Standard error of mean	0.24	0.23	0.20	0.18	0.15	0.18	0.24	0.25	0.22	0.26	0.07

(a) One kilogram was deducted from the measured weight, as a correction for the weight of clothing in computation of the body mass index.

(b) Excludes pregnant women.

Waist (a)

6.2.7 OBSERVED FREQUENCIES, AGE, SEX

Waist (cm)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Less than 70	19	10	5	6	5	5	3	1	-	4	58
70-79	138	124	77	89	58	30	29	20	21	15	601
80-89	164	203	215	217	228	129	113	97	92	69	1,527
90-99	44	95	162	196	217	200	153	139	162	119	1,487
100-109	17	36	37	64	86	84	70	85	104	88	671
110 or more	4	14	16	15	20	33	33	25	18	24	202
Not stated	-	2	-	1	-	1	-	-	1	1	6
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
						(cm)					
Mean	82.2	85.8	88.0	89.1	90.5	93.2	93.4	94.2	94.9	95.0	90.6
5th centile	70.0	72.5	74.0	74.0	76.0	78.0	77.0	79.0	79.0	78.0	74.0
Median	81.5	84.3	87.5	89.0	90.0	93.0	92.5	93.5	94.5	95.0	90.0
95th centile	100.0	105.0	103.0	106.0	106.5	111.0	113.5	111.0	109.0	111.5	109.0
Standard error of mean	0.49	0.46	0.41	0.41	0.39	0.46	0.52	0.53	0.50	0.57	0.16
						(Number)					
Women (b)											
Less than 60	12	15	10	12	7	2	4	2	-	2	66
60-69	193	205	208	197	195	125	60	56	51	34	1,324
70-79	132	176	217	246	261	193	153	116	131	106	1,731
80-89	35	55	51	101	120	99	118	109	116	111	915
90-99	8	14	25	44	30	44	50	51	58	53	377
100 or more	1	12	10	11	23	26	33	32	29	36	213
Not stated	-	2	-	1	1	-	-	1	-	-	5
Total	**381**	**479**	**521**	**612**	**637**	**489**	**418**	**367**	**385**	**342**	**4,631**
						(cm)					
Mean	70.1	72.0	72.7	74.5	75.2	77.5	80.5	81.4	81.7	83.3	76.6
5th centile	60.0	60.5	61.6	62.0	63.0	63.3	65.0	66.0	65.5	66.6	62.0
Median	68.5	70.0	71.0	72.0	73.0	75.5	79.0	80.0	80.0	81.3	74.0
95th centile	86.0	90.0	92.0	94.5	96.0	99.5	102.0	104.0	103.5	106.0	99.0
Standard error of mean	0.41	0.45	0.40	0.40	0.40	0.52	0.57	0.63	0.59	0.65	0.17

(a) The average of two measurements.
(b) Excludes pregnant women.

Waist (a)

6.2.8 ESTIMATES, AGE, SEX

	Age										
Waist (cm)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Less than 70	6.2	2.2	2.2	2.3	0.7	0.8	0.8	0.4	-	1.1	1.9
70-79	34.7	26.7	17.3	17.7	9.7	7.1	8.5	4.9	5.8	5.3	16.1
80-89	45.7	44.7	37.1	34.2	40.5	28.1	28.2	25.9	23.0	25.0	35.4
90-99	8.6	17.9	33.6	33.0	31.7	39.5	34.7	37.0	41.3	35.1	29.4
100-109	3.4	5.3	6.9	10.0	15.1	18.3	20.1	22.2	24.4	25.4	12.9
110 or more	1.3	2.9	3.0	2.7	2.4	6.1	7.7	9.4	5.3	8.0	4.2
Not stated	-	0.2	-	0.1	-	0.1	-	-	0.1	0.1	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(cm)					
Mean	81.7	85.0	87.3	88.8	89.9	93.1	93.3	94.9	94.7	94.6	89.2
5th centile	68.5	72.5	72.5	72.5	76.0	77.0	76.5	79.0	79.0	76.0	73.0
Median	81.0	84.0	87.0	88.5	89.0	93.0	92.5	93.5	94.5	94.0	88.5
95th centile	99.0	102.5	103.0	105.5	106.0	111.0	113.0	115.0	110.0	111.5	108.0
Standard error of mean	0.56	0.51	0.44	0.44	0.35	0.43	0.49	0.55	0.45	0.52	0.16
						(Per cent)					
Women (b)											
Less than 60	3.7	3.7	1.5	2.0	1.2	0.3	1.6	0.9	-	0.7	1.8
60-69	53.1	45.2	39.4	34.7	31.0	24.9	15.4	13.5	12.3	8.5	31.8
70-79	29.8	35.4	43.8	40.5	40.7	37.3	33.9	29.7	36.4	31.9	36.5
80-89	10.7	9.9	7.8	16.5	19.5	20.2	30.6	32.1	29.8	30.4	18.4
90-99	2.6	3.6	5.7	4.0	3.9	10.4	11.5	14.6	12.4	17.8	7.2
100 or more	0.0	2.0	1.9	2.2	3.5	6.9	7.1	9.1	9.1	10.6	4.3
Not stated	-	0.1	-	0.1	0.1	-	-	0.2	-	-	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(cm)					
Mean	69.9	71.4	72.7	73.6	75.2	78.7	80.3	82.0	81.5	83.9	75.6
5th centile	60.0	60.0	62.0	61.5	63.0	63.0	63.5	66.0	66.0	67.0	62.0
Median	68.0	69.5	71.0	71.0	73.5	76.5	79.0	81.0	80.0	82.0	73.5
95th centile	89.0	90.0	93.0	92.0	96.0	101.0	102.0	104.0	107.0	109.0	98.0
Standard error of mean	0.53	0.51	0.42	0.39	0.36	0.49	0.53	0.59	0.54	0.63	0.17

(a) The average of two measurements.
(b) Excludes pregnant women.

Hip (a)

6.2.9 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Hip (cm)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Less than 90	34	32	25	26	19	14	9	13	10	8	190
90-94	90	96	80	72	68	45	29	30	42	31	583
95-99	104	135	151	161	179	124	108	94	82	72	1,210
100-104	94	111	142	177	192	132	127	98	129	93	1,295
105-109	40	72	75	106	103	101	75	83	86	70	811
110-114	14	24	27	31	34	47	27	29	35	31	299
115 or more	10	14	12	15	19	19	26	20	14	15	164
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
						(cm)					
Mean	98.1	99.3	99.8	100.5	100.8	102.0	101.9	102.1	102.2	102.2	100.8
5th centile	87.2	88.1	89.3	90.0	91.0	91.0	92.0	91.0	91.0	91.0	90.0
Median	97.8	98.5	99.3	100.5	100.5	101.5	101.0	101.5	102.0	102.0	100.5
95th centile	111.8	112.0	111.0	112.0	112.0	113.5	116.0	114.8	113.0	113.5	112.5
Standard error of mean	0.37	0.34	0.30	0.28	0.30	0.32	0.36	0.38	0.37	0.40	0.11
						(Number)					
Women (b)											
Less than 85	13	24	20	15	15	6	2	4	4	4	107
85-89	60	69	56	64	52	20	21	16	15	15	388
90-94	100	111	135	108	113	88	53	49	46	32	835
95-99	79	107	119	146	169	111	80	96	98	78	1,083
100-104	76	85	87	117	134	109	92	68	88	79	935
105-109	22	36	53	66	79	74	70	57	58	54	569
110-114	23	25	20	41	34	40	45	31	33	31	323
115-119	5	6	10	30	17	13	25	24	19	21	170
120 or more	3	16	21	25	24	28	30	22	24	28	221
Total	**381**	**479**	**521**	**612**	**637**	**489**	**418**	**367**	**385**	**342**	**4,631**
						(cm)					
Mean	96.4	97.3	97.9	99.8	99.6	101.6	103.3	102.8	102.6	103.7	100.3
5th centile	85.0	85.0	85.0	86.5	87.0	88.5	89.0	89.2	89.2	88.1	87.0
Median	95.0	96.0	96.0	98.5	98.5	100.0	102.0	100.5	101.0	101.0	99.0
95th centile	111.0	114.0	117.5	118.0	117.0	121.3	122.5	120.0	122.0	123.9	119.0
Standard error of mean	0.40	0.44	0.42	0.40	0.37	0.45	0.50	0.52	0.51	0.68	0.15

(a) The average of two measurements.
(b) Excludes pregnant women.

Hip (a)

6.2.10 ESTIMATES, AGE, SEX

	Age										
Hip (cm)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Less than 90	9.4	6.4	7.0	6.3	3.1	3.7	1.8	3.1	0.7	1.4	5.0
90-94	25.7	19.4	15.8	10.7	11.8	12.0	6.5	6.3	10.5	10.2	14.0
95-99	25.4	33.7	27.0	29.1	30.2	25.8	25.8	21.8	21.2	22.4	27.2
100-104	24.6	20.3	28.6	31.2	33.3	27.2	32.2	30.3	34.4	32.3	28.6
105-109	8.9	13.5	15.1	15.5	13.8	18.7	19.0	21.1	20.9	19.1	15.6
110-114	3.7	4.2	4.8	4.3	4.4	9.0	6.9	9.7	8.2	9.5	5.8
115 or more	2.4	2.3	1.8	2.8	3.5	3.2	7.7	7.7	4.0	5.0	3.6
Not stated	-	0.2	-	0.1	-	0.5	-	-	0.1	0.1	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(cm)					
Weighted mean	97.7	98.6	99.3	100.1	100.5	101.2	102.4	103.0	102.4	102.2	100.3
5th centile	87.0	88.0	89.0	89.0	91.0	90.0	92.0	92.0	92.0	91.5	89.5
Median	97.5	98.0	99.5	100.0	100.5	101.0	101.0	102.0	101.5	102.0	100.0
95th centile	111.5	111.0	110.5	111.0	110.5	113.0	117.5	115.5	113.0	113.5	112.5
Standard error of mean	0.45	0.38	0.31	0.31	0.28	0.29	0.35	0.38	0.33	0.35	0.11
						(Per cent)					
Women (b)											
Less than 85	3.3	5.4	3.5	3.8	3.0	1.0	0.9	0.1	1.2	0.5	2.7
85-89	19.3	15.5	11.2	13.0	8.5	3.9	4.9	5.6	4.0	4.6	10.4
90-94	26.2	28.0	27.9	18.7	16.7	18.1	12.2	16.5	11.4	9.8	20.1
95-99	18.8	19.9	21.0	23.6	27.6	17.2	19.5	21.5	26.3	23.5	21.8
100-104	18.8	16.3	16.6	18.6	22.0	23.8	19.4	15.4	23.3	21.2	19.2
105-109	4.8	6.0	10.8	11.5	13.1	13.7	15.8	16.5	12.3	15.6	11.1
110-114	6.8	4.4	3.9	4.8	4.5	11.9	12.0	10.4	8.4	8.5	6.9
115-119	1.6	1.5	1.1	2.6	1.3	3.6	8.0	7.6	5.5	7.5	3.3
120 or more	0.4	2.9	4.0	3.4	3.2	6.8	7.3	6.2	7.6	8.8	4.4
Not stated	-	0.1	-	0.1	0.1	-	-	0.2	-	-	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(cm)					
Weighted mean	96.0	96.3	97.6	98.4	99.1	102.4	103.7	103.1	102.7	104.0	99.5
5th centile	85.5	84.0	86.0	85.5	87.0	89.5	89.0	89.0	88.5	89.0	87.0
Median	94.5	94.5	95.5	97.0	98.0	101.5	102.0	101.5	101.0	102.0	98.0
95th centile	111.0	114.0	117.0	118.0	112.5	122.5	124.0	120.0	122.0	124.0	118.0
Standard error of mean	0.51	0.50	0.43	0.39	0.33	0.41	0.48	0.50	0.46	0.58	0.15

(a) The average of two measurements.
(b) Excludes pregnant women.

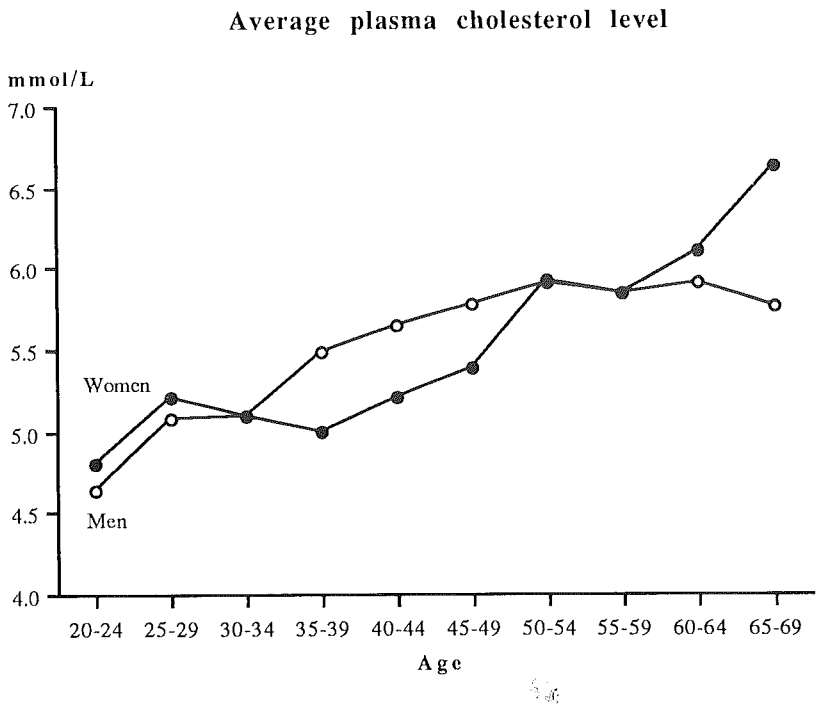
6.3 Blood chemistry

Comments (see also Section 6.4)

(Note: The oral contraceptive pill is widely used and can effect blood lipid levels. For this reason the data for women are presented separately for women taking and women not taking the pill. In comparisons between blood lipid levels in men and women, 'women' refers to women not taking the oral contraceptive pill)

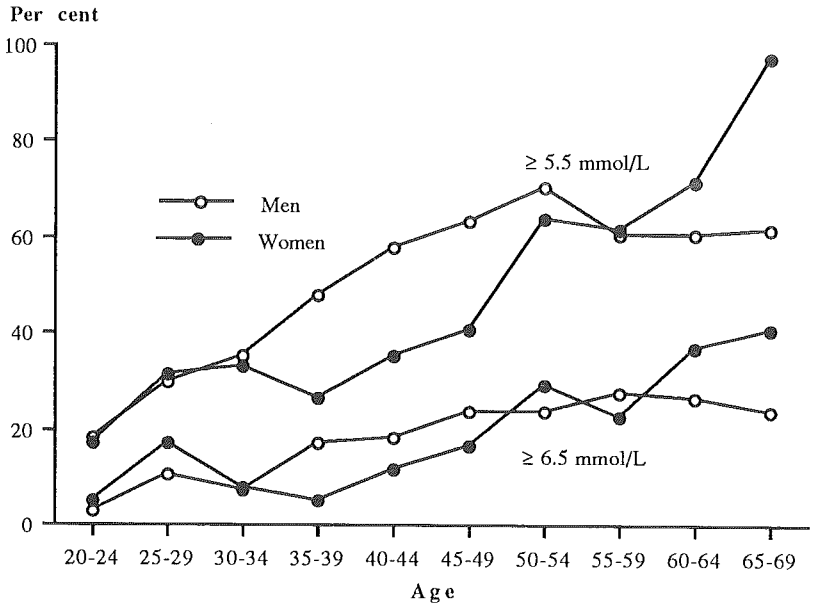
Plasma cholesterol

- Average plasma cholesterol level was 5.42mmol/L in men and 5.30mmol/L in women. At younger ages (20-29) plasma cholesterol was lower in men than women. During middle age (35-49) the reverse was true. From age 60-69 the level was again lower in men than women.



- There was no uniform pattern in the estimated differences in plasma cholesterol levels between women taking and women not taking the oral contraceptive pill.
- 47% of men and 39% of women had plasma cholesterol levels of 5.5mmol/L or more, the level which the National Heart Foundation regards as higher than desirable. 16% of men and 14% of women had levels of 6.5mmol/L or more.
- In men and women, the prevalence of raised plasma cholesterol levels increased overall with age. The prevalence of levels of 6.5mmol/L among women aged 25-29 (not taking oral contraceptives) was relatively high (17%).

Proportion with plasma cholesterol above given levels



Plasma high density lipoprotein (HDL) cholesterol

- Average plasma HDL cholesterol level was 1.18mmol/L in men and 1.50mmol/L in women. Variation in level across age groups was greater for women than men, however there was no discernable pattern.
- Among younger women, average plasma HDL cholesterol concentrations tended to be lower in those taking oral contraceptives than in those not taking them.

Plasma triglyceride

- In men, average plasma triglyceride concentration increased until age 60-64 (1.67mmol/L), then fell to 1.52mmol/L. There was a marked increase at age 35-39. These estimates are affected by extremely high values however the same pattern is shown by the median, although at a lower level. In women, triglyceride concentrations increased with age. Men had higher average and median concentrations at all ages except 65-69 years.
- Plasma triglyceride levels were generally higher in women taking the oral contraceptive pill than in women not taking them.
- 17% of men and 7% of women had plasma triglyceride concentrations of 2.0mmol/L or more. In both sexes the prevalence increased with age, reaching about 25% at age 45-49 in men and at age 65-69 in women.
- The proportion of men and women with a triglyceride concentration of 5.0mmol/L or more was 1.0% and 0.1% respectively.

Combined high cholesterol and triglyceride

- 6% of men and 4% of women had a plasma cholesterol concentration of 6.5mmol/L or more and a triglyceride concentration of 2.0mmol/L or more. The prevalence was high in men aged 45-64 (11%) and exceptionally high in women aged 65-69 (23%).

Proportion with raised cholesterol and triglyceride levels

(Cholesterol ≥ 6.5 mmol/L and triglycerides ≥ 2.0 mmol/L)

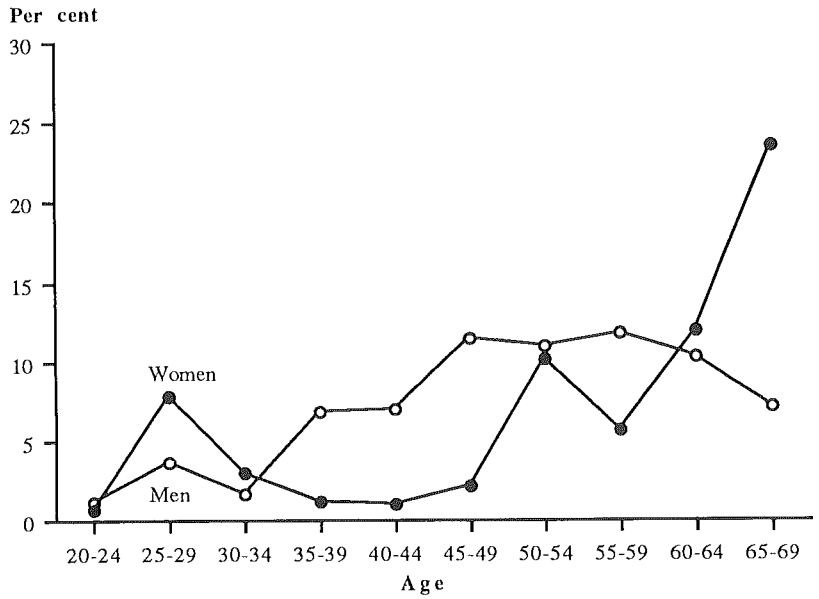


Table: Prevalence of plasma cholesterol concentrations of 6.5mmol/L or more and triglyceride concentrations of 2.0mmol/L or more

(Per cent)

	Cholesterol				*Cholesterol ≥6.5mmol/L & triglyceride ≥2.0mmol/L*	
	≥5.5mmol/L		*≥6.5mmol/L*			
	Men	*Women*	*Men*	*Women*	*Men*	*Women*
20-24	18.1	17.2	2.8	5.1	1.1	0.7
25-29	29.5	31.2	10.4	16.9	3.7	7.8
30-34	35.2	33.1	7.1	7.9	1.6	3.0
35-39	47.8	26.5	16.8	5.0	6.8	1.2
40-44	57.6	35.2	18.4	11.4	7.0	1.0
45-49	63.1	40.9	23.5	16.5	11.4	2.2
50-54	70.3	63.6	23.8	29.2	10.9	10.1
55-59	60.7	61.7	27.4	22.7	11.7	5.6
60-64	60.3	71.7	26.6	37.0	10.2	11.9
65-69	61.7	97.0	23.4	40.4	7.1	23.5
All ages	46.6	38.6	16.0	14.2	6.3	4.1

Plasma cholesterol
Men fasting

6.3.1 OBSERVED FREQUENCIES, AGE

Plasma cholesterol (mmol/L)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Less than 3.00	5	2	1	-	1	1	-	1	2	2	15
3.00-3.99	66	40	41	34	21	10	9	3	4	9	237
4.00-4.99	140	161	152	119	105	83	52	46	47	45	950
5.00-5.99	87	132	160	210	206	150	133	131	141	105	1,455
6.00-6.99	24	55	76	118	170	120	122	102	106	84	977
7.00-7.99	9	20	13	32	41	51	34	36	42	28	306
8.00-8.99	-	1	2	8	10	6	8	7	9	12	63
9.00 or more	-	2	1	3	3	2	1	-	4	-	16
Not stated	3	6	2	2	3	3	1	2	6	2	30
Total	**334**	**419**	**448**	**526**	**560**	**426**	**360**	**328**	**361**	**287**	**4,049**
						(mmol/L)					
Mean	4.75	5.13	5.20	5.55	5.73	5.82	5.91	5.90	5.96	5.84	5.57
5th centile	3.35	3.70	3.61	3.82	4.10	4.22	4.27	4.51	4.49	4.10	3.88
Median	4.70	5.00	5.20	5.44	5.70	5.80	5.90	5.87	5.84	5.80	5.52
95th centile	6.56	7.04	6.78	7.38	7.45	7.50	7.61	7.46	7.80	7.79	7.40
Standard error of mean	0.05	0.05	0.05	0.05	0.04	0.05	0.05	0.05	0.06	0.06	0.02

Plasma cholesterol
Men fasting

6.3.2 ESTIMATES, AGE

Plasma cholesterol (mmol/L)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Less than 3.00	3.2	0.9	0.1	-	0.8	0.1	-	0.0	0.2	1.3	0.7
3.00-3.99	21.1	12.6	12.1	5.7	4.5	1.9	1.8	1.6	0.7	4.1	7.9
4.00-4.99	41.5	35.3	34.7	25.1	17.2	22.9	12.7	18.3	14.4	16.1	26.1
5.00-5.99	23.7	29.0	34.7	41.4	39.7	33.6	43.8	37.4	40.6	35.5	35.1
6.00-6.99	7.2	14.5	15.8	19.4	30.2	28.9	30.4	30.2	28.0	30.5	21.6
7.00-7.99	1.0	4.9	2.3	6.2	6.3	9.5	9.6	10.0	11.2	9.3	6.2
8.00-8.99	-	0.3	0.1	1.1	0.8	1.8	1.6	1.9	1.2	3.0	0.9
9.00 or more	-	0.5	0.0	0.4	0.4	0.4	0.0	-	1.0	-	0.3
Not stated	2.3	2.0	0.3	0.6	0.2	0.9	0.1	0.6	2.8	0.2	1.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(mmol/L)					
Mean	4.63	5.07	5.10	5.49	5.64	5.78	5.90	5.84	5.90	5.76	5.42
5th centile	3.14	3.57	3.58	3.92	3.90	4.26	4.45	4.43	4.50	3.91	3.70
Median	4.60	5.00	5.00	5.40	5.65	5.79	5.87	5.74	5.77	5.79	5.40
95th centile	6.21	7.09	6.60	7.10	7.20	7.50	7.50	7.48	7.73	7.44	7.16
Standard error of mean	0.06	0.07	0.05	0.04	0.04	0.05	0.04	0.05	0.04	0.06	0.02

Plasma cholesterol
Women fasting, not now taking the oral contraceptive pill

6.3.3 OBSERVED FREQUENCIES, AGE

Plasma cholesterol (mmol/L)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Women											
Less than 3.00	1	2	2	1	2	-	1	-	-	-	9
3.00-3.99	20	28	31	53	28	13	4	2	5	1	185
4.00-4.99	43	76	109	154	150	77	30	22	7	-	668
5.00-5.99	20	53	102	158	168	122	92	53	33	15	816
6.00-6.99	14	15	29	50	76	76	57	48	43	20	428
7.00-7.99	1	9	9	8	22	26	30	15	21	7	148
8.00-8.99	1	4	3	2	1	5	9	6	8	8	47
9.00 or more	-	1	1	1	1	-	-	4	1	1	10
Not stated	2	-	1	12	5	10	2	3	2	-	37
Total	**102**	**188**	**287**	**439**	**453**	**329**	**225**	**153**	**120**	**52**	**2,348**
						(mmol/L)					
Mean	4.80	5.00	5.07	5.06	5.29	5.59	5.96	6.02	6.32	6.69	5.41
5th centile	3.39	3.44	3.63	3.67	3.89	4.10	4.30	4.21	4.19	5.48	3.78
Median	4.68	4.90	5.00	5.00	5.20	5.50	5.82	5.97	6.29	6.48	5.30
95th centile	6.63	7.36	6.90	6.56	7.01	7.31	7.79	8.12	8.32	8.92	7.40
Standard error of mean	0.10	0.08	0.06	0.05	0.05	0.06	0.07	0.09	0.11	0.15	0.02

Plasma cholesterol
Women fasting, not now taking the oral contraceptive pill

6.3.4 ESTIMATES, AGE

Plasma cholesterol (mmol/L)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Women											
Less than 3.00	3.1	1.2	0.2	0.0	0.6	-	0.7	-	-	-	0.6
3.00-3.99	17.4	13.4	11.6	15.0	5.9	6.9	2.1	1.8	8.5	2.7	9.8
4.00-4.99	36.1	36.9	37.4	35.7	38.8	29.9	16.4	15.4	3.2	-	31.1
5.00-5.99	29.8	27.2	34.6	34.8	31.5	34.2	34.9	41.3	28.0	31.5	32.9
6.00-6.99	12.1	8.6	10.9	8.4	18.0	20.4	26.6	28.6	37.7	42.0	16.6
7.00-7.99	0.1	10.1	3.9	2.4	3.4	6.1	16.3	6.3	18.1	6.0	5.9
8.00-8.99	0.3	2.6	0.5	0.6	0.0	1.0	2.7	4.4	3.0	12.8	1.5
9.00 or more	-	0.1	0.3	0.0	0.0	-	-	1.8	0.2	5.0	0.3
Not stated	1.1	-	0.6	3.1	1.7	1.5	0.3	0.4	1.4	-	1.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(mmol/L)					
Mean	4.80	5.20	5.09	4.99	5.21	5.38	5.93	5.85	6.10	6.62	5.30
5th centile	3.48	3.36	3.65	3.60	3.86	3.71	4.20	4.16	3.93	5.50	3.64
Median	4.79	4.97	5.00	4.90	5.10	5.22	5.90	5.80	6.15	6.23	5.20
95th centile	6.53	7.97	6.86	6.50	6.90	7.18	7.74	8.03	7.90	9.34	7.37
Standard error of mean	0.13	0.11	0.06	0.04	0.04	0.05	0.07	0.08	0.09	0.15	0.02

Plasma cholesterol
Women fasting, now taking the oral contraceptive pill

6.3.5 OBSERVED FREQUENCIES, AGE

	Age					
Plasma cholesterol (mmol/L)	*20-24*	*25-29*	*30-34*	*35-39*	*40-69*	*All ages*
				(Number)		
Women						
Less than 3.00	-	2	2	1	1	6
3.00-3.99	19	15	15	5	3	57
4.00-4.99	70	62	51	27	25	235
5.00-5.99	55	80	51	31	30	247
6.00-6.99	17	34	21	16	16	104
7.00-7.99	7	3	2	1	5	18
8.00-8.99	-	3	1	1	1	6
9.00 or more	-	1	-	-	-	1
Not stated	-	3	3	1	1	8
Total	**168**	**203**	**146**	**83**	**82**	**682**
				(mmol/L)		
Mean	5.00	5.26	5.08	5.26	5.40	5.18
5th centile	3.57	3.85	3.55	3.81	3.91	3.79
Median	4.93	5.19	5.09	5.18	5.40	5.11
95th centile	6.77	6.90	6.79	6.70	7.52	6.85
Standard error of mean	0.07	0.07	0.08	0.10	0.11	0.04

Plasma cholesterol
Women fasting, now taking the oral contraceptive pill

6.3.6 ESTIMATES, AGE

	Age					
Plasma cholesterol (mmol/L)	*20-24*	*25-29*	*30-34*	*35-39*	*40-69*	*All ages*
				(Per cent)		
Women						
Less than 3.00	-	0.9	2.0	1.8	2.4	1.1
3.00-3.99	14.1	9.0	11.1	7.4	3.2	10.3
4.00-4.99	47.1	39.0	32.9	38.6	31.8	39.7
5.00-5.99	29.8	35.8	38.7	36.8	33.2	34.5
6.00-6.99	4.5	11.4	11.7	14.4	22.7	10.5
7.00-7.99	4.5	1.2	0.4	0.1	5.7	2.2
8.00-8.99	-	2.5	1.3	0.1	0.2	1.1
9.00 or more	-	0.1	-	-	-	0.0
Not stated	-	0.3	1.9	0.7	0.7	0.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
				(mmol/L)		
Mean	4.92	5.11	5.09	5.08	5.42	5.08
5th centile	3.69	3.82	3.60	3.70	3.85	3.80
Mean	4.90	5.00	5.10	5.01	5.50	4.98
95th centile	6.47	6.87	6.84	6.30	6.90	6.75
Standard error of mean	0.07	0.08	0.08	0.09	0.09	0.04

HDL cholesterol
Men fasting

6.3.7 OBSERVED FREQUENCIES, AGE, SEX

HDL cholesterol (mmol/L)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Less than 0.50	-	-	1	2	-	-	1	-	1	-	5
0.50-0.99	72	106	103	146	135	115	99	78	93	74	1,021
1.00-1.49	215	239	272	287	334	254	198	192	209	158	2,358
1.50-1.99	41	58	62	73	77	48	55	48	47	43	552
2.00-2.49	2	10	7	14	10	5	5	6	4	8	71
2.50 or more	1	-	-	2	1	1	1	2	1	2	11
Not stated	3	6	3	2	3	3	1	2	6	2	31
Total	**334**	**419**	**448**	**526**	**560**	**426**	**360**	**328**	**361**	**287**	**4,049**
						(mmol/L)					
Mean	1.19	1.19	1.20	1.19	1.20	1.17	1.19	1.22	1.16	1.22	1.19
5th centile	0.80	0.78	0.78	0.80	0.78	0.75	0.76	0.77	0.73	0.74	0.78
Median	1.14	1.15	1.18	1.13	1.14	1.12	1.13	1.17	1.12	1.17	1.14
95th centile	1.66	1.72	1.78	1.82	1.78	1.75	1.80	1.80	1.67	1.90	1.78
Standard error of mean	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.00

HDL cholesterol
Men fasting

6.3.8 ESTIMATES, AGE

HDL cholesterol (mmol/L)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Less than 0.50	-	-	0.2	0.8	-	-	0.1	-	0.2	-	0.1
0.50-0.99	19.8	24.9	24.4	28.0	24.6	25.9	31.4	25.0	25.5	26.3	25.3
1.00-1.49	65.4	59.6	60.5	56.8	61.6	60.1	50.5	58.3	55.9	54.1	59.0
1.50-1.99	11.8	12.4	12.8	11.4	12.0	12.0	15.9	14.6	14.3	16.7	13.0
2.00-2.49	0.2	1.2	1.1	2.0	1.5	1.1	2.0	1.3	1.1	1.8	1.3
2.50 or more	0.5	-	-	0.3	0.1	0.0	0.1	0.1	0.3	0.9	0.2
Not stated	2.3	2.0	0.9	0.6	0.2	0.9	0.1	0.6	2.8	0.2	1.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(mmol/L)					
Mean	1.18	1.17	1.18	1.17	1.18	1.17	1.19	1.20	1.17	1.22	1.18
5th centile	0.80	0.71	0.80	0.71	0.79	0.77	0.72	0.77	0.71	0.70	0.77
Median	1.10	1.10	1.16	1.11	1.12	1.15	1.12	1.15	1.13	1.15	1.13
95th centile	1.64	1.70	1.70	1.80	1.74	1.69	1.89	1.80	1.61	1.83	1.74
Standard error of mean	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.00

HDL cholesterol
Women fasting, not now taking the oral contaraceptive pill

6.3.9 OBSERVED FREQUENCIES, AGE

	Age										
HDL cholesterol (mmol/L)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Women											
Less than 0.50	-	-	-	-	-	-	-	-	-	-	-
0.50-0.99	8	20	19	27	31	19	11	8	6	6	155
1.00-1.49	46	91	131	210	209	139	100	67	45	27	1,065
1.50-1.99	33	65	113	162	181	124	86	50	46	13	873
2.00-2.49	12	12	20	27	25	30	23	23	15	5	192
2.50 or more	1	-	3	1	2	7	3	2	6	1	26
Not stated	2	-	1	12	5	10	2	3	2	-	37
Total	**102**	**188**	**287**	**439**	**453**	**329**	**225**	**153**	**120**	**52**	**2,348**
						(mmol/L)					
Mean	1.51	1.42	1.47	1.45	1.47	1.52	1.51	1.55	1.61	1.44	1.49
5th centile	0.96	0.90	0.90	0.93	0.93	0.98	0.97	0.95	0.93	0.70	0.93
Median	1.43	1.40	1.47	1.43	1.45	1.50	1.50	1.50	1.57	1.37	1.45
95th centile	2.20	2.10	2.06	2.03	2.05	2.30	2.20	2.39	2.50	2.20	2.14
Standard error of mean	0.04	0.03	0.02	0.02	0.02	0.02	0.03	0.03	0.04	0.06	0.01

HDL cholesterol
Women fasting, not now taking the oral contraceptive pill

6.3.10 ESTIMATES, AGE

	Age										
HDL cholesterol (mmol/L)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Women											
Less than 0.50	-	-	-	-	-	-	-	-	-	-	-
0.50-0.99	3.9	9.6	3.9	5.3	7.2	4.8	4.0	4.6	7.4	12.1	5.8
1.00-1.49	45.7	46.7	45.5	48.9	43.7	43.0	40.7	43.1	34.2	51.7	44.8
1.50-1.99	35.2	36.1	40.5	36.7	42.8	41.8	42.8	28.3	41.5	21.4	38.6
2.00-2.49	13.1	7.6	8.1	6.0	4.2	8.3	10.1	21.3	14.0	14.0	8.8
2.50 or more	1.1	-	1.4	0.1	0.4	0.6	2.1	2.2	1.5	0.8	0.8
Not stated	1.1	-	0.6	3.1	1.7	1.5	0.3	0.4	1.4	-	1.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(mmol/L)					
Mean	1.55	1.44	1.52	1.47	1.47	1.52	1.54	1.60	1.58	1.43	1.50
5th centile	1.01	0.90	1.03	0.97	0.93	1.00	1.00	1.00	0.88	0.70	0.96
Median	1.48	1.40	1.50	1.47	1.47	1.50	1.50	1.50	1.60	1.34	1.48
95th centile	2.13	2.10	2.06	2.00	1.98	2.20	2.20	2.40	2.40	2.21	2.10
Standard error of mean	0.05	0.03	0.02	0.01	0.01	0.02	0.02	0.03	0.03	0.06	0.01

HDL cholesterol
Women fasting, now taking the oral contraceptive pill

6.3.11 OBSERVED FREQUENCIES, AGE

	Age					
HDL cholesterol (mmol/L)	*20-24*	*25-29*	*30-34*	*35-39*	*40-69*	*All ages*
				(Number)		
Women						
Less than 0.50	-	-	-	2	-	2
0.50-0.99	7	13	12	4	2	38
1.00-1.49	101	91	72	42	35	341
1.50-1.99	54	88	54	25	35	256
2.00-2.49	6	6	5	9	9	35
2.50 or more	-	2	-	-	-	2
Not stated	-	3	3	1	1	8
Total	**168**	**203**	**146**	**83**	**82**	**682**
				(mmol/L)		
Mean	1.40	1.46	1.42	1.45	1.54	1.44
5th centile	1.00	0.96	0.91	0.89	1.01	0.97
Median	1.39	1.47	1.39	1.40	1.50	1.40
95th centile	1.90	1.95	1.94	2.20	2.10	2.00
Standard error of mean	0.02	0.02	0.03	0.04	0.04	0.01

HDL cholesterol
Women fasting, now taking the oral contraceptive pill

6.3.12 ESTIMATES, AGE

	Age					
HDL cholesterol (mmol/L)	*20-24*	*25-29*	*30-34*	*35-39*	*40-69*	*All ages*
				(Per cent)		
Women						
Less than 0.50	-	-	-	0.6	-	0.1
0.50-0.99	2.8	5.2	7.4	2.3	0.5	4.2
1.00-1.49	67.9	49.5	46.4	52.6	40.6	54.0
1.50-1.99	25.9	41.6	41.7	34.1	44.5	36.4
2.00-2.49	3.4	1.9	2.6	9.7	13.7	4.2
2.50 or more	-	1.6	-	-	-	0.5
Not stated	-	0.3	1.9	0.7	0.7	0.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
				(mmol/L)		
Mean	1.39	1.45	1.43	1.51	1.57	1.44
5th centile	1.03	0.99	0.90	1.00	1.10	1.00
Median	1.31	1.40	1.36	1.40	1.51	1.40
95th centile	1.82	1.90	1.90	2.20	2.10	2.00
Standard error of mean	0.02	0.03	0.02	0.04	0.03	0.01

Plasma triglyceride
Men fasting

6.3.13 OBSERVED FREQUENCIES, AGE

Plasma triglyceride (mmol/L)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Less than 0.50	18	13	13	5	8	3	3	2	2	1	68
0.50-0.99	161	184	183	189	161	114	88	65	69	60	1,274
1.00-1.49	99	113	146	144	160	115	106	121	118	105	1,227
1.50-1.99	37	54	58	78	94	83	72	62	68	60	666
2.00-2.49	12	20	30	43	52	48	32	37	45	24	343
2.50-2.99	4	13	8	23	28	24	17	17	16	19	169
3.00-4.99	-	15	8	29	44	28	34	18	34	12	222
5.00 or more	-	1	-	13	10	8	7	4	3	4	50
Not stated	3	6	2	2	3	3	1	2	6	2	30
Total	**334**	**419**	**448**	**526**	**560**	**426**	**360**	**328**	**361**	**287**	**4,049**
						(mmol/L)					
Mean	1.04	1.23	1.19	1.62	1.61	1.65	1.75	1.60	1.69	1.55	1.50
5th centile	0.48	0.50	0.51	0.60	0.55	0.62	0.60	0.69	0.69	0.69	0.60
Median	0.92	1.00	1.03	1.20	1.30	1.38	1.40	1.35	1.40	1.32	1.20
95th centile	1.99	2.73	2.29	3.57	3.70	3.50	4.20	3.19	3.91	3.10	3.30
Standard error of mean	0.03	0.04	0.03	0.10	0.05	0.05	0.08	0.05	0.05	0.05	0.02

Plasma triglyceride
Men fasting

6.3.14 ESTIMATES, AGE

Plasma triglyceride (mmol/L)	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Less than 0.50	3.7	3.8	2.9	1.1	1.0	0.6	1.5	0.2	0.1	0.7	1.9
0.50-0.99	49.7	43.2	41.4	37.5	32.0	30.9	24.4	20.3	17.9	21.4	34.7
1.00-1.49	27.6	24.1	31.1	26.5	29.0	24.0	26.5	36.2	34.8	34.8	28.7
1.50-1.99	13.0	16.7	13.5	17.8	17.5	19.4	21.0	18.4	17.3	23.7	17.2
2.00-2.49	3.3	4.7	8.7	6.8	7.2	12.1	10.5	13.9	13.9	8.9	8.2
2.50-2.99	0.5	2.3	1.1	3.7	3.7	6.0	3.6	5.3	4.2	5.2	3.2
3.00-4.99	-	3.1	1.0	3.7	7.2	5.2	9.9	4.2	8.3	4.4	4.2
5.00 or more	-	0.1	-	2.4	2.3	0.9	2.3	0.8	0.7	0.6	1.0
Not stated	2.3	2.0	0.3	0.6	0.2	0.9	0.1	0.6	2.8	0.2	1.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(mmol/L)					
Mean	1.04	1.22	1.18	1.49	1.56	1.54	1.77	1.58	1.67	1.52	1.41
5th centile	0.50	0.50	0.50	0.60	0.60	0.60	0.60	0.72	0.70	0.63	0.58
Median	0.95	1.00	1.03	1.11	1.20	1.29	1.40	1.39	1.40	1.33	1.17
95th centile	1.99	2.60	2.20	3.27	3.70	3.10	4.14	3.00	3.78	3.10	3.02
Standard error of mean	0.03	0.04	0.03	0.06	0.04	0.04	0.07	0.05	0.04	0.04	0.02

Plasma triglyceride
Women fasting, not now taking the oral contraceptive pill

6.3.15 OBSERVED FREQUENCIES, AGE

	Age										
Plasma triglyceride (mmol/L)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Women											
Less than 0.50	11	19	27	24	16	10	5	1	1	-	114
0.50-0.99	61	111	178	266	274	162	85	52	42	11	1,242
1.00-1.49	12	33	54	94	98	93	76	47	30	22	559
1.50-1.99	11	12	15	28	41	39	28	20	23	4	221
2.00-2.49	4	8	6	5	9	11	18	23	11	7	102
2.50-2.99	-	2	2	6	5	1	5	3	6	2	32
3.00-4.99	1	3	4	4	5	3	5	4	4	6	39
5.00 or more	-	-	-	-	-	-	1	-	1	-	2
Not stated	2	-	1	12	5	10	2	3	2	-	37
Total	**102**	**188**	**287**	**439**	**453**	**329**	**225**	**153**	**120**	**52**	**2,348**
						(mmol/L)					
Mean	0.91	0.94	0.90	0.93	0.99	1.08	1.28	1.35	1.43	1.67	1.06
5th centile	0.41	0.41	0.41	0.47	0.50	0.50	0.59	0.60	0.60	0.72	0.50
Median	0.70	0.75	0.79	0.80	0.81	0.93	1.10	1.16	1.20	1.33	0.90
95th centile	1.99	2.10	1.93	1.81	1.85	1.96	2.62	2.45	2.92	4.13	2.24
Standard error of mean	0.05	0.04	0.03	0.02	0.03	0.03	0.05	0.05	0.07	0.13	0.01

Plasma triglyceride
Women fasting, not now taking the oral contraceptive pill

6.3.16 ESTIMATES, AGE

	Age										
Plasma triglyceride (mmol/L)	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Women											
Less than 0.50	15.7	10.3	11.2	6.7	5.1	6.3	1.7	1.1	1.9	-	7.2
0.50-0.99	57.5	52.9	62.1	62.4	60.8	46.9	39.3	40.7	31.4	20.6	53.5
1.00-1.49	13.8	18.5	16.6	19.0	21.6	32.4	34.9	30.4	25.4	46.2	23.0
1.50-1.99	9.8	7.3	5.1	4.9	8.1	10.4	10.6	9.9	23.9	7.2	8.4
2.00-2.49	1.9	7.5	2.8	0.5	1.5	2.3	9.9	13.6	11.1	10.3	4.3
2.50-2.99	-	0.1	0.4	2.2	0.8	0.0	1.4	1.2	2.7	3.5	1.0
3.00-4.99	0.2	3.2	1.1	1.2	0.5	0.3	1.3	2.7	0.7	12.1	1.4
5.00 or more	-	-	-	-	-	-	0.7	-	1.4	-	0.1
Not stated	1.1	-	0.6	3.1	1.7	1.5	0.3	0.4	1.4	-	1.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(mmol/L)					
Mean	0.84	1.04	0.88	0.92	0.93	1.03	1.27	1.27	1.39	1.66	1.02
5th centile	0.40	0.43	0.40	0.45	0.48	0.48	0.60	0.55	0.60	0.61	0.46
Median	0.70	0.80	0.73	0.80	0.80	0.93	1.10	1.09	1.11	1.31	0.83
95th centile	1.66	2.10	1.94	1.89	1.70	1.85	2.40	2.34	2.44	4.55	2.10
Standard error of mean	0.06	0.05	0.03	0.02	0.02	0.02	0.05	0.05	0.06	0.13	0.01

Plasma triglyceride
Women fasting, now taking the oral contraceptive pill

6.3.17 OBSERVED FREQUENCIES, AGE

Plasma triglyceride (mmol/L)	*Age*					*All ages*
	20-24	*25-29*	*30-34*	*35-39*	*40-69*	
				(Number)		
Women						
Less than 0.50	2	6	5	3	-	16
0.50-0.99	82	104	62	34	32	314
1.00-1.49	67	68	57	31	30	253
1.50-1.99	12	17	14	9	13	65
2.00-2.49	4	4	2	3	5	18
2.50-2.99	1	1	3	1	1	7
3.00-4.99	-	-	-	1	-	1
Not stated	-	3	3	1	1	8
Total	**168**	**203**	**146**	**83**	**82**	**682**
				(mmol/L)		
Mean	1.04	1.01	1.07	1.10	1.16	1.06
5th centile	0.53	0.50	0.50	0.50	0.58	0.50
Median	1.00	0.93	1.00	1.02	1.06	1.00
95th centile	1.72	1.80	1.82	2.03	2.22	1.84
Standard error of mean	0.03	0.03	0.04	0.06	0.05	0.02

Plasma triglyceride
Women fasting, now taking the oral contraceptive pill

6.3.18 ESTIMATES, AGE

Plasma triglyceride (mmol/L)	*Age*					*All ages*
	20-24	*25-29*	*30-34*	*35-39*	*40-69*	
				(Per cent)		
Women						
Less than 0.50	0.3	1.9	2.6	2.1	-	1.4
0.50-0.99	51.7	55.9	48.1	35.5	41.5	49.9
1.00-1.49	41.8	32.5	33.2	31.1	38.8	35.7
1.50-1.99	4.3	8.0	12.2	27.6	13.6	10.3
2.00-2.49	1.8	1.1	0.4	2.1	4.9	1.6
2.50-2.99	0.0	0.2	1.5	0.8	0.6	0.5
3.00-4.99	-	-	-	0.1	-	0.0
Not stated	-	0.3	1.9	0.7	0.7	0.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
				(mmol/L)		
Mean	1.01	0.98	1.02	1.14	1.12	1.02
5th centile	0.54	0.50	0.50	0.50	0.63	0.50
Median	0.99	0.90	0.98	1.10	1.03	0.99
95th centile	1.64	1.60	1.61	1.60	1.80	1.64
Standard error of mean	0.03	0.03	0.03	0.05	0.04	0.02

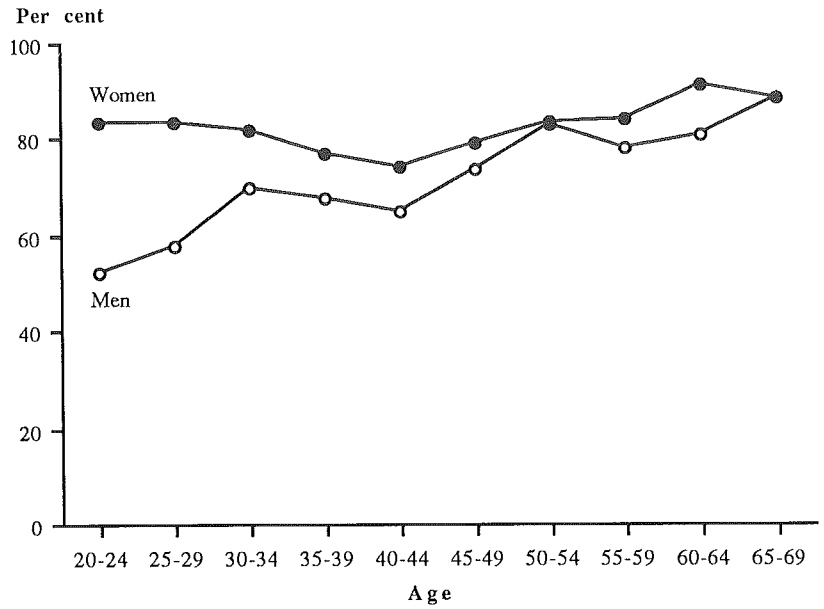
6.4 History of medical measurements, conditions and treatment

Comments

When blood pressure last measured

- Overall, 32% of men and 42% of women reporting having had their blood pressure measured in the three months before to the survey. About 70% of men and 80% of women had their blood pressure measured within the previous 12 months.
- Younger women were more likely than men of the same age to have had their blood pressure measured within the previous three months.
- Only a small percentage of men and women over 30 years of age had never had their blood pressure measured.

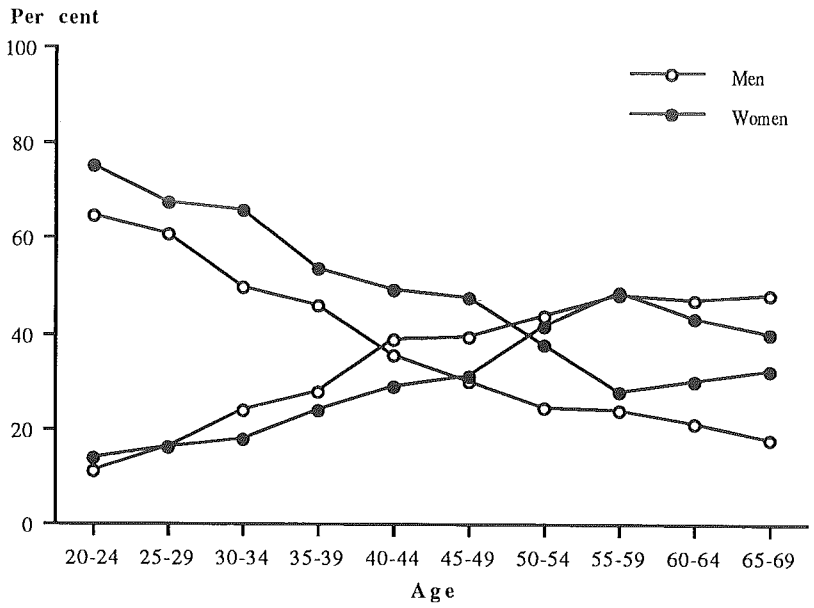
Blood pressure measured within last year



When blood cholesterol last measured

- 31% of men and 27% of women reporting having had their blood cholesterol measured within the previous 12 months. This figure was over 40% for men and women older than 50 years.
- 53% of women and 42% of men had never had their blood cholesterol measured.

When blood cholesterol last measured



Reported conditions and treatment

High blood pressure (see also Section 6.1)

- 17% of men and 20% of women reported having been told they had high blood pressure. This proportion ranged from 13-14% at age 30-40 to 36% of men and 48% of women aged 65-69.
- 8% of men and women reported being 'on tablets for blood pressure'. Among women the proportion increased progressively from less than 1% in the younger age groups to 36% in those aged 65-69. For men, there was a similar progressive increase to 30% in the oldest age group.

Angina

- A little less than 3% of men and 2% of women said they had been told they had angina. About 1% of men and women said they were on tablets or other treatment for angina.

Heart attack

- Over twice as many men (2.4%) as women (1.1%) said they had been told that they had suffered a heart attack. The proportion was 10% in the oldest age group for men and 6% for women of the same age.

Stroke

- Overall, less than 1% of men and women reporting having been told they had suffered a stroke, women being less likely to have had a stroke than men. The proportion was 5% in men aged 65-69 and 4% in women of the same age.

High cholesterol and triglycerides (see also Section 6.3)

- Over 15% of men and 12% of women reporting having been told they had high cholesterol, the prevalence being greatest at age 55-59 for both men (29%) and women (32%).
- Over twice as many men (6.6%) as women (2.6%) reported being told they had high triglycerides.
- More men (3.3%) than women (2.2%) reported having treatment to lower blood fat.

Diabetes

Approximately 1 in 50 men and women had been told by a doctor or nurse that they had diabetes (2.1% and 1.5% respectively). More people reported having been given advice or treatment for diabetes or sugar trouble (2.3% and 2.1% respectively).

Q.9 When did you last have your blood pressure measured?

6.4.1 OBSERVED FREQUENCIES, AGE, SEX

	Age										
When blood pressure measured	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
In the last three months	68	119	140	167	197	156	156	148	187	192	1,530
In the last six months	41	80	82	88	96	110	87	76	67	46	773
In the last year	87	90	113	134	137	89	81	63	72	38	904
In the last three years	68	85	85	113	114	72	49	47	48	27	708
More than three years ago	35	45	49	57	42	40	19	24	16	11	338
Never measured	38	20	13	6	6	2	2	1	2	1	91
Don't know	49	45	30	23	22	13	7	8	6	5	208
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
In the last three months	156	209	214	204	216	184	194	180	183	207	1,947
In the last six months	77	109	109	121	121	90	80	51	82	47	887
In the last year	77	116	118	149	153	108	80	74	80	45	1,000
In the last three years	49	50	81	79	88	72	40	41	21	23	544
More than three years ago	9	15	17	57	42	27	18	14	18	18	235
Never measured	10	3	2	3	1	-	-	1	-	-	20
Don't know	14	6	14	16	18	9	7	6	2	2	94
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.9 When did you last have your blood pressure measured?

6.4.2 ESTIMATES, AGE, SEX

	Age										
When blood pressure measured	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
In the last three months	18.6	20.1	29.1	28.8	32.4	37.6	39.8	40.6	45.3	59.9	32.0
In the last six months	10.1	18.2	17.8	13.1	14.2	21.2	22.3	18.7	20.0	15.4	16.6
In the last year	23.3	19.4	23.1	25.8	18.0	15.1	20.8	18.6	15.6	12.9	20.1
In the last three years	15.6	18.5	16.5	17.6	19.4	12.4	12.6	15.2	13.4	6.7	15.7
More than three years ago	10.3	8.8	6.9	9.4	9.0	10.1	3.7	4.5	4.3	3.5	7.7
Never measured	9.3	3.6	2.6	1.6	2.2	0.8	0.2	0.0	0.3	0.6	2.6
Don't know	12.7	11.4	4.0	3.5	4.8	2.8	0.6	2.4	1.2	1.1	5.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
In the last three months	44.7	37.6	40.8	32.0	35.3	41.8	44.4	50.7	52.8	58.7	42.0
In the last six months	19.7	22.6	22.7	19.2	17.6	17.5	19.7	15.1	18.9	14.5	19.3
In the last year	19.2	23.2	18.6	25.7	21.4	19.8	19.3	18.1	19.5	15.1	20.6
In the last three years	10.7	10.6	13.8	12.8	14.3	13.8	10.1	7.8	4.1	5.1	11.0
More than three years ago	1.9	4.2	1.3	7.2	8.2	5.3	5.5	5.7	4.3	6.0	4.8
Never measured	1.2	0.5	0.6	0.2	0.2	-	-	0.5	-	-	0.4
Don't know	2.7	1.4	2.3	2.8	2.9	1.9	1.0	2.2	0.4	0.5	2.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Q.10 When did you last have your blood cholesterol measured?

6.4.3 OBSERVED FREQUENCIES, AGE, SEX

	Age										
When blood cholesterol measured	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
In the last three months	14	23	35	40	63	50	41	54	45	52	417
In the last six months	10	18	34	35	54	57	52	49	58	40	407
In the last year	19	33	59	92	101	75	80	62	75	52	648
In the last three years	17	31	56	91	101	72	73	43	45	36	565
More than three years ago	5	18	18	29	43	37	25	30	35	30	270
Never measured	253	298	264	260	210	157	96	95	99	72	1,804
Don't know	68	63	46	41	42	33	34	34	41	37	439
Not stated	-	-	-	-	-	1	-	-	-	1	2
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
In the last three months	17	26	32	35	54	39	61	50	44	43	401
In the last six months	12	24	22	35	45	47	44	50	44	37	360
In the last year	20	33	54	68	98	63	70	68	71	56	601
In the last three years	18	31	43	77	89	69	58	47	51	35	518
More than three years ago	3	8	17	32	28	26	25	24	29	29	221
Never measured	284	352	353	348	302	228	150	108	124	117	2,366
Don't know	38	34	34	34	23	18	11	20	23	25	260
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.10 When did you last have your blood cholesterol measured?

6.4.4 ESTIMATES, AGE, SEX

	Age										
When blood cholesterol measured	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
In the last three months	4.4	4.0	6.1	8.0	12.8	14.8	12.2	17.3	13.4	16.9	9.8
In the last six months	1.7	4.6	8.2	4.6	8.3	10.1	13.4	13.6	16.7	13.2	8.2
In the last year	5.2	7.2	9.3	15.3	17.4	14.6	18.0	17.4	16.6	17.9	12.9
In the last three years	5.2	5.6	10.7	14.4	13.9	14.5	18.4	13.9	14.4	14.2	11.7
More than three years ago	1.1	3.5	4.5	6.1	7.6	8.9	5.8	6.3	7.1	10.5	5.6
Never measured	64.6	60.9	49.7	45.9	35.2	29.6	24.1	23.8	20.8	17.9	41.7
Don't know	17.8	14.1	11.5	5.8	4.9	7.4	8.1	7.6	11.0	9.4	10.1
Not stated	-	-	-	-	-	0.0	-	-	-	0.1	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
In the last three months	5.7	5.8	4.7	7.5	9.6	8.1	12.4	15.8	12.5	12.1	8.6
In the last six months	2.4	4.9	4.8	5.3	6.6	9.7	12.7	14.5	10.2	11.8	7.3
In the last year	5.6	5.4	8.3	11.0	12.7	12.9	16.3	18.1	20.5	16.0	11.4
In the last three years	2.2	7.8	7.3	10.4	12.8	12.7	12.3	11.4	11.7	11.5	9.4
More than three years ago	0.5	3.4	2.1	5.0	5.2	5.9	6.1	5.6	8.5	8.0	4.5
Never measured	74.9	67.6	65.8	53.5	49.0	47.7	37.4	27.8	30.1	32.2	52.8
Don't know	8.9	5.2	6.9	7.2	4.1	3.0	2.8	6.8	6.5	8.4	6.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Medical conditions (a)

6.4.5 OBSERVED FREQUENCIES, AGE, SEX

Medical condition	Age										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
High blood pressure											
No	366	440	445	503	505	380	303	251	269	203	3,665
Yes	20	44	67	85	109	102	98	116	129	117	887
Angina											
No	386	482	511	587	609	471	383	338	350	281	4,398
Yes	-	2	1	1	5	11	18	29	48	39	154
Heart attack											
No	386	483	511	585	607	472	385	340	357	283	4,409
Yes	-	1	1	3	7	10	16	27	41	37	143
Stroke											
No	386	483	512	586	612	481	398	358	385	298	4,499
Yes	-	1	-	2	2	1	3	9	13	22	53
High cholesterol											
No	379	462	472	509	495	379	299	269	301	256	3,821
Yes	7	22	40	79	119	103	102	98	97	64	731
High triglycerides											
No	384	478	500	552	561	443	353	325	350	291	4,237
Yes	2	6	12	36	53	39	48	41	48	29	314
Not stated	-	-	-	-	-	-	-	1	-	-	1
Diabetes											
No	384	483	507	585	612	468	388	358	371	295	4,451
Yes	2	1	5	3	2	14	13	9	26	25	100
Not stated	-	-	-	-	-	-	-	-	1	-	1
Women											
High blood pressure											
No	367	453	479	541	536	394	291	239	246	171	3,717
Yes	25	55	76	88	103	96	128	128	140	171	1,010
Angina											
No	392	507	553	625	632	489	413	357	368	306	4,642
Yes	-	1	2	4	7	1	6	10	18	36	85
Heart attack											
No	391	508	554	628	634	489	413	361	371	321	4,670
Yes	1	-	1	1	5	1	6	6	14	21	56
Not stated	-	-	-	-	-	-	-	-	1	-	1
Stroke											
No	392	507	555	629	636	489	415	366	378	329	4,696
Yes	-	1	-	-	3	1	4	1	8	13	31
High cholesterol											
No	380	482	522	593	573	429	351	251	275	252	4,108
Yes	12	26	33	36	66	61	68	116	111	90	619
High triglycerides											
No	390	503	549	621	627	475	398	344	358	320	4,585
Yes	2	5	6	8	12	15	21	23	28	22	142
Diabetes											
No	391	507	546	621	635	486	412	359	367	331	4,655
Yes	1	1	9	8	4	4	7	8	19	11	72

(a) Q.11 Have you ever been told that you have any of the following? (High blood pressure to high triglycerides)
Q.15 Has a doctor or nurse ever told you that you had diabetes?

Medical conditions (a)

6.4.6 ESTIMATES, AGE, SEX

Medical condition	Age										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
High blood pressure											
No	94.9	93.7	87.1	84.4	85.0	79.0	77.8	67.9	67.6	64.0	83.0
Yes	5.1	6.3	12.9	15.6	15.0	21.0	22.2	32.1	32.4	36.0	17.0
Angina											
No	100.0	99.6	99.8	99.8	99.3	97.3	94.9	92.6	87.3	87.6	97.1
Yes	-	0.4	0.2	0.2	0.7	2.7	5.1	7.4	12.7	12.4	2.9
Heart attack											
No	100.0	100.0	99.4	99.9	98.9	97.1	97.4	93.5	89.9	89.6	97.6
Yes	-	0.0	0.6	0.1	1.1	2.9	2.6	6.5	10.1	10.4	2.4
Stroke											
No	100.0	99.8	100.0	99.9	99.9	100.0	98.7	97.5	97.2	94.7	99.2
Yes	-	0.2	-	0.1	0.1	0.0	1.3	2.5	2.8	5.3	0.8
High cholesterol											
No	97.3	95.0	91.0	87.7	78.8	76.9	74.2	70.8	74.3	78.9	84.7
Yes	2.7	5.0	9.0	12.3	21.2	23.1	25.8	29.2	25.7	21.1	15.3
High triglycerides											
No	99.2	99.6	97.3	94.0	90.5	92.0	86.1	86.8	87.1	89.2	93.4
Yes	0.8	0.4	2.7	6.0	9.5	8.0	13.9	13.1	12.9	10.8	6.6
Not stated	-	-	-	-	-	-	-	0.1	-	-	0.0
Diabetes											
No	99.9	100.0	99.2	99.7	99.2	95.3	97.1	96.1	92.8	92.3	97.9
Yes	0.1	0.0	0.8	0.3	0.8	4.7	2.9	3.9	7.0	7.7	2.1
Not stated	-	-	-	-	-	-	-	-	0.1	-	0.0
Women											
High blood pressure											
No	93.9	89.2	86.0	84.5	85.3	80.7	68.0	66.6	62.0	52.5	80.3
Yes	6.1	10.8	14.0	15.5	14.7	19.3	32.0	33.4	38.0	47.5	19.7
Angina											
No	100.0	100.0	99.8	98.5	99.1	99.7	98.2	97.6	94.1	88.3	98.2
Yes	-	0.0	0.2	1.5	0.9	0.3	1.8	2.4	5.9	11.7	1.8
Heart attack											
No	99.9	100.0	99.8	99.7	99.0	100.0	98.8	98.4	95.6	94.1	98.9
Yes	0.1	-	0.2	0.3	1.0	0.0	1.2	1.6	4.1	5.9	1.1
Not stated	-	-	-	-	-	-	-	-	0.3	-	0.0
Stroke											
No	100.0	99.9	100.0	100.0	99.5	99.9	99.2	99.4	98.1	96.4	99.5
Yes	-	0.1	-	-	0.5	0.1	0.8	0.6	1.9	3.6	0.5
High cholesterol											
No	96.1	95.1	93.8	94.5	91.5	90.4	84.0	67.6	69.7	71.2	88.2
Yes	3.9	4.9	6.2	5.5	8.5	9.6	16.0	32.4	30.3	28.8	11.8
High triglycerides											
No	99.9	99.2	99.4	98.5	99.0	97.5	95.0	91.6	93.6	92.9	97.4
Yes	0.1	0.8	0.6	1.5	1.0	2.5	5.0	8.4	6.4	7.1	2.6
Diabetes											
No	99.6	100.0	97.5	99.1	99.1	98.8	98.5	97.8	94.4	98.1	98.5
Yes	0.4	0.0	2.5	0.9	0.9	1.2	1.5	2.2	5.6	1.9	1.5

(a) Q.11 Have you ever been told that you have any of the following? (High blood pressure to high triglycerides)
Q.15 Has a doctor or nurse ever told you that you had diabetes?

Medical treatments (a)

6.4.7 OBSERVED FREQUENCIES, AGE, SEX

Medical treatment	Age										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Blood pressure											
No	384	481	507	571	580	448	342	300	310	229	4,152
Yes	2	3	5	17	34	34	59	67	88	91	400
Blood fat											
No	386	483	506	578	602	468	377	348	376	290	4,414
Yes	-	1	6	10	12	14	24	19	22	30	138
Angina											
No	386	483	512	587	612	476	391	352	366	297	4,462
Yes	-	1	-	1	2	6	10	15	32	23	90
Diabetes											
No	384	481	506	583	606	469	385	358	373	293	4,438
Yes	2	3	6	5	8	13	16	9	24	27	113
Not stated	-	-	-	-	-	-	-	-	1	-	1
Women											
Blood pressure											
No	391	506	549	622	611	448	354	291	276	213	4,261
Yes	1	2	6	7	28	42	65	76	110	129	466
Blood fat											
No	392	507	554	626	634	486	405	346	360	312	4,622
Yes	-	1	1	3	5	4	14	21	26	30	105
Angina											
No	391	508	554	628	636	490	416	361	374	322	4,680
Yes	1	-	1	1	3	-	3	6	12	20	47
Diabetes											
No	386	505	542	616	633	481	412	354	362	332	4,623
Yes	6	3	13	13	6	9	7	13	24	10	104

(a) Q.12 Are you on tablets for blood pressure?
Q.13 Are you having treatment to lower your blood fat?
Q.14 Are you on tablets or other treatment for angina?
Q.17 Have you ever been given advice or treatment for diabetes or sugar trouble?

Medical treatments (a)

6.4.8 ESTIMATES, AGE, SEX

Medical treatment	Age										All ages
	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	
	(Per cent)										
Men											
Blood pressure											
No	99.2	99.5	99.2	96.4	93.4	93.9	86.4	79.7	75.2	69.7	92.1
Yes	0.8	0.5	0.8	3.6	6.6	6.1	13.6	20.3	24.8	30.3	7.9
Blood fat											
No	100.0	99.8	97.0	97.9	97.4	95.4	93.7	93.4	94.0	89.4	96.7
Yes	-	0.2	3.0	2.1	2.6	4.6	6.3	6.6	6.0	10.6	3.3
Angina											
No	100.0	99.8	100.0	99.8	99.9	99.4	97.4	96.2	92.0	94.4	98.6
Yes	-	0.2	-	0.2	0.1	0.6	2.6	3.8	8.0	5.6	1.4
Diabetes											
No	99.2	99.8	99.1	99.3	98.6	96.0	96.7	96.2	93.5	91.7	97.7
Yes	0.8	0.2	0.9	0.7	1.4	4.0	3.3	3.8	6.4	8.3	2.3
Not stated	-	-	-	-	-	-	-	-	0.1	-	0.0
Women											
Blood pressure											
No	99.7	99.7	98.8	99.1	95.5	91.7	84.2	79.5	70.9	64.5	91.6
Yes	0.3	0.3	1.2	0.9	4.5	8.3	15.8	20.5	29.1	35.5	8.4
Blood fat											
No	100.0	100.0	99.9	99.2	99.4	98.9	96.9	93.8	91.4	88.8	97.8
Yes	-	0.0	0.1	0.8	0.6	1.1	3.1	6.2	8.6	11.2	2.2
Angina											
No	99.9	100.0	99.9	100.0	99.4	100.0	99.1	98.5	96.8	93.0	99.1
Yes	0.1	-	0.1	0.0	0.6	-	0.9	1.5	3.2	7.0	0.9
Diabetes											
No	98.2	99.7	97.1	98.4	98.6	98.4	98.2	96.3	93.4	98.2	97.9
Yes	1.8	0.3	2.9	1.6	1.4	1.6	1.8	3.7	6.6	1.8	2.1

(a) Q.12 Are you on tablets for blood pressure?
Q.13 Are you having treatment to lower your blood fat?
Q.14 Are you on tablets or other treatment for angina?
Q.17 Have you ever been given advice or treatment for diabetes or sugar trouble?

6.5 Alcohol intake

Comments

Use of alcohol

- Overall, 87% of men and 75% of women said they drank alcohol. The proportion of non-drinkers was higher in the older age groups.

Frequency of drinking alcohol

- 62% of all men drank alcohol once a week or more often. Occasional drinking (1-4 days a week) was more common in younger men, about 50% in those aged 20-29 and 21% in those aged 65-69. Regular drinking (5 days or more a week) was more common in older men, being over 30% in those older than 45 and only 5% in those aged 20-25.
- About 40% of all women drank alcohol once a week or more often. Occasional drinking was more common among younger women. Regular drinking was more common in older women (around 20%) than younger women (less than 2% at age 20-24).

Amount of alcohol consumed

- Among drinkers, about 78% of men and 92% of women said they usually drink 1-4 drinks on a day when they did drink. About 18% of men and 6% of women drinkers usually had 5-8 drinks on a day when they drank. About 5% of men and 1 in 200 women usually had 9 drinks or more on a drinking day.

Heavy drinking

- Younger people tended to drink more heavily when they drank even though they were likely to drink less often than older groups. Thus, 12% of male drinkers aged 20-24 said they drank 9 drinks or more on a drinking day compared with about 3% of men older than 45.
- This pattern of drinking among younger drinkers was even more marked in women, although at all ages they drank considerably less than men. 20% of women drinkers aged 20-24 drank 5 drinks or more on a drinking day, compared with around 2% of women older than 50.

The risks of alcohol consumption

Data from the frequency and quantity questions have been combined to classify alcohol consumption. This classification can be expressed as a scale ranging from 'no risk' to 'very high risk', as shown in the tables which follow. Risk relates to harm from a wide variety of possible causes, not only heart disease. It is accepted that with identical drinking patterns, risks are greater for women than for men. In fact, because of particular risks associated with pregnancy, it has been assumed that there is no risk free level of drinking in women.

For men:

- 80% were non-drinkers or no risk drinkers;
- 14% were low risk drinkers;
- 5% were intermediate risk drinkers;

- 1% were high or very high risk drinkers; and
- there was little variation in this pattern across ages.

For women:

- 25% were non-drinkers and 71% were low risk drinkers;
- 4% were intermediate risk drinkers;
- less than 1% were high or very high risk drinkers; and
- in those aged 50-69 there were more non-drinkers and correspondingly less low risk drinkers than in younger age groups.

Definition of the risks of alcohol consumption

Risk levels have been assigned to categories as follows.

		Risk	
Category	*Description*	*Men*	*Women*
A	Non-drinkers		
B	Average daily intake of less than 3 drinks	None	Low
C	Average daily intake of 4 drinks or 9-12 drinks in any day	Low	Intermediate
D	Average daily intake of 5-8 drinks or occasional excess	Intermediate	High
E	Average daily intake of 9-12 drinks or frequent or great occasional excessive intake	High	Very high
F	Average daily intake of over 12 drinks	Very high	Very high

The categories of risk have been defined from Q33 and Q34 as follows.

Q33 Frequency of drinking (per week)	*Q34 Amount (number of drinks)*					
	1-2	*3-4*	*5-8*	*9-12*	*13-20*	*>20*
Less than once a week	B	B	B	C	D	E
1 or 2 days	B	B	B	C	D	E
3 or 4 days	B	B	C	D	E	F
5 or 6 days	B	C	D	E	F	F
Every day	B	C	D	E	F	F

Q.33 How often do you usually drink alcohol?

6.5.1 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Usual frequency	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
I don't drink alcohol	49	38	52	65	58	57	61	65	79	59	583
Less than once a week	115	151	125	146	125	105	84	68	69	76	1,064
On 1 or 2 days a week	144	167	133	134	154	105	82	62	67	45	1,093
On 3 or 4 days a week	54	91	103	109	115	65	48	55	46	31	717
On 5 or 6 days a week	21	24	64	65	73	53	47	37	48	28	460
Every day	3	13	35	69	89	97	79	80	89	81	635
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
I don't drink alcohol	73	99	114	131	152	119	139	127	120	129	1,203
Less than once a week	176	246	234	227	210	149	129	105	105	101	1,682
On 1 or 2 days a week	116	97	114	121	109	79	55	47	52	35	825
On 3 or 4 days a week	21	45	56	83	71	51	33	25	29	16	430
On 5 or 6 days a week	2	17	24	40	47	27	20	15	15	16	223
Every day	4	4	13	27	50	65	43	48	65	45	364
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.33 How often do you usually drink alcohol?

6.5.2 ESTIMATES, AGE, SEX

	Age										
Usual frequency	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
I don't drink alcohol	15.9	8.0	11.0	12.0	8.7	11.5	12.9	17.8	19.2	16.9	12.6
Less than once a week	28.7	35.9	27.2	23.5	21.1	24.7	21.4	20.6	17.2	27.2	25.7
On 1 or 2 days a week	37.0	33.4	25.5	25.2	21.6	19.2	19.5	14.4	15.1	13.4	24.4
On3 or 4 days a week	13.5	16.4	21.1	15.8	20.6	12.9	12.9	14.0	10.2	7.3	15.4
On5 or 6 days a week	4.4	3.9	10.6	12.8	11.3	11.6	12.8	8.7	12.5	8.4	9.3
Every day	0.6	2.4	4.6	10.8	16.6	20.1	20.5	24.5	25.8	26.8	12.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
I don't drink alcohol	20.2	18.5	24.0	22.1	23.3	21.9	32.8	32.7	33.1	33.5	24.7
Less than once a week	41.3	51.9	35.2	32.4	30.1	29.5	31.5	25.4	24.0	32.5	35.0
On 1 or 2 days a week	31.4	18.3	22.3	21.9	20.2	17.3	12.1	15.7	13.5	7.7	19.5
On 3 or 4 days a week	5.4	6.8	11.3	13.6	9.6	11.2	7.1	6.2	8.6	6.5	8.9
On 5 or 6 days a week	0.5	3.6	5.1	5.7	8.0	5.3	5.9	4.6	3.4	5.2	4.7
Every day	1.1	0.9	2.1	4.2	8.8	14.8	10.5	15.4	17.5	14.6	7.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Q.34 On a day when you drink alcohol, how many drinks do you usually have?

6.5.3 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Usual intake	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
I don't drink alcohol	49	38	52	65	58	57	61	65	79	59	583
1 or 2 drinks	91	162	158	208	244	187	160	137	145	151	1,643
3 or 4 drinks	122	168	186	198	185	144	115	106	113	60	1,397
5 to 8 drinks	80	86	95	87	100	78	53	47	53	40	719
9 to 12 drinks	28	24	17	24	22	12	8	8	5	8	156
13 to 20 drinks	12	3	1	4	4	3	2	4	2	2	37
More than 20 drinks	3	1	3	2	1	-	1	-	-	-	11
Not stated	1	2	-	-	-	1	1	-	1	-	6
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
I don't drink alcohol	73	99	114	131	152	119	139	127	120	129	1,203
1 or 2 drinks	128	235	305	347	360	274	223	189	205	176	2,442
3 or 4 drinks	120	126	102	123	114	79	49	42	53	34	842
5 to 8 drinks	65	39	31	25	8	18	7	9	5	3	210
9 to 12 drinks	5	6	2	1	1	-	-	-	1	-	16
13 to 20 drinks	1	1	-	-	1	-	-	-	1	-	4
More than 20 drinks	-	-	-	-	-	-	-	-	-	-	-
Not stated	-	2	1	2	3	-	1	-	1	-	10
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.34 On a day when you drink alcohol, how many drinks do you usually have?

6.5.4 ESTIMATES, AGE, SEX

	Age										
Usual intake	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
I don't drink alcohol	15.9	8.0	11.0	12.0	8.7	11.5	12.9	17.8	19.2	16.9	12.6
1 or 2 drinks	22.9	35.8	34.0	37.9	44.9	42.2	41.0	39.1	38.9	49.9	37.5
3 or 4 drinks	33.1	35.3	39.1	31.4	27.6	26.3	31.1	27.8	30.1	17.8	31.1
5 to 8 drinks	17.7	15.9	13.5	15.1	13.8	15.1	12.7	12.4	10.9	12.6	14.4
9 to 12 drinks	8.0	4.0	1.7	2.7	3.9	3.6	1.7	2.1	0.5	2.6	3.4
13 to 20 drinks	2.0	0.7	0.5	0.8	0.9	0.7	0.2	0.8	0.3	0.3	0.8
More than 20 drinks	0.3	0.0	0.1	0.2	0.2	-	0.0	-	-	-	0.1
Not stated	0.2	0.2	-	-	-	0.6	0.4	-	0.0	-	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
I don't drink alcohol	20.2	18.5	24.0	22.1	23.3	21.9	32.8	32.7	33.1	33.5	24.7
1 or 2 drinks	36.2	48.9	52.8	52.5	55.1	57.0	53.2	54.0	49.8	56.5	50.9
3 or 4 drinks	28.6	24.6	17.1	19.4	19.6	14.8	12.3	10.8	14.8	8.8	18.5
5 to 8 drinks	14.2	7.0	5.6	5.1	1.5	6.3	1.4	2.4	1.7	1.2	5.3
9 to 12 drinks	0.3	0.3	0.1	0.0	0.1	-	-	-	0.0	-	0.1
13 to 20 drinks	0.4	0.3	-	-	0.1	-	-	-	0.1	-	0.1
Not stated	-	0.3	0.4	0.8	0.4	-	0.2	-	0.5	-	0.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Alcohol index

6.5.5 OBSERVED FREQUENCIES, AGE, SEX

Alcohol index	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Non-drinkers	49	38	52	65	58	57	61	65	79	59	583
No-risk drinkers	263	372	352	394	410	306	244	210	212	194	2,957
Low risk drinkers	46	53	75	84	98	68	58	60	63	39	644
Intermediate drinkers	18	14	28	38	35	41	31	24	40	20	289
High risk drinkers	9	5	3	5	12	8	4	6	3	7	62
Very high risk drinkers	-	-	2	2	1	1	2	2	-	1	11
Not stated	1	2	-	-	-	1	1	-	1	-	6
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Non-drinkers	73	99	114	131	152	119	139	127	120	129	1,203
Low risk drinkers	304	388	420	473	457	342	258	223	237	195	3,297
Intermediate drinkers	11	17	18	19	26	22	17	14	25	15	184
High risk drinkers	4	2	2	4	-	7	4	3	1	3	30
Very high risk drinkers	-	-	-	-	1	-	-	-	2	-	3
Not stated	-	2	1	2	3	-	1	-	1	-	10
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Alcohol index

6.5.6 ESTIMATES, AGE, SEX

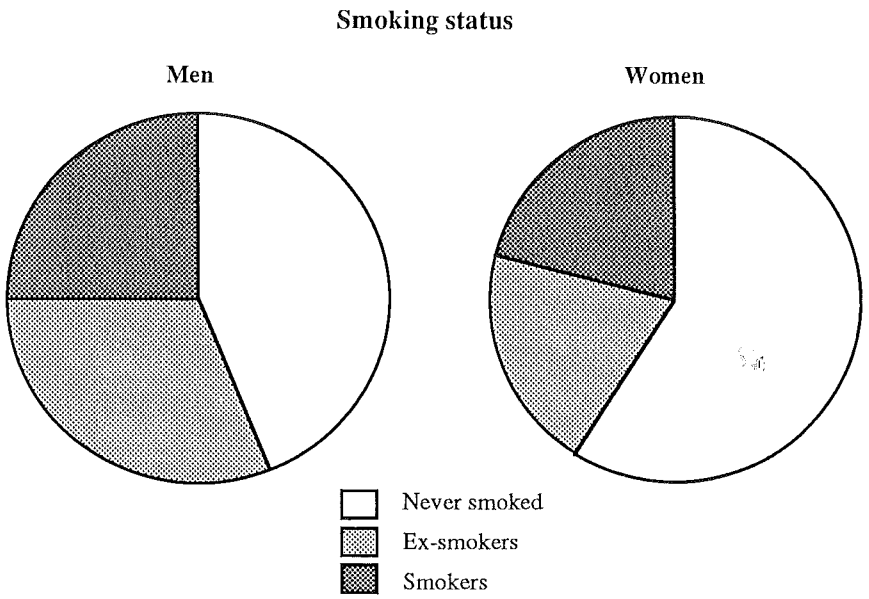
Alcohol index	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Non-drinkers	15.9	8.0	11.0	12.0	8.7	11.5	12.9	17.8	19.2	16.9	12.6
No-risk drinkers	65.5	79.0	73.5	68.6	68.0	62.7	61.4	56.9	54.2	62.0	67.1
Low risk drinkers	14.8	9.5	12.2	11.7	14.9	14.1	18.2	16.0	18.3	12.6	13.7
Intermediate drinkers	2.3	2.4	3.0	6.9	6.1	9.0	6.1	7.7	7.8	6.4	5.3
High risk drinkers	1.3	0.9	0.1	0.3	2.2	1.6	1.0	0.9	0.4	1.9	1.0
Very high risk drinkers	-	-	0.1	0.5	0.0	0.6	0.0	0.7	-	0.2	0.2
Not stated	0.2	0.2	-	-	-	0.6	0.4	-	0.0	-	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
Non-drinkers	20.2	18.5	24.0	22.1	23.3	21.9	32.8	32.7	33.1	33.5	24.7
Low risk drinkers	77.3	77.6	71.9	74.6	72.1	71.8	61.6	63.2	58.9	60.9	70.8
Intermediate drinkers	1.9	3.3	3.7	1.6	4.1	5.4	4.8	3.2	6.8	4.4	3.6
High risk drinkers	0.6	0.3	0.0	0.9	-	0.9	0.6	0.9	0.6	1.2	0.5
Very high risk drinkers	-	-	-	-	0.1	-	-	-	0.1	-	0.0
Not stated	-	0.3	0.4	0.8	0.4	-	0.2	-	0.5	-	0.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

6.6 Smoking behaviour

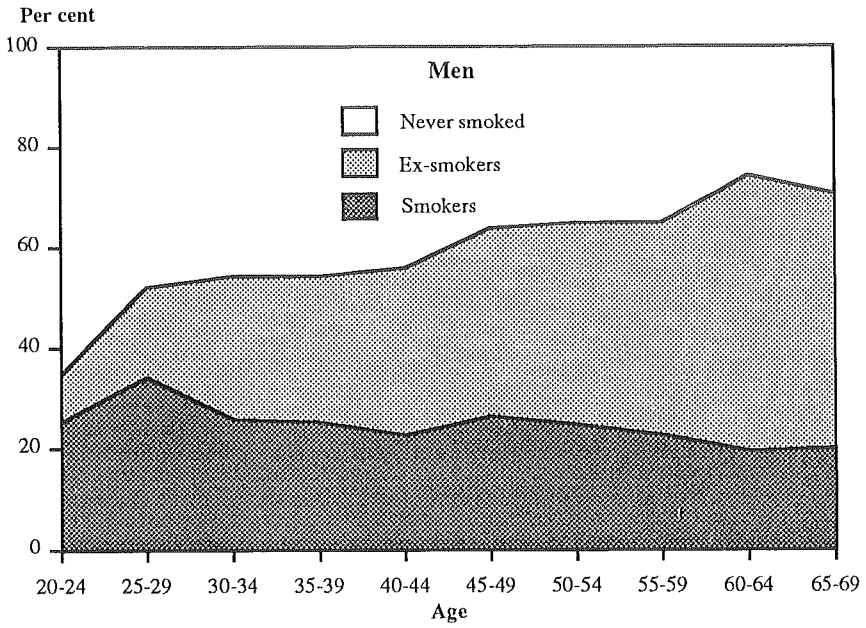
Comments

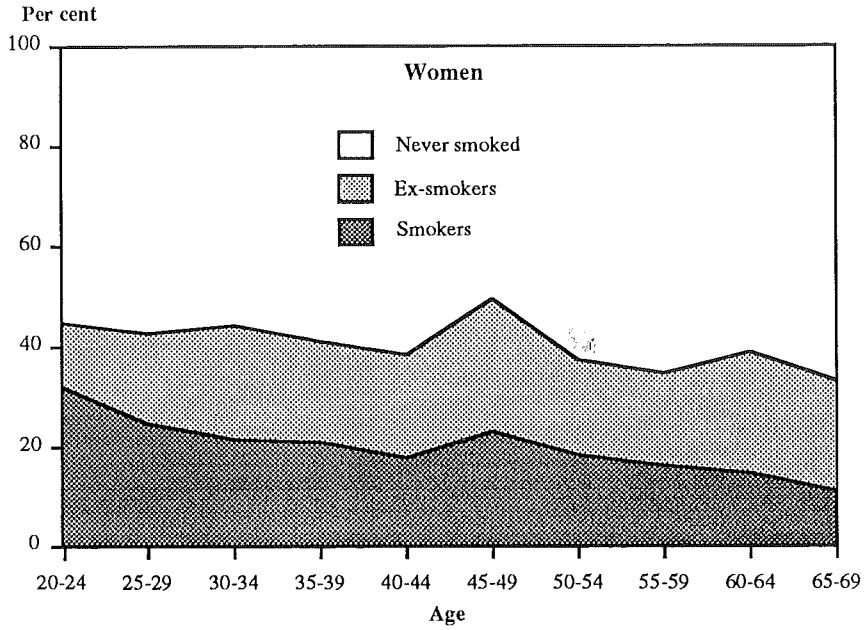
Smoking status

- About 1 in 4 men (24%) said they were current cigarette smokers. Prevalence was greatest among men aged 25-29 (34%) and lowest among men older than 60 (17%).
- The pattern of smoking changed dramatically with age. In the youngest age group 65% of men said they had never smoked regularly and 9% said they had stopped smoking. In age group 60-64, 26% said they had never smoked regularly and 55% were ex-smokers. Overall, almost 3 in 4 men (74%) had either never smoked regularly or had stopped smoking.
- 55% of men who had smoked regularly said they were now ex-smokers. The prevalence of ex-smokers increased with age to over 70% at age 60-69.
- About 1 in 5 women (21%) said they were current cigarette smokers. Cigarette smoking was much more prevalent among younger women (32%) than older women (11%).
- In the youngest age group, 68% of women said they had never smoked or had stopped smoking. In the oldest age group this proportion was 89%. Overall, 4 in 5 women (79%) had either never smoked regularly or had stopped smoking.
- Of women who had smoked regularly, almost half (48%) said they had stopped. The proportion increased with age to around over 60% at the older age groups.



Smoking status



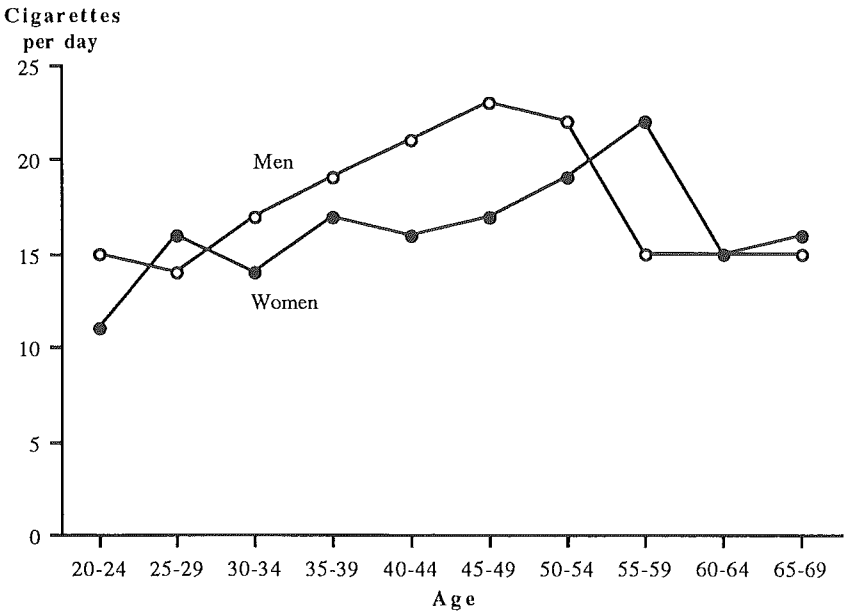


Cigarette consumption

Of those who smoked manufactured cigarettes:

- 74% of men and 63% of women smoked more than 10 cigarettes daily.
- Average daily consumption for men was 18 cigarettes and for women 15 cigarettes. Consumption was higher among men aged 40-54 and women aged 50-59.

Cigarette consumption (smokers)



Smoking status (a)

6.6.1 OBSERVED FREQUENCIES, AGE, SEX

Smoking status	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Cigarette smoker (b) (c)	110	159	142	159	172	117	100	80	79	64	1,182
Cigar and/or pipe only	1	1	4	9	4	6	6	9	7	5	52
Ex-smokers	36	91	142	162	186	168	147	168	212	164	1,476
Never smoked regularly	239	232	224	258	252	189	148	110	100	87	1,839
Not stated	-	1	-	-	-	2	-	-	-	-	3
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Cigarette smoker (b) (d)	116	146	129	131	120	108	77	57	64	46	994
Cigar and/or pipe only	1	-	1	-	1	-	-	-	-	-	3
Ex-smokers	55	84	113	133	131	117	78	57	88	78	934
Never smoked regularly	220	278	311	365	387	265	264	253	234	218	2,795
Not stated	-	-	1	-	-	-	-	-	-	-	1
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

(a) Q.26 Have you ever smoked cigarettes, cigars or a pipe regularly?
Q.28 Have you given up smoking?
Q.30 If you currently smoke, how many—manufactured cigarettes a day, grams "hand rolled" cigarette tobacco per week, cigars per week, grams pipe tobacco per week?
(b) May also smoke cigars or pipes.
(c) Includes 4 men who smoke "hand-rolled" but not manufactured cigarettes.
(d) Includes 7 women who smoke "hand-rolled" but not manufactured cigarettes.

Smoking status (a)

6.6.2 ESTIMATES, AGE, SEX

Smoking status	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Cigarette smoker (b) (c)	25.3	33.9	24.9	23.4	21.6	24.5	22.7	21.2	16.6	17.4	24.2
Cigar and/or pipe only	0.1	0.1	0.9	2.1	1.1	1.5	2.2	1.4	2.7	2.6	1.3
Ex-smokers	9.5	18.0	28.3	28.9	33.3	37.4	39.9	42.3	55.1	50.5	30.8
Never smoked regularly	65.1	48.0	45.9	45.6	44.0	36.3	35.3	35.1	25.6	29.6	43.6
Not stated	-	0.0	-	-	-	0.3	-	-	-	-	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
Cigarette smoker (b) (d)	31.6	24.7	21.8	20.9	17.8	23.2	18.6	16.4	14.9	11.2	21.2
Cigar and/or pipe only	0.4	-	0.0	-	0.2	-	-	-	-	-	0.1
Ex-smokers	12.5	17.9	22.4	20.1	20.4	26.2	19.0	18.1	23.8	22.2	19.8
Never smoked regularly	55.5	57.5	55.6	59.0	61.6	50.6	62.4	65.5	61.3	66.6	58.9
Not stated	-	-	0.1	-	-	-	-	-	-	-	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Q.26 Have you ever smoked cigarettes, cigars or a pipe regularly?
Q.28 Have you given up smoking?
Q.30 If you currently smoke, how many— manufactured cigarettes a day, grams "hand rolled" cigarette tobacco per week, cigars per week, grams pipe tobacco per week?

(b) May also smoke cigars or pipes.

(c) Includes 4 men who smoke "hand-rolled" but not manufactured cigarettes.

(d) Includes7 women who smoke "hand-rolled" but not manufactured cigarettes.

Daily consumption of manufactured cigarettes by current smokers

6.6.3 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Manufactured cigarettes a day	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
1-10	35	53	36	28	25	18	16	15	17	14	257
11-20	50	65	53	54	59	37	27	25	25	28	423
21-40	23	35	37	57	64	50	42	28	26	14	376
41 or more	1	-	4	7	13	3	7	2	3	2	42
Total	**109**	**153**	**130**	**146**	**161**	**108**	**92**	**70**	**71**	**58**	**1,098**
						(Cigarettes)					
Mean	16	15	17	19	22	20	21	16	17	17	18
Standard error of mean	0.9	0.7	1.0	1.0	1.1	1.3	1.6	1.3	1.6	1.8	0.4
						(Number)					
Women											
1-10	58	52	52	37	34	33	17	15	25	13	336
11-20	45	65	42	52	56	36	32	24	28	25	405
21-40	13	26	33	40	27	37	26	14	11	7	234
41 or more	-	2	1	1	1	2	1	4	-	-	12
Total	**116**	**145**	**128**	**130**	**118**	**108**	**76**	**57**	**64**	**45**	**987**
						(Cigarettes)					
Mean	13	16	16	18	17	18	20	19	15	16	17
Standard error of mean	0.7	0.8	0.9	0.9	0.9	1.0	1.4	1.7	1.0	1.3	0.3

(a) Daily consumption of manufactured cigarettes by current smokers

6.6.4 ESTIMATES, AGE, SEX

	Age										
Manufactured cigarettes a day	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
1-10	38.4	34.6	25.7	24.9	14.2	15.8	12.7	26.4	28.8	21.6	26.2
11-20	44.0	51.3	46.4	30.1	34.2	32.3	37.5	34.6	37.0	48.5	41.0
21-40	17.5	14.2	25.0	35.8	45.4	46.0	41.2	36.2	32.2	27.8	29.2
41 or more	0.1	-	2.8	9.3	6.3	5.9	8.6	2.8	2.0	2.1	3.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(Cigarettes)					
Weighted mean	15	14	17	19	21	23	22	15	15	15	18
Standard error of mean	0.9	0.7	0.9	1.2	0.9	1.6	1.4	1.2	1.1	1.2	0.4
						(Per cent)					
Women											
1-10	55.3	33.5	47.9	31.4	26.1	31.3	22.8	24.3	42.5	27.6	37.4
11-20	36.5	49.4	32.6	40.4	53.3	38.8	46.1	33.1	34.8	48.4	41.2
21-40	8.3	17.0	19.2	28.1	20.6	29.2	30.9	29.4	22.7	24.0	20.6
41 or more	-	0.1	0.4	0.0	0.0	0.7	0.2	13.2	-	-	0.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
						(Cigarettes)					
Weighted mean	11	16	14	17	16	17	19	22	15	16	15
Standard error of mean	0.8	0.8	0.8	0.8	0.7	0.9	1.1	1.9	0.8	1.1	0.3

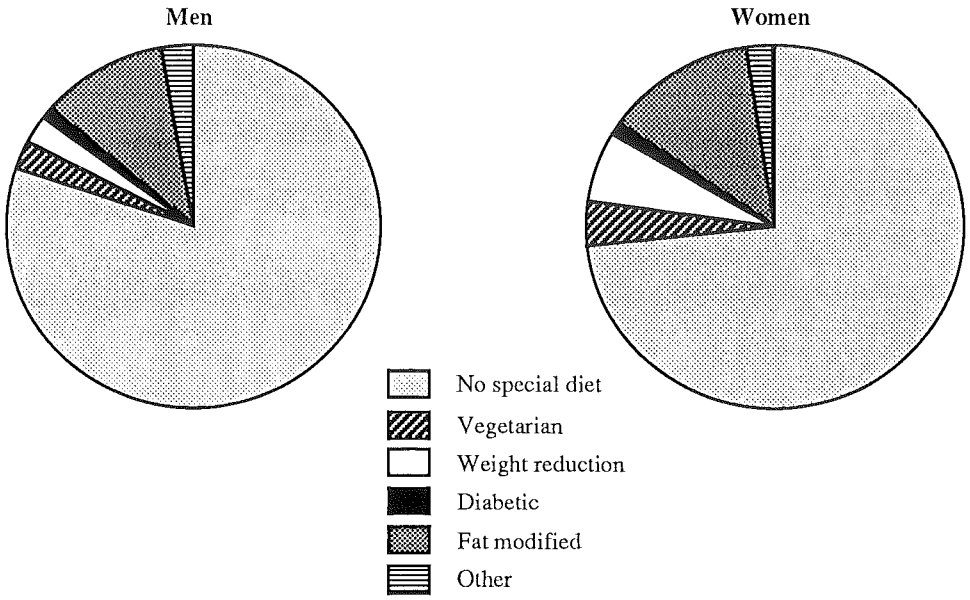
6.7 Dietary behaviour

Comments

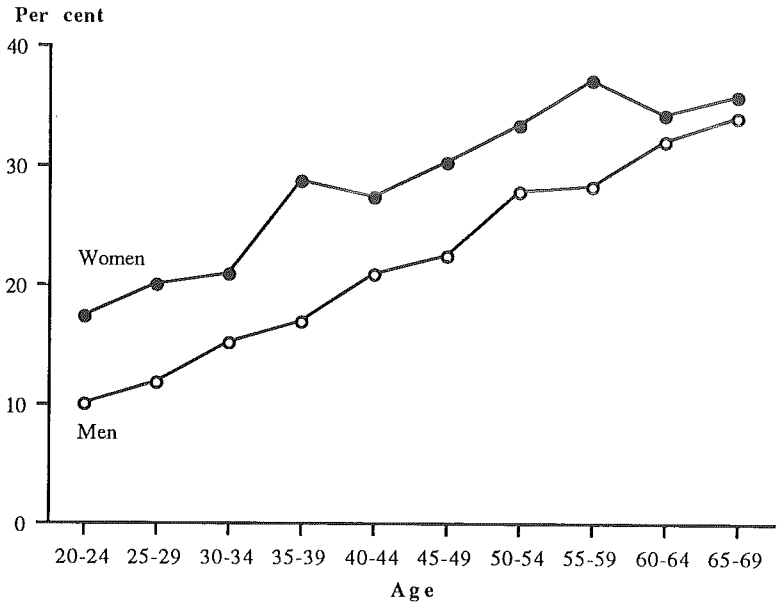
Usual way of eating

- 20% of men and 27% of women followed some kind of special diet.
- A fat-modified diet to lower blood fat was reported by 11% of men and almost 13% of women. In both sexes the prevalence of this diet increased with age, being around 20% for men and 23% for women at older ages.
- A weight reduction diet was reported by a little over 6% of women and 2% of men. The prevalence increased with age for men but not for women.

Usual way of eating



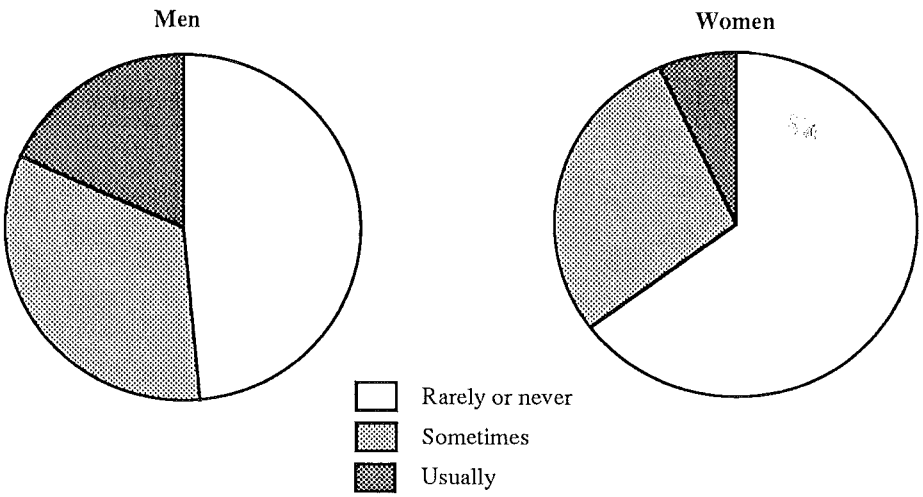
Proportion following some kind of special diet



Eating fat on meat

- Men were more likely than women to eat the fat on meat. Overall, 18% of men and 7% of women usually ate the fat on meat while 49% of men and 65% of women did this rarely or never. This pattern was fairly constant across the ages.

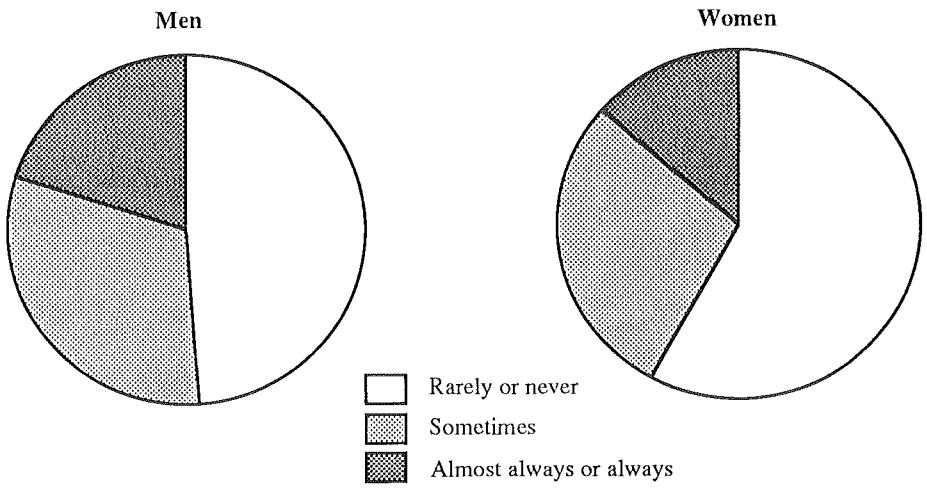
Proportion eating the fat on meat



Use of salt

- At all ages, women were less likely than men to add salt to their food. Overall, 58% of women rarely or never added salt to their food compared with 49% of men.
- Younger men were less likely to add salt to their food after it was cooked than older men. For example, around 14% of men aged 20-29 almost always added salt to their food after it was cooked compared with almost 30% of men aged 60-69.

Proportion adding salt to food after cooking



Q.36 Which of the following best describes your usual way of eating?

6.7.1 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Usual way of eating	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
No special diet	357	435	452	504	504	384	299	274	277	222	3,708
Vegetarian	9	8	9	11	13	4	4	8	7	6	79
Weight reduction diet	4	9	7	7	17	12	12	10	15	10	103
Diabetic diet	1	1	3	2	1	9	4	1	12	18	52
Fat modified diet	6	21	25	49	56	65	75	64	80	60	501
Other	9	10	16	15	23	8	7	9	7	3	107
Not stated	-	-	-	-	-	-	-	1	-	1	2
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
No special diet	319	426	453	472	469	359	289	223	245	209	3,464
Vegetarian	13	20	21	18	18	13	12	14	10	11	150
Weight reduction diet	30	26	26	53	51	31	27	24	17	22	307
Diabetic diet	2	2	3	-	7	5	3	6	17	6	51
Fat modified diet	16	20	38	69	77	69	79	92	90	86	636
Other	12	14	14	17	17	13	8	8	7	7	117
Not stated	-	-	-	-	-	-	1	-	-	1	2
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.36 Which of the following best describes your usual way of eating?

6.7.2 ESTIMATES, AGE, SEX

Usual way of eating	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
No special diet	90.0	88.2	84.8	83.2	79.0	77.6	72.2	71.7	68.0	65.9	80.3
Vegetarian	4.4	1.8	2.6	3.2	2.6	0.9	1.8	3.2	2.3	2.1	2.6
Weight reduction diet	1.3	1.8	2.5	1.2	3.8	1.3	3.8	2.1	4.3	4.7	2.4
Diabetic diet	0.0	0.0	0.2	0.3	0.1	3.4	1.0	0.5	3.8	6.2	1.1
Fat modified diet	2.2	5.2	6.0	9.0	10.3	14.9	19.9	19.4	19.6	20.4	10.8
Other	2.1	3.0	3.9	3.2	4.1	1.8	1.4	2.3	2.1	0.6	2.7
Not stated	-	-	-	-	-	-	-	0.9	-	0.0	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
No special diet	82.6	80.1	79.1	71.4	72.6	69.8	66.7	62.8	65.7	64.2	73.2
Vegetarian	3.6	4.7	5.1	5.4	3.1	3.9	3.8	3.4	2.4	2.7	4.0
Weight reduction diet	6.1	6.9	4.7	7.1	9.0	7.5	5.9	5.3	4.0	7.1	6.5
Diabetic diet	1.4	0.1	0.7	-	1.6	1.2	0.1	2.1	4.1	1.0	1.1
Fat modified diet	3.7	4.3	8.3	13.2	11.5	14.9	21.5	25.2	21.1	23.6	12.7
Other	2.6	4.0	2.0	2.9	2.2	2.7	1.9	1.1	2.6	1.2	2.5
Not stated	-	-	-	-	-	-	0.2	-	-	0.1	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Q.37 How often do you eat the fat on meat?

6.7.3 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Eating fat on meat	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Usually	66	85	99	108	114	91	80	68	61	64	836
Sometimes	128	167	174	217	221	177	111	116	120	74	1,505
Rarely or never	192	232	239	263	279	214	210	183	217	182	2,211
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Usually	16	36	37	53	52	35	35	25	21	23	333
Sometimes	101	141	153	201	194	153	123	105	95	71	1,337
Rarely or never	275	331	365	375	393	302	261	237	270	248	3,057
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.37 How often do you eat the fat on meat?

6.7.4 ESTIMATES, AGE, SEX

	Age										
Eating fat on meat	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Usually	17.1	17.6	19.3	18.4	18.6	18.9	20.0	18.5	15.3	20.0	18.4
Sometimes	33.2	34.5	34.0	36.9	36.0	36.7	27.7	31.6	30.2	23.1	33.1
Rarely or never	49.7	47.9	46.7	44.7	45.4	44.4	52.4	49.9	54.5	56.9	48.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
Usually	4.1	7.1	6.7	8.4	8.1	7.1	8.4	6.8	5.4	6.7	7.0
Sometimes	25.8	27.8	27.6	32.0	30.4	31.2	29.4	28.6	24.6	20.8	28.3
Rarely or never	70.2	65.2	65.8	59.6	61.5	61.6	62.3	64.6	69.9	72.5	64.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Q.35 Do you add salt to your food after it is cooked?

6.7.5 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Use of salt	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Rarely or never	185	254	274	295	304	213	179	164	160	127	2,155
Sometimes	141	157	141	172	189	156	109	115	121	98	1,399
Almost always or always	60	73	97	121	121	113	113	88	117	95	998
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Rarely or never	249	304	321	376	367	266	232	183	207	185	2,690
Sometimes	104	131	162	170	186	138	119	120	125	105	1,360
Almost always or always	39	73	72	82	85	86	68	63	54	52	674
Not stated	-	-	-	1	1	-	-	1	-	-	3
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.35 Do you add salt to your food after it is cooked?

6.7.6 ESTIMATES, AGE, SEX

	Age										
Use of salt	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Rarely or never	46.3	56.5	53.2	52.2	51.2	44.1	44.6	45.6	42.8	39.9	49.0
Sometimes	36.9	32.1	27.1	29.0	29.1	35.1	29.9	32.3	28.3	32.1	31.2
Almost always or always	16.8	11.4	19.7	18.8	19.6	20.8	25.5	22.2	28.9	28.1	19.8
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
Rarely ornever	66.0	60.2	58.2	62.8	58.2	57.1	54.1	45.9	54.0	49.2	58.0
Sometimes	26.1	26.2	28.1	24.0	29.1	27.2	31.0	34.5	31.1	32.1	28.2
Almost always or always	8.0	13.7	13.7	13.0	12.6	15.7	14.9	19.5	14.9	18.7	13.8
Not stated	-	-	-	0.2	0.0	-	-	0.2	-	-	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

6.8 Oral contraceptive use

Comments

Ever use

Oral contraceptives were introduced in Australia in 1960. Table 6.8.2 shows 'ever use' of contraceptives by age group.

- About 86% of women aged 25-39 had taken oral contraceptives at some time and this proportion decreased with age to 33% of women aged 60-64.

Duration of use

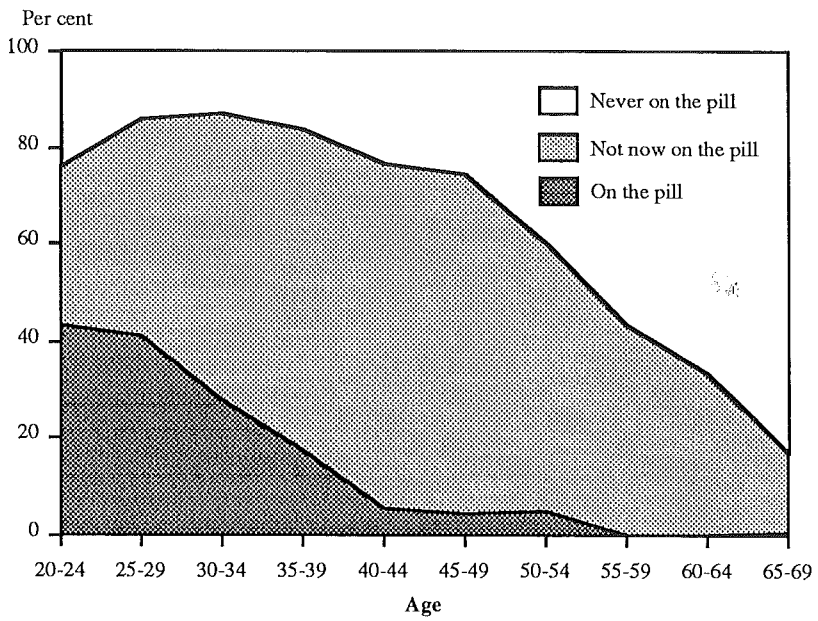
- Of women who had ever taken the oral contraceptive pill, 45% had done so for longer than 5 years altogether and 12% had taken it for less than 6 months.

Current use

- Of women aged 20-24 who had taken the oral contraceptive pill at some time, 56% were current users. The proportion of current users decreased with age.

These figures are expressed as a proportion of all women. The denominator includes those who were pregnant, those who were sexually inactive and those who had had sterilisation operations. It also includes women whose sexual partners were practising contraception in one form or another or had had a sterilisation operation. None of this information was sought in the questionnaire apart from a question on pregnancy.

Proportion of women using the oral contraceptive pill



Q.18 Have you ever taken the oral contraceptive pill?

6.8.1 OBSERVED FREQUENCIES, AGE

	Age										
Ever use	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Women											
Yes	308	456	495	565	527	382	266	172	138	60	3,369
No	84	52	58	60	112	99	143	188	246	275	1,317
Not stated	-	-	2	4	-	9	10	7	2	7	41
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.18 Have you ever taken the oral contraceptive pill?

6.8.2 ESTIMATES, AGE

	Age										
Ever use	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Women											
Yes	76.4	85.7	87.0	85.6	76.8	74.5	60.5	43.2	33.4	17.6	69.9
No	23.6	14.3	12.5	13.5	23.2	24.5	37.5	54.6	65.9	80.7	29.3
Not stated	-	-	0.5	0.9	-	1.0	2.0	2.2	0.7	1.7	0.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Q.19 For how long altogether have you taken the oral contraceptive pill?

6.8.3 OBSERVED FREQUENCIES, AGE

	Age										
Duration of use	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Women											
Less than 6 months	35	38	24	45	45	38	28	29	25	15	322
Between 6 months and 2 years	80	71	60	88	107	74	61	33	25	10	609
Between 2 and 5 years	130	90	125	129	142	85	53	30	27	17	828
Between 5 and 10 years	62	206	162	159	137	104	52	37	26	9	954
Longer than10 years	-	49	124	138	94	80	72	42	34	8	641
Not stated	1	2	2	10	2	10	10	8	3	8	56
Total	**308**	**456**	**497**	**569**	**527**	**391**	**276**	**179**	**140**	**67**	**3,410**

Q.19 For how long altogether have you taken the oral contraceptive pill?

6.8.4 ESTIMATES, AGE

	Age										
Duration of use	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Women											
Less than 6 months	17.4	12.3	4.6	9.8	10.0	11.3	11.3	16.7	23.8	20.2	11.7
Between 6 months and 2 years	31.3	16.9	11.6	14.0	21.0	16.8	20.5	15.7	16.8	19.5	18.3
Between 2 and 5 years	34.5	18.9	28.3	21.3	24.9	19.3	15.9	17.5	21.1	21.6	23.5
Between 5 and 10 years	16.5	41.9	33.1	26.9	25.6	30.4	19.8	19.1	15.3	14.1	27.7
Longer than10 years	-	9.9	21.9	24.7	17.9	20.9	29.4	25.9	20.2	14.5	17.2
Not stated	0.4	0.2	0.6	3.3	0.4	1.3	3.1	5.1	2.7	10.0	1.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Q.20 Are you now taking the oral contraceptive pill?

6.8.5 OBSERVED FREQUENCIES, AGE

	Age										
Current use	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Women											
Yes	194	228	165	96	38	25	20	2	2	2	772
No	113	226	330	464	487	357	245	169	135	56	2,582
Not stated	1	2	2	9	2	9	11	8	3	9	56
Total	**308**	**456**	**497**	**569**	**527**	**391**	**276**	**179**	**140**	**67**	**3,410**

Q.20 Are you now taking the oral contraceptive pill?

6.8.6 ESTIMATES, AGE

	Age										
Current use	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Women											
Yes	56.4	48.0	31.9	20.0	7.4	5.4	7.9	0.4	0.4	3.2	26.1
No	43.2	51.8	67.6	76.7	92.2	93.3	88.4	94.5	96.8	84.0	72.3
Not stated	0.4	0.2	0.6	3.3	0.4	1.3	3.7	5.1	2.7	12.9	1.7
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Q.21 Are you now pregnant?

6.8.7 OBSERVED FREQUENCIES, AGE

	Age										
Now pregnant	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Women											
Yes	11	29	34	17	2	1	1	-	1	-	96
No	381	478	519	608	635	489	418	367	385	342	4,622
Not stated	-	1	2	4	2	-	-	-	-	-	9
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.21 Are you now pregnant?

6.8.8 ESTIMATES, AGE

	Age										
Now pregnant	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Women											
Yes	2.9	7.2	7.9	2.9	0.2	0.1	0.2	-	0.3	-	2.8
No	97.1	92.2	91.6	96.2	99.7	99.9	99.8	100.0	99.7	100.0	96.9
Not stated	-	0.6	0.5	0.9	0.1	-	-	-	-	-	0.3
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

6.9 Exercise for recreation, sport or health-fitness

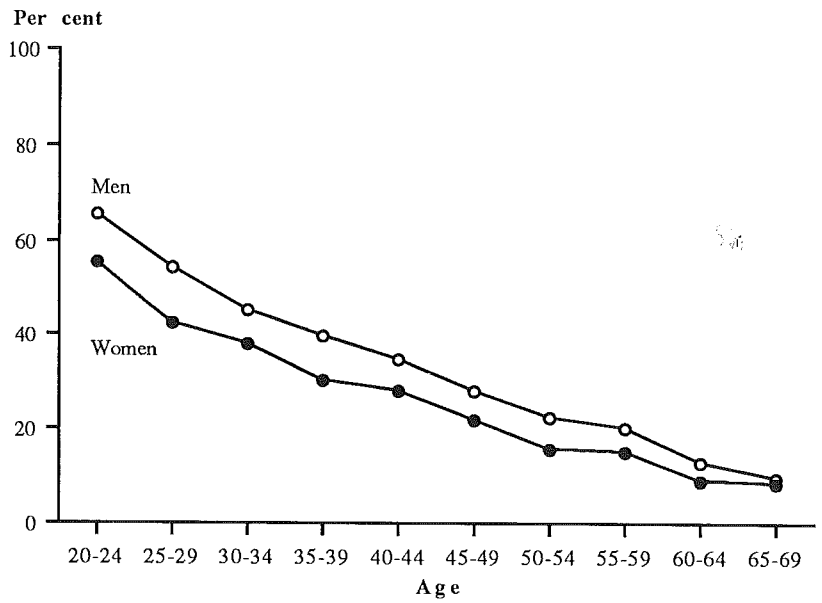
Comments

The comments below relate to exercise for recreation, sport or health-fitness purposes. Vigorous activity at work and around the house is not taken into account.

Vigorous exercise during leisure time

- 38% of men and 30% of women said they had engaged in vigorous exercise during the preceding fortnight for sport, recreation or health fitness purposes. Conversely, 35% of men aged 20-24 years did not engage in any vigorous exercise during the previous fortnight; this increased to 90% for those aged 65-69. The corresponding figures for women were 45% and 91% respectively.
- In both sexes, the prevalence of vigorous exercise decreased progressively and sharply with age. In both men and women, the proportion taking vigorous leisure exercise in the youngest group was almost 7 times as high as that in the oldest group.
- Across all ages, 6% of men and 4% of women took an average of 3 or more sessions of vigorous exercise per week at an average of 20 minutes or more per session. This is the level of exercise commonly believed to confer a 'training effect' on the heart and lungs. The prevalence of this level of exercise also decreased with age for both sexes from 11% in men aged 20-24 to 2% aged 65-69; and from 8% women aged 20-24 to 2% aged 65-69; and from 8% women aged 20-24 to less than 1% aged 65-69.

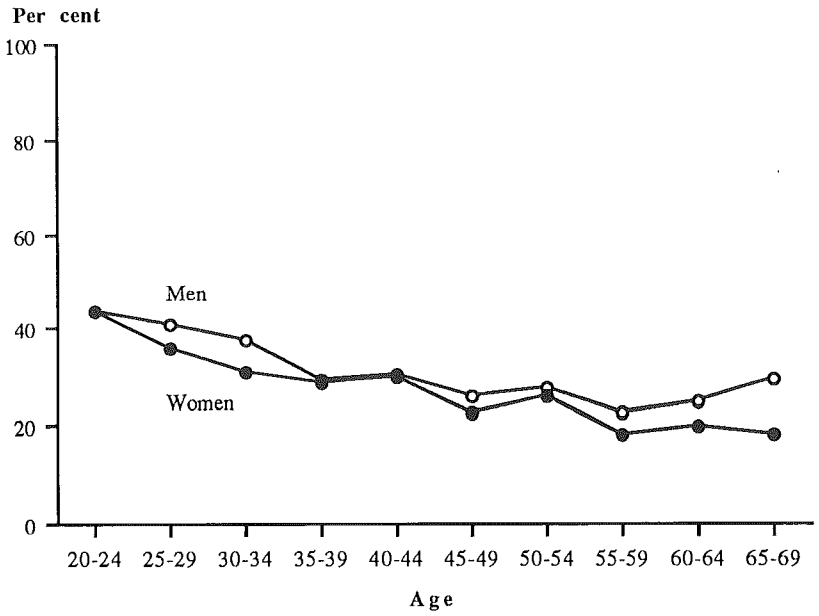
Proportion engaged in vigorous exercise during leisure time



Less-vigorous exercise during leisure time

- 33% of men and 29% of women said they had engaged in less-vigorous exercise during the preceding fortnight for sport, recreation or health fitness purposes (less-vigorous exercise is that which does not result in harder breathing or puffing and panting).
- As with vigorous exercise, there is a trend with age for proportionately fewer men and women to take part in less-vigorous exercise. However, the decline in the proportion taking exercise from the youngest to the oldest age groups was much less marked than for vigorous exercise.

Proportion engaged in less vigorous exercise during leisure time



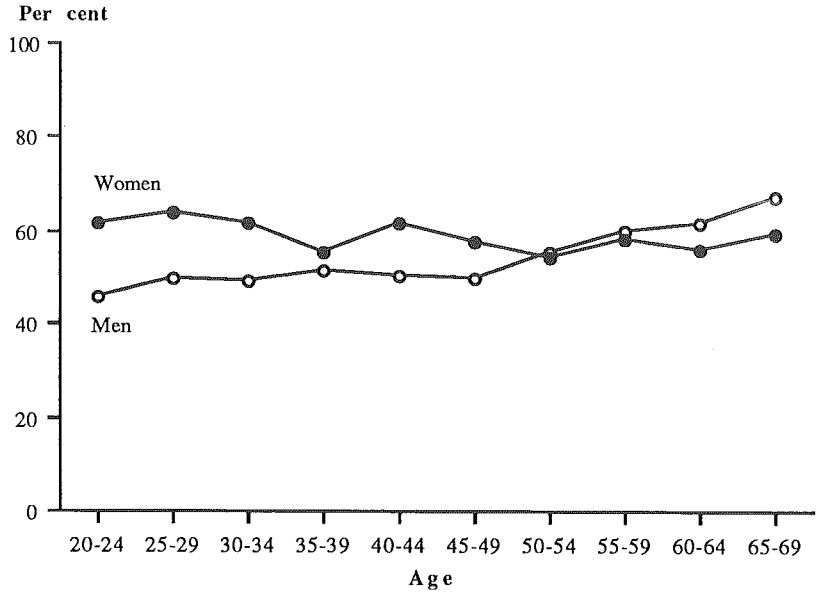
Walking for recreation or exercise

- 52% of men and 59% of women said they had walked for recreation or exercise during the preceding two weeks. Such walking was more popular amongst older men than younger men. The reverse was true for women, although the trend was less marked.

Exercise of any kind during leisure time

- Approximately 73% of men and women engaged in some form of exercise during the preceding two weeks, either walking, vigorous or less-vigorous exercise.

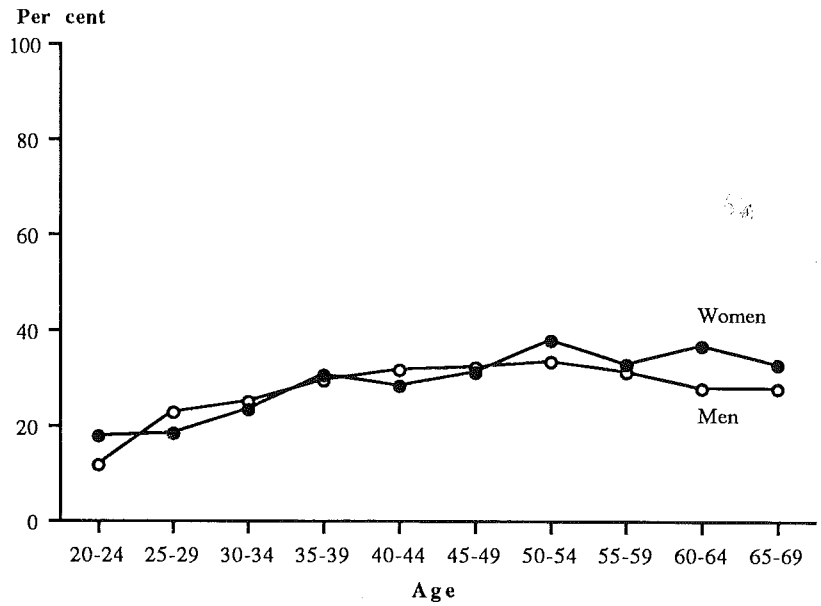
Proportion engaged in walking for recreational exercise



No exercise of any kind during leisure time

- Conversely, about 27% of men and women did not walk for recreation or exercise, or take part in vigorous or less-vigorous exercise during the preceding two weeks. Above age 50, women are less likely to exercise than men.

Proportion engaged in no exercise of any kind during leisure time



Q.22 In the past 2 weeks, did you engage in vigorous exercise—exercise which made you breathe harder or puff and pant? (a)

6.9.1 OBSERVED FREQUENCIES, AGE, SEX

Vigorous exercise	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Yes											
Group 1 (b)	46	47	46	47	49	28	14	12	10	7	306
Group 2 (c)	213	227	203	190	185	95	71	48	34	25	1,291
No	127	210	263	351	380	359	316	307	353	288	2,954
Not stated	-	-	-	-	-	-	-	-	1	-	1
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Yes											
Group 1 (b)	36	34	30	22	29	9	9	7	3	1	180
Group 2 (c)	174	191	179	160	145	95	65	47	29	30	1,115
No	182	283	346	447	465	386	345	313	354	311	3,432
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

(a) For example, vigorous sports such as football, netball, tennis, squash, athletics; jogging or running; keep-fit exercises; vigorous swimmimg; etc.
(b) Average of 3 or more sessions of vigorous exercise per week and 20 minutes or more per session.
(c) Average of less than 3 sessions per week or less than 20 minutes per session.

Q.22 In the past 2 weeks, did you engage in vigorous exercise — exercise which made you breathe harder or puff and pant? (a)

6.9.2 ESTIMATES, AGE, SEX

Vigorous exercise	*Age*										
	20-24	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Yes											
Group 1 (b)	10.6	7.2	9.5	5.9	4.9	6.9	4.0	2.8	2.1	2.1	6.3
Group 2 (c)	54.5	47.0	35.7	33.6	29.5	21.0	18.1	17.3	10.7	7.5	31.5
No	34.9	45.8	54.8	60.5	65.7	72.1	77.9	79.8	86.4	90.4	62.2
Not stated	-	-	-	-	-	-	-	-	0.8	-	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
Yes											
Group 1 (b)	8.0	6.4	5.9	2.5	4.7	1.7	0.9	2.2	1.3	0.1	4.0
Group 2 (c)	47.1	35.9	32.2	27.6	23.4	20.2	15.0	12.9	7.7	8.4	26.2
No	44.9	57.7	61.9	69.9	71.9	78.1	84.1	85.0	91.0	91.5	69.9
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) For example, vigorous sports such as football, netball, tennis, squash, athletics; jogging or running; keep-fit exercises; vigorous swimmimg; etc.
(b) Average of 3 or more sessions of vigorous exercise per week and 20 minutes or more per session.
(c) Average of less than 3 sessions per week or less than 20 minutes per session.

Q.23 In the past 2 weeks, did you engage in less vigorous exercise for recreation, sport or health-fitness purposes which did not make you breathe harder or puff and pant?

6.9.3 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Less vigorous exercise	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Yes	172	196	192	217	218	135	120	77	94	82	1,503
No	214	288	320	371	396	347	281	290	303	238	3,048
Not stated	-	-	-	-	-	-	-	-	1	-	1
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Yes	170	185	179	180	187	116	103	72	74	59	1,325
No	222	323	376	449	452	374	315	294	311	282	3,398
Not stated	-	-	-	-	-	-	1	1	1	1	4
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.23 In the past 2 weeks, did you engage in less vigorous exercise for recreation, sport or health-fitness purposes which did not make you breathe harder or puff and pant?

6.9.4 ESTIMATES, AGE, SEX

	Age										
Less vigorous exercise	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Yes	43.3	40.8	37.3	29.3	30.1	25.5	27.1	22.1	24.8	28.9	32.5
No	56.7	59.2	62.7	70.7	69.9	74.5	72.9	77.9	74.4	71.1	67.5
Not stated	-	-	-	-	-	-	-	-	0.8	-	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
Yes	43.8	35.8	30.5	28.7	29.7	22.1	25.6	17.8	19.7	18.0	29.1
No	56.2	64.2	69.5	71.3	70.3	77.9	74.3	81.6	80.3	81.6	70.8
Not stated	-	-	-	-	-	-	0.1	0.5	0.1	0.4	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Q.24 In the past 2 weeks, did you walk for recreation or exercise?

6.9.5 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Walk	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Yes	169	244	263	295	324	248	213	211	244	199	2,410
No	217	240	249	293	290	234	187	156	153	121	2,140
Not stated	-	-	-	-	-	-	1	-	1	-	2
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Yes	245	323	346	368	383	282	243	209	214	192	2,805
No	147	185	209	260	256	208	176	158	172	150	1,921
Not stated	-	-	-	1	-	-	-	-	-	-	1
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

Q.24 In the past 2 weeks, did you walk for recreation or exercise?

6.9.6 ESTIMATES, AGE, SEX

	Age										
Walk	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Yes	45.8	50.0	49.3	51.5	50.3	49.6	55.2	59.8	61.6	67.3	52.4
No	54.2	50.0	50.7	48.5	49.7	50.4	44.8	40.2	37.6	32.7	47.5
Not stated	-	-	-	-	-	-	0.0	-	0.8	-	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
Yes	61.8	63.6	61.5	55.3	61.6	57.7	54.5	58.0	56.2	59.4	59.4
No	38.2	36.4	38.5	44.6	38.4	42.3	45.5	42.0	43.8	40.6	40.6
Not stated	-	-	-	0.1	-	-	-	-	-	-	0.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Whether person exercised (a) or not during leisure time

6.9.7 OBSERVED FREQUENCIES, AGE, SEX

	Age										
Whether exercised or not	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Number)					
Men											
Yes	42	96	115	146	172	147	135	125	119	105	1,202
No	344	388	397	442	442	335	266	242	278	215	3,349
Not stated	-	-	-	-	-	-	-	-	1	-	1
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
Yes	63	103	124	181	191	160	139	122	152	123	1,358
No	329	405	431	448	448	330	280	245	234	219	3,369
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

(a) Exercise of any kind during past 2 weeks, ie. vigorous exercise, less vigorous exercise or walking.

Whether person exercised (a) or not during leisure time

6.9.8 ESTIMATES, AGE, SEX

	Age										
Whether exercised or not	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						(Per cent)					
Men											
Yes	88.3	77.2	74.9	70.7	68.2	67.9	66.6	68.7	71.5	72.1	73.5
No	11.7	22.8	25.1	29.3	31.8	32.1	33.4	31.3	27.7	27.9	26.5
Not stated	-	-	-	-	-	-	-	-	0.8	-	0.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
Yes	82.2	81.5	76.5	69.5	71.7	68.7	62.0	67.2	63.2	67.3	72.6
No	17.8	18.5	23.5	30.5	28.3	31.3	38.0	32.8	36.8	32.7	27.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) Exercise of any kind during past 2 weeks, ie. vigorous exercise, less vigorous exercise or walking.

6.10 Multiple major risk factors

Comments

Previous sections in this report have discussed single risk factors independently of other risk factors. This section considers the prevalence of multiple major risk factors within individuals. The simultaneous occurrence of risk factors within the one individual has important risk implications because of interaction between the factors. The three major established risk factors for cardiovascular disease are considered in this section: high blood pressure, high blood cholesterol, and cigarette smoking.

The following definitions have been used.

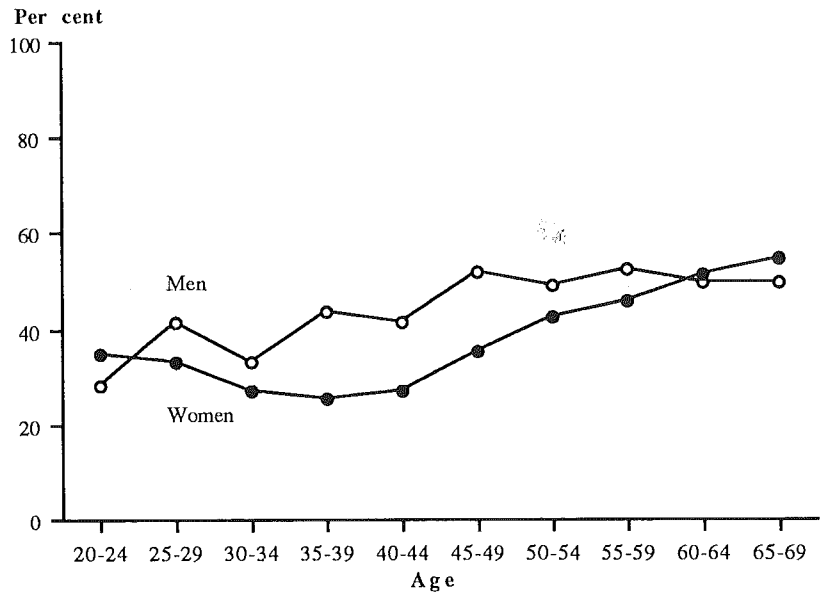
High blood pressure:	diastolic blood pressure $\geq$ 95mmHg
High blood cholesterol:	plasma cholesterol $\geq$ 6.5mmol/L
Cigarette smoking:	smoking one or more manufactured and/or 'hand-rolled' cigarettes daily (cigar and/or pipe smoking is not included)

Table 6.10.2 shows the prevalence of individuals with any one of these risk factors, any two risk factors, and all three risk factors.

- Overall, 42% of men and 35% of women had at least one of the three major risk factors.
- 8% of men and 5% of women had two or three major risk factors, the prevalence increasing to age 50-54 and declining thereafter.
- 1 in 200 men and 1 in 500 women had all three risk factors.

Proportion with at least one major risk factor

(High blood pressure or high blood cholesterol or cigarette smoking)



Multiple major risk factors (a)

6.10.1 OBSERVED FREQUENCIES, AGE, SEX

Risk factor	Age 20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	All ages
						(Number)					
Men											
No risk factors	262	290	319	326	326	235	193	171	187	154	2,463
One factor	112	167	167	215	225	189	148	146	163	139	1,671
Two factors	12	27	25	44	56	54	52	47	44	25	386
Three factors	-	-	1	3	7	4	8	3	4	2	32
Total	**386**	**484**	**512**	**588**	**614**	**482**	**401**	**367**	**398**	**320**	**4,552**
Women											
No risk factors	261	328	393	463	456	308	236	191	172	139	2,947
One factor	126	162	144	150	166	150	137	137	168	158	1,498
Two factors	5	17	17	16	16	30	45	36	40	41	263
Three factors	-	1	1	-	1	2	1	3	6	4	19
Total	**392**	**508**	**555**	**629**	**639**	**490**	**419**	**367**	**386**	**342**	**4,727**

(a) High blood pressure, high blood cholesterol, cigarette smoking.

Multiple major risk factors (a)

6.10.2 ESTIMATES, AGE, SEX

Risk factor	Age 20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	All ages
						(Per cent)					
Men											
No risk factors	71.8	58.5	67.1	56.6	58.5	48.2	50.7	47.6	50.0	50.4	57.6
One factor	26.0	35.1	28.5	35.5	33.2	40.0	35.1	39.2	39.8	40.9	34.4
Two factors	2.2	6.4	4.3	6.9	7.9	11.5	12.5	12.1	9.4	8.1	7.5
Three factors	-	-	0.1	1.0	0.4	0.3	1.8	1.0	0.8	0.6	0.5
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Women											
No risk factors	65.3	67.0	73.0	74.6	73.0	64.6	57.2	54.1	48.7	45.4	64.8
One factor	33.7	30.1	23.9	24.0	24.7	29.5	31.3	35.0	42.0	43.4	30.4
Two factors	1.0	2.9	3.1	1.4	2.3	5.6	11.4	10.2	8.0	10.5	4.6
Three factors	-	0.1	0.0	-	0.0	0.3	0.0	0.8	1.4	0.7	0.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

(a) High blood pressure, high blood cholesterol, cigarette smoking.

APPENDIX A:

Letter of invitation

national heart foundation of australia
risk factor program 1989

Risk Factor Program Address:

National Heart Foundation
Risk Assessment Centre
86 Hampden Road
BATTERY POINT TAS 7000
GPO Box 1312N
HOBART TAS 7001
Telephone: 345 199

Dear

I write to ask you to take part in a National Heart Foundation Australia-wide program to prevent heart disease and promote health.

We ask for about half an hour of your time to check you for important heart disease risk factors. There will be no charge whatsoever and we will send you your results. Also, **by participating you will be making a valuable contribution to the whole community.**

Although the death rate from heart disease is falling, heart attack is still the greatest single health problem in Australia. To plan future prevention programs we have to find out how common the preventable risk factors such as high blood cholesterol are in the community.

To do this we have specially selected 1500 or more people at random in each capital city. You are one of those people and we are pleased to invite you to one of our risk factor centres for a free measure of your blood cholesterol level and an assessment of your blood pressure and other factors associated with heart disease. Your visit will take approximately half an hour.

We do urge you to participate **even if you have recently had a cholesterol test or medical check-up, are being treated for some condition, or don't feel you need a check-up for your own sake.** For this important national health project it is vital to obtain an accurate picture of the population, and this depends on the participation of yourself and all other people selected.

We also assure you that **any information obtained will be kept strictly confidential and no individual person will be identified in any reports,** although if you ask us we can send your results to your doctor.

In the strong hope that you will take part, we have taken the liberty of making the following appointment for you to attend:-

Location: National Heart Foundation
Risk Assessment Centre
86 Hampden Road
BATTERY POINT

Time: ..... (Day of week) ..... (Date) at .....am/pm

At the bottom of the **attached sheet** we explain how to confirm your appointment, and how to make another if you cannot keep the one we have given you. At the top of the sheet we have also laid out some important directions about how to prepare for the appointment. **Please read them carefully.**

Thank you in anticipation of your help.

Yours sincerely

Dr James Curran
Medical Director

P.S. Please keep this and the attached sheet(s) as a record of your appointment and show them to your employer if necessary. If there are any problems in getting time off work we would be happy to speak to your employer by phone. Also, please ring us if you have any questions at all. Our number is 345 199.

national heart foundation of australia

DIRECTIONS FOR YOUR FREE HEART RISK CHECK-UP

To contact us telephone 345 199

PREPARING FOR YOUR VISIT **Please read these directions carefully**

Step 1 Since food can interfere with the accuracy of your cholesterol test, PLEASE DO NOT EAT OR DRINK ANYTHING FOR AT LEAST 12 HOURS BEFORE YOUR VISIT, except for water, or tea or coffee **without** milk or sugar. Of course you should take any medications or tablets as usual. If for medical reasons, such as diabetes, you cannot go without food, please telephone us on 345 199 for advice.

Step 2 When you come to the centre, please wear loose or short sleeves that give us easy access to your upper arm when measuring your blood pressure.

Step 3 If you use reading glasses, please bring them along.

Step 4 If you do not speak English, please bring along someone who can interpret for you.

YOUR APPOINTMENT DETAILS AGAIN

As a reminder, please write below the appointment time we have given you **or** the new one if you have changed it (see below)

Time
(fill in): .... at .....am/pm
Day of week Date/Month

Place: National Heart Foundation
Risk Assessment Centre
86 Hampden Road
BATTERY POINT

Retain the above section as your reminder

Tear or cut along this line if mailing us your answer

PLEASE LET US KNOW YOUR ANSWER

Please let us know whether you will take part by **either** telephoning us on 345 199 anytime (but preferably after 2.30 p.m.)

or, if it is more convenient, by completing the section below and mailing this portion of the page to us in the post-paid, addressed envelope supplied.

If you cannot keep the appointment we have given you, **we are only too happy to make another appointment to suit you.** Either call us to arrange a time, or mail us suitable times if you prefer (see below).

Please note that the clinic operates from 8.30 a.m. to 2 p.m. Monday to Friday. Other times are possible by arrangement.

Name..... Address .....

.....

I will/will not be attending your risk factor centre at the time you gave me.
(delete whichever doesn't apply)

I wish to make another appointment. Here are some suitable days and times (Please list a few)

.....

I can be contacted through the following telephone numbers: (Please write)

During working hours .....

After hours .....

APPENDIX A:

Reminder letter

national heart foundation of australia
risk factor program 1989

Risk Factor Program Address:

National Heart Foundation
Risk Assessment Centre
86 Hampden Road
BATTERY POINT TAS 7000
GPO Box 1312N
HOBART TAS 7001
Telephone: 345 199

Dear

Recently we wrote to invite you for a free heart-risk check as part of a national program to prevent heart disease.

Since we have not heard from you, we wonder if you have felt unable to keep the appointment or if you did not receive our letter in time.

It is critical to the whole program that those whom we invite should participate. We're sending you this second letter because we really do need your help in our efforts to prevent heart disease, and we believe you in turn will benefit from your check.

We are therefore asking you if you can call us to make another appointment, or, if there is still time for you to arrange things, to confirm the appointment we gave you for:

National Heart Foundation
Risk Assessment Centre
86 Hampden Road
BATTERY POINT

on: ...., at .....am/pm
Day of week Date

Please note that we have set aside several times each day to ensure that **we can always fit people in.**

If you are willing to take part, please call us on 345 199 so we can find a time to suit you.

Yours sincerely

Dr James Curran
Medical Director

APPENDIX A:

Results letter

national heart foundation of australia
risk factor program 1989

Risk Factor Program Address:

National Heart Foundation
Risk Assessment Centre
86 Hampden Road
BATTERY POINT TAS 7000
GPO Box 1312N
HOBART TAS 7001
Telephone: 345 199

Dear Doctor

Your patient named on the attached sheet has taken part in the National Heart Foundation Risk Factor Prevalence Study's 1989 survey, and has agreed to release his/her results to you.

This is the third of three national surveys of the prevalence of coronary risk factors in Australia, the first being held in 1980 and the second in 1983. The study, possibly the only one of its kind in the world, attempts to shed light on the marked decline in cardiovascular death rates and on the patterns of coronary heart disease mortality.

In each capital city 1500 or more people will have been randomly selected and invited to undergo the assessment detailed in the attached sheet. Participants will have also answered relevant questions about their coronary risk.

You will see that in accordance with our belief that people are best cared for by their family doctor, we have suggested that they visit you if any of our findings seem to need review or follow-up.

Yours sincerely

Dr James Curran
Medical Director

national heart foundation of australia
risk factor program 1989

Risk Factor Program Address:

National Heart Foundation
Risk Assessment Centre
86 Hampden Road
BATTERY POINT TAS 7000
GPO Box 1312N
HOBART TAS 7001
Telephone: 345 199

Dear

We are very grateful for your recent contribution to our National Risk Factor Program. The results of your assessment are listed below. Please take special note of any items marked with an asterisk and see the sections at the bottom. If a letter to your doctor is enclosed, please take it along with these results when you next visit him/her.

RESULTS:

Item	Your Level	Desirable level
Height	_____ cm	
Weight		
• In kilograms	_____ kg	
• Compared to desirable weight for someone of your height	_____	_____
Blood pressure (average of two readings)		
systolic	_____ mmHg	less than 140 mmHg
diastolic	_____ mmHg	less than 85 mmHg
Blood total cholesterol	_____ mmol/l	less than 5.5 mmol/l

Note:
- Cigarette smoking is a major risk factor. If you smoke, your doctor may be able to help you stop.
- If you are overweight, your doctor may also be able to help you reduce.

MEANING OF ASTERISKS (*)

If any result is marked by an asterisk, we suggest you visit your family doctor so he/she can review our findings and if necessary offer you advice or treatment.

The more risk factors you have the greater your chance of later developing heart disease, so the more asterisks you have the more the reason for checking with your doctor. The risk of heart disease can usually be lowered.

A CAUTIONARY WORD ABOUT THESE RESULTS AND ASTERISKS

Do not be alarmed by any asterisks. They are used to give a guide to the risk of **later** heart disease, especially in those who are currently well. They are not meant to be a diagnosis of present disease — that can only be done after a proper medical history and physical examination by a doctor. An apparently high blood pressure, for example, is often quite normal when re-measured. Your doctor is the best person to explain what these results mean to your health.

While it is good if you receive no asterisks, this is not a guarantee of freedom from future heart disease. It still pays to keep a regular eye on your health.

Thank you again for your help.

Yours sincerely

Dr James Curran
Medical Director

APPENDIX B:

IN CONFIDENCE

NATIONAL HEART FOUNDATION RISK FACTOR STUDY 1989

Telephone number(s) where you may be contacted. Home _ _ _ _ _ _ _ _ _ _ _ _

Work _ _ _ _ _ _ _ _ _ _ _ _

CONSENT AND FORWARDING OF RESULTS

I consent to undergo the tests performed at the clinic and I understand that the results of my assessment will be given to me and/or my doctor if I wish.

I further understand that information and blood specimens collected in the course of the study will be used for research purposes, the results of which will be published in scientific journals or reports in such a way that individual participants cannot be identified.

I also understand that my own answers in this questionnaire and the results of my tests will not be released to anyone, even to my own doctor, without my specific permission.

Signature _ Date _ _ _ / _ _ _ / 1989.

To whom would you like your results sent?
(Please tick the appropriate box)

To no-one .... ☐

To myself only .... ☐

To my doctor only* .... ☐

To myself and my doctor* ☐

*If you want your results sent to your doctor, please write the name and address below.

Dr _

Address _

_ Postcode _ _ _ _ _ _

OFFICE USE ONLY

To be copied from page 12.

Weight _____kg

Height _____cm

Blood pressure:

Average systolic _____ mmHg

Average diastolic _____ mmHg

Total cholesterol _____mmol/l

H.D.L. cholesterol _____mmol/l

Triglycerides _____ mmol/l

Ferritin _____µg/l

Iron _____ µmol/l

Transferrin _____µmol/l

Office use only

DIRECTIONS

- Please indicate your answer by ticking the appropriate box ☑ or by writing your answer in the space provided.
- Please use BLOCK LETTERS.
- If you are uncertain about the answer to any of the questions leave them blank and ask the receptionist to help you when you have reached the end of the questionnaire.
- Please do not write in the far right hand column of each page **(Office use only).**

☐☐☐☐☐ 1 5

☐☐☐☐☐☐ 6 11

1. Date of birth: ___ / ___ / 19___
day mth year

☐☐☐☐☐☐ 12 17

2. Sex: Male............ ☐ 1
Female......... ☐ 2

☐ 18

3. Marital status:

Never married......................... ☐ 1
Now married........................... ☐ 2
Separated but not divorced ☐ 3
Divorced................................. ☐ 4
Widowed .... ☐ 5

☐☐☐☐ 8 9 — 19 24

☐ 25

4. How many children and full-time students are living with you in your care?

None .... ☐
Children 0–14 years ____ number
Full-time students 15–24 years ____ number

26 ☐☐ 27
28 ☐☐ 29

5. Living arrangements:

Living with legal husband or wife .... ☐ 1
Living with partner as a couple (such as de facto marriage)...................... ☐ 2
Living with other person(s) (such as children, parents, flatmates) ☐ 3
Living alone .... ☐ 4

☐ 30

6. Where were you born? ____
(Write State or Territory if born in Australia. Write country if born overseas.)

☐☐ 31 32

7. If you were not born in Australia, how many years have you lived in Australia? __________years

☐☐ 33 34

8. **Please indicate the highest level of education you have completed.**

		Office use only
Never attended school	1	
Primary school	2	
Some high school	3	
Completed high school (Year 12 or equivalent)	4	35
University, C.A.E. or other tertiary institution	5	

9. **When did you last have your blood pressure measured?**

In the last three months	1	
In the last six months	2	
In the last year	3	
In the last three years	4	
More than three years ago	5	
Never measured	6	36
Don't know	7	

10. **When did you last have your blood cholesterol measured?**

In the last three months	1	
In the last six months	2	
In the last year	3	
In the last three years	4	
More than three years ago	5	
Never measured	6	37
Don't know	7	

11. **Have you ever been told that you have any of the following?**

	No	Yes	
High blood pressure	1	2	38
Angina	1	2	39
Heart attack *(a "coronary", coronary occlusion, coronary thrombosis, myocardial infarction)*	1	2	40
Stroke	1	2	41
High cholesterol	1	2	42
High triglycerides	1	2	43

	No	Yes	
12. **Are you on tablets for blood pressure?**	1	2	44
13. **Are you having treatment to lower your blood fat?**	1	2	45
14. **Are you on tablets or other treatment for angina?**	1	2	46

Office use only

15. **Has a doctor or nurse ever told you that you had diabetes?** — No ☐ 1 Yes ☐ 2 — ☐ 47

If yes, please state the year you were first told 19 _ _ _ (Year) — ☐☐ 48 49

16. **Has a doctor or nurse ever told you that you showed sugar in the urine?** — No ☐ 1 Yes ☐ 2 — ☐ 50

If yes, please state the year you were first told 19 _ _ _ (Year) — ☐☐ 51 52

17. **Have you ever been given advice or treatment for diabetes or sugar trouble?** — No ☐ 1 Yes ☐ 2 — ☐ 53

If yes, please state the year this advice or treatment was first given 19 _ _ _ (Year) — ☐☐ 54 55

Was this Diet advice ..... ☐ 1
Tablets ..... ☐ 2
Insulin injections ..... ☐ 3
Diet advice and tablets ..... ☐ 4
Diet advice and injections ..... ☐ 5

☐ 56

QUESTIONS 18 TO 21 FOR WOMEN ONLY

18. **Have you ever taken the oral contraceptive pill?**

Yes ..... ☐ 1
No ..... ☐ 2 **Go to Question 21.**

☐ 57

19. **For how long altogether have you taken the oral contraceptive pill?**
(Please estimate the total of all periods of use.)

Less than 6 months ..... ☐ 1
Between 6 months and 2 years ..... ☐ 2
Between 2 and 5 years ..... ☐ 3
Between 5 and 10 years ..... ☐ 4
Longer than 10 years ..... ☐ 5

☐ 58

20. **Are you now taking the oral contraceptive pill?**

Yes ..... ☐ 1
No ..... ☐ 2

☐ 59

21. **Are you now pregnant?**

Yes ..... ☐ 1
No ..... ☐ 2

☐ 60

In Questions 22 to 25 we want to find out about the exercise you had during the PAST 2 WEEKS;
- For recreation, sport or health-fitness purposes,
- As part of your tasks at work and around the house.

Please distinguish between vigorous exercise which made you breathe harder or puff and pant, and less vigorous exercise.

Office use only

RECREATION, SPORT OR HEALTH-FITNESS

22. **In the PAST 2 WEEKS, did you engage in vigorous exercise — exercise which made you breathe harder or puff and pant?** *(e.g. vigorous sports such as football, netball, tennis, squash, athletics; jogging or running; keep-fit exercises; vigorous swimming; etc.)*

No ..... ☐ 1
Yes..... ☐ 2

61

If yes, how many sessions of vigorous exercise did you have over the 2 week period? _ _ _ _ _ _ _ _ _

62 ☐☐ 63

Please estimate the TOTAL TIME spent exercising vigorously during the PAST 2 WEEKS. _ _ _ / _ _ _

hours minutes

☐☐☐☐
64 67

23. **In the PAST 2 WEEKS, did you engage in less vigorous exercise for recreation, sport or health-fitness purposes which did not make you breathe harder or puff and pant?**

No ..... ☐ 1
Yes..... ☐ 2

68

If yes, how many sessions of less vigorous exercise did you have over the 2 week period? _ _ _ _ _ _ _

☐☐
69 70

24. **In the PAST 2 WEEKS, did you walk for recreation or exercise?**

No ..... ☐ 1
Yes..... ☐ 2

71

If yes, how many times? _ _ _ _ _ _ _

☐☐
72 73

VIGOROUS TASKS AT WORK AND AROUND THE HOUSE (Paid or unpaid work)

25. **In the PAST 2 WEEKS, did you engage in vigorous activity, apart from exercise, which made you breathe harder or puff and pant?** *(e.g. carrying loads, heavy gardening, chopping wood, labouring — at home, during employment or anywhere else.)*

No ..... ☐ 1
Yes..... ☐ 2

74

If yes, how many sessions of these types of vigorous activity did you have over the 2 week period? _ _ _ _

☐☐
75 76

Please estimate the TOTAL TIME spent in these types of vigorous activity during the PAST 2 WEEKS.

_ _ _ / _ _ _ _

hours minutes

☐☐☐☐
77 80

Office use only

26. **Have you ever smoked cigarettes, cigars or a pipe regularly?**

Yes.......... ☐ 1

No........... ☐ 2 **Go to Question 33.**

81

27. **At what age did you start smoking regularly?**

I started smoking regularly at _ _ _ _ years of age.

82 83

28. **Have you given up smoking?**

Yes, I gave up smoking in _ _ _ _ / 19 _ _ _
mth year

No, I still smoke............ ☐ 8888 **Go to Question 30.**

84 87

If you have GIVEN UP SMOKING please answer the following questions:

29. **How much did you smoke?**

I used to smoke _ _ _ _ _ manufactured cigarettes a **day** 88 89

_ _ _ _ _ grams* "hand-rolled" cigarette tobacco per **week** 90 92

_ _ _ _ _ cigars per **week** 93 94

_ _ _ _ _ grams pipe tobacco per **week** 95 97

If you CURRENTLY SMOKE please answer Questions 30 to 32; otherwise go to Question 33.

30. I currently smoke _ _ _ _ _ manufactured cigarettes a **day** 98 99

_ _ _ _ _ grams* "hand-rolled" cigarette tobacco per **week** 100 102

_ _ _ _ _ cigars per **week** 103 104

_ _ _ _ _ grams pipe tobacco per **week** 105 107

*NOTE: A 1¾ ounce pouch of cigarette tobacco equals 50 grams.

31. **Which brand of manufactured cigarette do you usually smoke?**
(Copy the name from a packet if possible)

I don't smoke manufactured cigarettes .... ☐ 995 **Go to Question 33.**

108 110

The brand I usually smoke is _
(Because of the number of varieties of many brands, please give this in full e.g. Benson and Hedges Extra Mild, Marlboro Red.)

32. **Have you switched to lower tar manufactured cigarettes?**

Yes, in _ _ _ _ / 19 _ _ _
mth year

No...................... ☐ 8888

I don't know........ ☐ 9999

111 114

Office use only

33. How often do you usually drink alcohol?

- I don't drink alcohol ☐ 1 **Go to Question 35.**
- Less than once a week ☐ 2
- On 1 or 2 days a week ☐ 3
- On 3 or 4 days a week ☐ 4
- On 5 or 6 days a week ☐ 5
- Every day ☐ 6

☐ 115

34. On a day when you drink alcohol, how many drinks do you usually have?

- 1 or 2 drinks ☐ 1
- 3 or 4 drinks ☐ 2
- 5 to 8 drinks ☐ 3
- 9 to 12 drinks ☐ 4
- 13 to 20 drinks ☐ 5
- More than 20 drinks ☐ 6

☐ 116

35. Do you add salt to your food after it is cooked?

- Rarely or never ☐ 1
- Sometimes ☐ 2
- Almost always or always ☐ 3

☐ 117

36. Which of the following best describes your usual way of eating?
(Please tick one box only.)

- No special diet ☐ 1
- Vegetarian ☐ 2
- Weight reduction diet ☐ 3
- Diabetic diet ☐ 4
- Fat modified diet to lower blood fat ☐ 5
- Other ☐ 6 Please specify _____

☐ 118

37. How often do you eat the fat on meat?

- Usually ☐ 1
- Sometimes ☐ 2
- Rarely or never ☐ 3

☐ 119

38. How much of the following dairy products do you usually have IN A WEEK?

	Number in a week		
Full cream milk	_____	(litres)	120 ☐☐ 121
Skim milk	_____	(litres)	122 ☐☐ 123
Low fat milk	_____	(litres)	124 ☐☐ 125
Yoghurt — plain or flavoured	_____	(small cartons)	126 ☐☐ 127
Low fat yoghurt — plain or flavoured	_____	(small cartons)	128 ☐☐ 129
Cream	_____	(tablespoons)	130 ☐☐ 131
Ice-cream	_____	(scoops)	132 ☐☐ 133

39. **How tall are you without shoes?**

Centimetres _ _ _ _ _ _ _

or Feet / inches_ _ _ _/_ _ _

Don't know.............................. ☐ 999

Office use only
☐☐☐ 134 136

40. **How much do you weigh without clothes and shoes?**

Kilograms _ _ _ _ _ _ _ _

or Stone / pounds_ _ _ _/_ _ _

Don't know.............................. ☐ 999

☐☐☐ 137 139

Questions 41 to 46 ask about employment and income.

The answers to these questions play an important part in understanding the patterns of health in the Australian community.

For example, risk factors for heart disease are known to vary between different groups in the community.

Knowledge about these differences helps in providing the best health care.

41. **Do you have a full-time or part-time job of any kind?**
(Either for payment or profit, or unpaid work in a family business)

Yes.......... ☐ 1

No........... ☐ 2 **Go to Question 44.**

☐ 140

42. **In your main job, what is your occupation?**

- Give full title.

  For example, Civil Engineering Draftsman, Accounts Clerk, Fast Foods Cook, 1st Class Welder, Extruding Machine Operator, Coal Miner.

- Armed Services personnel state rank as well as occupation.
- Public Servants state official designation (e.g. ASO3) as well as occupation.

  Occupation _

  _

  _

  _

43. **What are the main tasks or duties that you usually perform in that occupation?**

- Describe as fully as possible.

  For example, preparing drawings for dam construction, recording and paying accounts, cooking hamburgers and chips, welding of high pressure steam pipes, operating plastic extruding machine, operating continuous mining machine.

  Tasks or duties _

  _

  _

  _

☐☐☐☐ 141 144

☐☐☐☐ 145 148

44. Which of the following describes the current employment status of yourself and of your partner (if applicable)?

- Here, partner means the person you are living with as legal husband or wife or 'de facto'.
- Please tick more than one box where applicable.

	Self	Partner (spouse or 'de facto')	Office use only
Working full-time	☐ 1	☐ 1	☐ 149 ☐ 150
Working part-time	☐ 1	☐ 1	☐ 151 ☐ 152
Not working (but not retired)	☐ 1	☐ 1	☐ 153 ☐ 154
Home duties	☐ 1	☐ 1	☐ 155 ☐ 156
Full-time student	☐ 1	☐ 1	☐ 157 ☐ 158
Part-time student	☐ 1	☐ 1	☐ 159 ☐ 160
Retired	☐ 1	☐ 1	☐ 161 ☐ 162
Permanently unable to work/ill	☐ 1	☐ 1	☐ 163 ☐ 164
Other (please specify) _	☐ 1	☐ 1	☐ 165 ☐ 166

45. What is the gross income of yourself and of your partner (if applicable)?

- Include income from all sources (e.g. wages, interest, pensions, Family Allowance Supplement and other benefits, tax rebates) before tax or anything else is taken out.
- Please estimate as best you can.

Gross income (i.e. before tax):	Self	Partner (spouse or 'de facto')
No income	☐ 1	☐ 1
$1 to $135 per week ($1 to $7,000 per year)	☐ 2	☐ 2
$136 to $173 per week ($7,001 to $9,000 per year)	☐ 3	☐ 3
$174 to $212 per week ($9,001 to $11,000 per year)	☐ 4	☐ 4
$213 to $250 per week ($11,001 to $13,000 per year)	☐ 5	☐ 5
$251 to $289 per week ($13,001 to $15,000 per year)	☐ 6	☐ 6
$290 to $327 per week ($15,001 to $17,000 per year)	☐ 7	☐ 7
$328 to $365 per week ($17,001 to $19,000 per year)	☐ 8	☐ 8
$366 to $404 per week ($19,001 to $21,000 per year)	☐ 9	☐ 9
$405 to $442 per week ($21,001 to $23,000 per year)	☐ 10	☐ 10
$443 to $577 per week ($23,001 to $30,000 per year)	☐ 11	☐ 11
$578 to $769 per week ($30,001 to $40,000 per year)	☐ 12	☐ 12
$770 to $962 per week ($40,001 to $50,000 per year)	☐ 13	☐ 13
Over $962 per week (Over $50,000 per year)	☐ 14	☐ 14

Office use only: ☐☐ 167 168 ☐☐ 169 170

46. What is the main source of income of yourself and of your partner (if applicable)?

	Self		Partner (spouse or 'de facto')	
Wages or salary	☐	1	☐	1
Own business or share in partnership	☐	2	☐	2
Any government pension or cash benefit	☐	3	☐	3
Superannuation	☐	4	☐	4
Investment / interest	☐	5	☐	5
Other (please specify) _____	☐	6	☐	6

_____

Office use only

☐ ☐
171 172

PLEASE STOP HERE

Thank you for your co-operation. Please now return this questionnaire to the receptionist and tell her about any difficulties you had with these questions.

OFFICE USE ONLY

To be completed during examination

Weight _ _ _ _ _ _ _ kg — 173 [ ][ ][ ] . [ ] 176

Height _ _ _ _ _ _ _ cm — 177 [ ][ ][ ] 179

Waist circumference:

1st reading _ _ _ _ _ _ cm — 180 [ ][ ][ ] 182

2nd reading _ _ _ _ _ _ cm — 183 [ ][ ][ ] 185

Hip (buttocks) circumference:

1st reading _ _ _ _ _ _ cm — 186 [ ][ ][ ] 188

2nd reading _ _ _ _ _ _ cm — 189 [ ][ ][ ] 191

Blood pressure observer _ _ _ _ _ _ _ _ — [ ] 192

Sphygmomanometer _ _ _ _ _ _ _ _ _ _ — 193 [ ][ ] 194

Ambient temperature _ _ _ _ _ _ _ _ °C — 195 [ ][ ] 196

Blood pressure:

1st reading:

Systolic _ _ _ _ _ _ _ _ _ _ mm Hg — 197 [ ][ ][ ] 199

Diastolic _ _ _ _ _ _ _ _ _ _ mm Hg — 200 [ ][ ][ ] 202

2nd reading:

Systolic _ _ _ _ _ _ _ _ _ _ mm Hg — 203 [ ][ ][ ] 205

Diastolic _ _ _ _ _ _ _ _ _ _ mm Hg — 206 [ ][ ][ ] 208

Have you had anything to eat or drink in the past 12 hours apart from water, black tea or black coffee?

No [ ] 1

Yes [ ] 2 — [ ] 209

Have you donated blood in the last 12 months?

No [ ] 1

Yes [ ] 2 — [ ] 210

If yes, how recently did you donate blood?

Less than 1 week ago..... [ ] 1

Between 1 week and 1 month ago..... [ ] 2

Between 1 month and 3 months ago ..... [ ] 3

Between 3 months and 6 months ago..... [ ] 4 — [ ] 211

Between 6 months and 12 months ago..... [ ] 5

Do you regularly take iron supplements or a multi-vitamin mineral supplement containing iron?

No..... [ ] 1

Yes..... [ ] 2 — [ ] 212

Don't know.... [ ] 3

NATIONAL HEART FOUNDATION RISK FACTOR PROGRAM 1989

BLOOD ANALYSIS FORM

Form A: Send from laboratory to AIH

Centre: .....

Date dispatched: from centre...../..... from lab...../.....

Surname	Serial number	Cholesterol (mmol/l)		Triglycerides	Iron	Ferritin	Transferrin
		Total	HDL	(mmol/l)	(μmol/l)	(μg/l)	(μmol/l)
	1 11	12 14	15 17	18 20	21 23	24 28	29 31
	1 11	12 14	15 17	18 20	21 23	24 28	29 31

APPENDIX D:

Catchment areas

Catchment areas for each centre were originally defined for the 1980 survey in terms of Commonwealth electoral divisions and subdivisions. A distance of approximately 16 km was used for ease of attending the centre, but particular geographic characteristics and the availability of public transport influenced the placement of the catchment area boundaries.

Catchment boundaries for the 1983 survey were also defined in terms of electoral divisions and subdivisions. However, because of changes to electoral boundaries since 1980 and 1983, it has been necessary to use the postcode level in the definition of comparable catchment areas for the 1989 survey.

The catchment areas for the 1989 survey were defined as follows:

	Electoral Division	*Electoral Subdivision or postcode*
SYDNEY SOUTH	Bennelong	
	Berowra	Hornsby Central, Pennant Hills, Turramurra, Turramurra South, Wahroonga
	Bradfield	
	Dundas	
	North Sydney	
	Parramatta	Ermington, Parramatta North
	Warringah	
SYDNEY SOUTH	Banks	
	Barton	
	Blaxland	
	Fowler	Postcode 2170 only
	Grayndler	
	Kingsford-Smith	
	Lowe	
	Phillip	
	Prospect	Fairfield
	Reid	
	St. George	
	Sydney	
	Wentworth	
MELBOURNE	Batman	Northcote, Preston East
	Chisholm	
	Gellibrand	
	Goldstein	
	Henty	
	Higgins	
	Kooyong	
	Maribyrnong	Essendon, Niddrie, Strathmore
	Melbourne	
	Melbourne Ports	
	Menzies	Bulleen, Doncaster
	Wills	

BRISBANE	Bowman	
	Brisbane	
	Griffith	
	Lilley	
	Morton	
	Petrie	Postcodes 4012, 4017, 4031, 4032, 4034, 4035, 4036, 4053, 4054, 4055
	Ryan	
	Fadden	Postcodes 4068, 4073-4077, 4103-4113, 4115-4117, 4119, 4122, 4123, 4126, 4156
	Forde	
	Rankin	
ADELAIDE	Adelaide	
	Bonython	Briggs North, Ramsay
	Boothby	
	Hawker	
	Hindmarsh	
	Kingston	
	Makin	
	Port Adelaide	
	Sturt	
PERTH	Canning	Postcodes 6107-6110, 6155
	Cowan	
	Curtin	
	Fremantle	Postcodes 6150, 6153-6160, 6162, 6163
	Moore	Postcodes 6053-6056
	Perth	
	Stirling	
	Swan	
	Tangney	
HOBART	Denison	
	Franklin	Bellerive, Clarence, Kingborough, Lindisfarne
DARWIN	Northern Territory	Casuarina
		Fannie Bay
		Jingili
		Karama
		Leanyer
		Ludmilla
		Millner
		Nightcliff
		Palmerston
		Port Darwin
		Sanderson
		Wanguri
CANBERRA	Canberra	
	Fraser	

APPENDIX E:

Australian standard classification of occupations (ASCO)

Major and minor groups

1 *Managers and Administrators*

11 Legislators and Government Appointed Officials
12 General Managers
13 Specialist Managers
14 Farmers and Farm Managers
15 Managing Supervisors (Sales and Service)
16 Managing Supervisors (Other Business)

2 *Professionals*

21 Natural Scientists
22 Building Professionals and Engineers
23 Health Diagnosis and Treatment Practitioners
24 School Teachers
25 Other Teachers and Instructors
26 Social Professionals
27 Business Professionals
28 Artists and Related Professionals
29 Miscellaneous Professionals

3 *Para-Professionals*

31 Medical and Science Technical Officers and Technicians
32 Engineering and Building Associates and Technicians
33 Air and Sea Transport Technical Workers
34 Registered Nurses
35 Police
39 Miscellaneous Para-Professionals

4 *Tradespersons*

41 Metal Fitting and Machining Tradespersons
42 Other Metal Tradespersons
43 Electrical and Electronics Tradespersons
44 Building Tradespersons
45 Printing Tradespersons
46 Vehicle Tradespersons
47 Food Tradespersons
48 Amenity Horticultural Tradespersons
49 Miscellaneous Tradespersons

5 *Clerks*

51 Stenographers and Typists
52 Data Processing and Business Machine Operators
53 Numerical Clerks
54 Filing, Sorting and Copying Clerks
55 Material Recording and Despatching Clerks
56 Receptionists, Telephonists and Messengers
59 Miscellaneous Clerks

6 *Salespersons and Personal Service Workers*

61 Investment, Insurance and Real Estate Salespersons
62 Sales Representatives
63 Sales Assistants
64 Tellers, Cashiers and Ticket Salespersons
65 Miscellaneous Salespersons
66 Personal Service Workers

7 *Plant and Machine Operators, and Drivers*

71 Road and Rail Transport Drivers
72 Mobile Plant Operators (except Transport)
73 Stationary Plant Operators
74 Machine Operators

8 *Labourers and Related Workers*

81 Trades Assistants and Factory Hands
82 Agricultural Labourers and Related Workers
83 Cleaners
84 Construction and Mining Labourers
89 Miscellaneous Labourers and Related Workers

APPENDIX F:

Sample numbers, population estimates and post-strata weights

SAMPLE NUMBERS

Australian and Overseas born by age and sex, 1988

Centre	*Age* 20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	*All ages*
						MALES					
Australian born											
Sydney	57	73	49	63	65	44	51	45	57	39	543
Melbourne	33	28	39	40	24	24	19	27	25	27	286
Brisbane	31	38	42	38	41	26	19	19	33	20	307
Adelaide	72	78	94	86	78	70	46	41	54	47	666
Perth	35	42	43	41	29	28	25	33	22	22	320
Hobart	40	53	53	65	55	35	36	28	40	32	437
Darwin	26	38	48	67	63	40	25	11	13	4	335
ACT	47	41	43	50	55	36	20	17	16	15	340
Total	341	391	411	450	410	303	241	221	260	206	3,234
Overseas born											
Sydney	25		43		73		68		61		270
Melbourne	17		24		35		34		27		137
Brisbane	6		17		22		17		15		77
Adelaide	30		45		72		71		60		278
Perth	15		29		54		32		33		163
Hobart	4		9		34		19		20		86
Darwin	23		40		51		29		13		156
ACT	18		32		42		36		23		151
Total	138		239		383		306		252		1,318
						FEMALES					
Australian born											
Sydney	57	70	58	80	77	72	59	55	60	61	649
Melbourne	24	34	43	39	29	19	23	22	32	28	293
Brisbane	34	38	35	38	47	34	30	34	34	23	347
Adelaide	80	92	90	82	76	61	47	48	56	63	695
Perth	31	29	48	47	36	40	25	29	24	21	330
Hobart	41	57	66	69	60	39	35	32	40	35	474
Darwin	41	48	60	68	55	37	18	12	12	6	357
ACT	38	46	48	52	44	41	29	20	22	14	354
Total	346	414	448	475	424	343	266	252	280	251	3,499
Overseas born											
Sydney	21		50		63		46		40		220
Melbourne	11		15		42		41		19		128
Brisbane	10		18		21		20		15		84
Adelaide	27		59		80		56		50		272
Perth	26		25		40		35		24		150
Hobart	11		15		15		21		24		86
Darwin	24		50		48		21		9		152
ACT	10		29		53		28		16		136
Total	140		261		362		268		197		1,228

POPULATION ESTIMATES

Population estimates of capital city statistical divisions.
Australia and Overseas born by age and sex, 1988

Centre	Age 20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	All ages
					MALES						
Australian born											
Sydney	100,595	99,954	88,719	76,655	71,289	52,118	46,367	48,562	46,685	40,288	671,232
Melbourne	93,573	87,764	75,398	61,176	55,383	39,087	33,377	34,724	33,826	28,253	542,561
Brisbane	40,509	39,293	35,542	33,032	30,901	22,376	18,473	17,886	17,122	14,810	269,944
Adelaide	32,026	30,625	26,783	23,430	20,585	13,961	11,364	11,788	12,664	11,471	194,697
Perth	29,167	29,561	27,170	22,335	19,288	13,960	11,896	11,385	10,080	8,612	183,454
Hobart	5,947	6,224	6,017	5,282	4,608	3,448	2,881	2,846	2,873	2,297	42,423
Darwin	2,725	2,850	2,561	2,300	1,796	1,147	810	652	588	352	15,781
ACT	9,977	9,442	8,213	7,847	6,704	4,297	3,174	2,549	2,113	1,505	55,821
Total	314,519	305,713	270,403	232,057	210,554	150,394	128,342	130,392	125,951	107,588	1,975,913
Overseas born											
Sydney	76,859		104,034		100,720		65,591		45,492		392,696
Melbourne	60,669		85,919		88,996		66,146		43,273		345,003
Brisbane	18,256		22,442		22,319		14,669		11,309		88,995
Adelaide	20,097		25,059		25,381		21,746		17,281		109,564
Perth	27,990		34,182		33,774		22,796		17,483		136,225
Hobart	1,361		2,095		2,276		1,907		1,530		9,169
Darwin	1,711		2,237		2,112		1,083		570		7,713
ACT	5,205		6,845		7,093		4,307		2,570		26,020
Total	212,148		282,813		282,671		198,245		139,508		1,115,385

FEMALES

Australian born											
Sydney	99,897	101,567	90,432	81,040	74,449	55,745	49,805	53,033	54,400	51,161	711,529
Melbourne	93,360	89,831	77,005	65,821	58,349	41,393	36,279	38,006	38,835	36,920	575,799
Brisbane	40,263	40,462	37,323	35,369	32,147	23,453	19,681	19,684	19,388	18,691	286,461
Adelaide	31,483	31,270	28,145	25,138	21,490	14,642	12,332	13,783	15,034	15,237	208,554
Perth	29,913	30,304	28,456	24,039	20,453	15,155	12,742	12,669	11,619	11,032	196,382
Hobart	6,008	6,494	6,269	5,546	4,842	3,639	3,193	3,150	3,179	3,026	45,346
Darwin	2,524	2,816	2,556	2,141	1,597	1,053	678	593	580	365	14,903
ACT	9,668	8,955	8,345	8,056	6,878	4,461	3,166	2,542	2,290	1,941	56,302
Total	313,116	311,699	278,531	247,150	220,205	159,541	137,876	143,460	145,325	138,373	2,095,276
Overseas born											
Sydney	78,425		102,467		84,895		53,304		43,645		362,736
Melbourne	60,213		86,307		80,129		55,729		40,779		323,157
Brisbane	18,157		22,130		19,161		11,661		11,199		82,308
Adelaide	19,590		25,126		24,661		19,540		16,344		105,261
Perth	28,531		34,739		29,898		20,044		17,194		130,406
Hobart	1,385		1,922		1,908		1,578		1,280		8,073
Darwin	1,825		2,301		1,613		759		459		6,957
ACT	4,994		6,966		6,210		3,454		2,575		24,199
Total	213,120		281,958		248,475		166,069		133,475		1,043,097

POST-STRATA WEIGHTS

These weights were used to calculate estimates based on the total sample. The weights may be calculated by dividing the population distribution by the sample distribution, i.e. $(N_h/N)/(n_h/n)$. Weights were recalculated for estimates based on sub-sets of the sample, for example blood chemistry estimates based on fasting respondents only.

	Age										
Centre	*20-24*	*25-29*	*30-34*	*35-39*	*40-44*	*45-49*	*50-54*	*55-59*	*60-64*	*65-69*	*All ages*
						MALES					
Australian born											
Sydney	2.60	2.01	2.66	1.79	1.61	1.74	1.34	1.59	1.20	1.52	1.82
Melbourne	4.17	4.61	2.84	2.25	3.39	2.40	2.58	1.89	1.99	1.54	2.80
Brisbane	1.92	1.52	1.24	1.28	1.11	1.27	1.43	1.38	0.76	1.09	1.30
Adelaide	0.65	0.58	0.42	0.40	0.39	0.29	0.36	0.42	0.34	0.36	0.43
Perth	1.23	1.04	0.93	0.80	0.98	0.73	0.70	0.51	0.67	0.58	0.85
Hobart	0.22	0.17	0.17	0.12	0.12	0.14	0.12	0.15	0.11	0.11	0.14
Darwin	0.15	0.11	0.08	0.05	0.04	0.04	0.05	0.09	0.07	0.13	0.07
ACT	0.31	0.34	0.28	0.23	0.18	0.18	0.23	0.22	0.19	0.15	0.24
Total	1.36	1.15	0.97	0.76	0.76	0.73	0.78	0.87	0.71	0.77	0.90
Overseas born											
Sydney		4.52		3.56		2.03		1.42		1.10	2.14
Melbourne		5.25		5.27		3.74		2.86		2.36	3.71
Brisbane		4.48		1.94		1.49		1.27		1.11	1.70
Adelaide		0.99		0.82		0.52		0.45		0.42	0.58
Perth		2.74		1.73		0.92		1.05		0.78	1.23
Hobart		0.50		0.34		0.10		0.15		0.11	0.16
Darwin		0.11		0.08		0.06		0.05		0.06	0.07
ACT		0.43		0.31		0.25		0.18		0.16	0.25
Total		2.26		1.74		1.09		0.95		0.82	1.25
						FEMALES					
Australian born											
Sydney	2.64	2.18	2.35	1.52	1.45	1.16	1.27	1.45	1.36	1.26	1.65
Melbourne	5.85	3.98	2.69	2.54	3.03	3.28	2.37	2.60	1.83	1.98	2.96
Brisbane	1.78	1.60	1.60	1.40	1.03	1.04	0.99	0.87	0.86	1.22	1.24
Adelaide	0.59	0.51	0.47	0.46	0.43	0.36	0.39	0.43	0.40	0.36	0.45
Perth	1.45	1.57	0.89	0.77	0.85	0.57	0.77	0.66	0.73	0.79	0.90
Hobart	0.22	0.17	0.14	0.12	0.12	0.14	0.14	0.15	0.12	0.13	0.14
Darwin	0.09	0.09	0.06	0.05	0.04	0.04	0.06	0.07	0.07	0.09	0.06
ACT	0.38	0.29	0.26	0.23	0.24	0.16	0.16	0.19	0.16	0.21	0.24
Total	1.36	1.13	0.94	0.78	0.78	0.70	0.78	0.86	0.78	0.83	0.90
Overseas born											
Sydney		5.62		3.08		2.03		1.74		1.64	2.48
Melbourne		8.24		8.66		2.87		2.05		3.23	3.80
Brisbane		2.73		1.85		1.37		0.88		1.12	1.48
Adelaide		1.09		0.64		0.46		0.52		0.49	0.58
Perth		1.65		2.09		1.12		0.86		1.08	1.31
Hobart		0.19		0.19		0.19		0.11		0.08	0.14
Darwin		0.11		0.07		0.05		0.05		0.08	0.07
ACT		0.75		0.36		0.18		0.19		0.24	0.27
Total		2.29		1.63		1.03		0.93		1.02	1.28

APPENDIX G:

List of tables

Body mass index
6.2.5 Observed frequencies, age, sex
6.2.6 Estimates, age, sex

Waist
6.2.7 Observed frequencies, age, sex
6.2.8 Estimates, age, sex

Hip
6.2.9 Observed frequencies, age, sex
6.2.10 Estimates, age, sex

Blood chemistry

Plasma cholesterol
Men fasting
6.3.1 Observed frequencies, age
6.3.2 Estimates, age

Plasma cholesterol
Women fasting, not now taking the oral contraceptive pill
6.3.3 Observed frequencies, age
6.3.4 Estimates, age

Plasma cholesterol
Women fasting, now taking the oral contraceptive pill
6.3.5 Observed frequencies, age
6.3.6 Estimates, age

HDL cholesterol
Men fasting
6.3.7 Observed frequencies, age, sex
6.3.8 Estimates, age

HDL cholesterol
Women fasting, not now taking the oral contraceptive pill
6.3.9 Observed frequencies, age
6.3.10 Estimates, age

HDL cholesterol
Women fasting, now taking the oral contraceptive pill
6.3.11 Observed frequencies, age
6.3.12 Estimates, age

Plasma triglyceride
Men fasting
6.3.13 Observed frequencies, age
6.3.14 Estimates, age

Plasma triglyceride
Women fasting, not now taking the oral contraceptive pill
6.3.15 Observed frequencies, age
6.3.16 Estimates, age

Plasma triglyceride
Women fasting, now taking the oral contraceptive pill
6.3.17 Observed frequencies, age
6.3.18 Estimates, age

History of medical measurements, conditions and treatment

Q.9 When did you last have your blood pressure measured?
6.4.1 Observed frequencies, age, sex
6.4.2 Estimates, age, sex

Q.10 When did you last have your blood cholesterol measured?
6.4.3 Observed frequencies, age, sex
6.4.4 Estimates, age, sex

Medical conditions
6.4.5 Observed frequencies, age, sex
6.4.6 Estimates, age, sex

Medical treatments
6.4.7 Observed frequencies, age, sex
6.4.8 Estimates, age, sex

Alcohol intake

Q.33 How often do you usually drink alcohol?
6.5.1 Observed frequencies, age, sex
6.5.2 Estimates, age, sex

Q.34 On a day when you drink alcohol, how many drinks do you have?
6.5.3 Observed frequencies, age, sex
6.5.4 Estimates, age, sex

Alcohol index
6.5.5 Observed frequencies, age, sex
6.5.6 Estimates, age, sex

Smoking behaviour

Smoking status
6.6.1 Observed frequencies, age, sex
6.6.2 Estimates, age, sex

Daily consumption of manufactured cigarettes by current smokers
6.6.3 Observed frequencies, age, sex
6.6.4 Estimates, age, sex

Dietary behaviour

Q.37 How often do you eat the fat on meat?
6.7.1 Observed frequencies, age, sex
6.7.2 Estimates, age, sex

Q.35 Do you add salt to your food after it is cooked?
6.7.3 Observed frequencies, age, sex
6.7.4 Estimates, age, sex

Q.36 Which of the following best describes your usual way of eating?
6.7.5 Observed frequencies, age, sex
6.7.6 Estimates, age, sex

Oral contraceptive use

Q.18 Have you ever taken the oral contraceptive pill?
6.8.1 Observed frequencies, age
6.8.2 Estimates, age

Q.19 For how long altogether have you taken the oral contraceptive pill?
6.8.3 Observed frequencies, age
6.8.4 Estimates, age

Q.20 Are you now taking the oral contraceptive pill?
6.8.5 Observed frequencies, age
6.8.6 Estimates, age

Q.21 Are you now pregnant?
6.8.7 Observed frequencies, age
6.8.8 Estimate, age

Exercise for recreation, sport or health fitness

Q.22 In the past 2 weeks, did you engage in vigorous exercise — exercise which made you breathe harder or puff and pant?
6.9.1 Observed frequencies, age, sex
6.9.2 Estimates, age, sex

Q.23 In the past 2 weeks, did you engage in less-vigorous for recreation, sport or health-fitness purposes which did not make you breathe harder or puff and pant?
6.9.3 Observed frequencies, age, sex
6.9.4 Estimates, age, sex

Q.24 In the past 2 weeks, did you walk for recreation or exercise?
6.9.5 Observed frequencies, age, sex
6.9.6 Estimates, age, sex

Whether person exercised or not during leisure time
6.9.7 Observed frequencies, age, sex
6.9.8 Estimates, age, sex

Multiple major risk factors

Multiple major risk factors
6.10.1 Observed frequencies, age, sex
6.10.2 Estimates, age, sex

APPENDIX H:

Related publications

National Heart Foundation of Australia. Risk Factor Prevalence Study, No. 1 — 1980. Canberra: NHFA, 1982.

National Heart Foundation of Australia. Risk Factor Prevalence Study, No. 2 — 1983. Canberra: NHFA, 1985.

Menzies School of Health Research. Prevalence of cardiovascular disease risk factors in Darwin, 1985-1986. Darwin: MSHR, 1986.

Commonwealth Department of Health. National Dietary Survey of Adults: 1983, No. 1 Foods consumed. Canberra: AGPS, 1986.

Commonwealth Department of Community Services and Health. National Dietary Survey of Adults: 1983, No. 2 Nutrient intakes. Canberra: AGPS, 1987.