National Better Health Program

IMPROVED NUTRITION

Monitoring targets towards 2000

A statistical report to the Project Planning Team

Australian Institute of Health

September 1989

Acknowledgments

Overall responsibility for the planning and production of this report rests with the Australian Institute of Health. Much of the content was prepared as background material for the Nutrition Project Planning Team which reported to the Management Committee of the National Better Health Program in July 1989.

The report was prepared by Stan Bennett. Norma Briscoe helped to prepare the figures and Peter Wright helped to prepare Appendix B. Penny Rogers, Colin Mathers, Ian Buttsworth John Goss, Judith Abercromby and Carolyn Merton also gave valuable advice and assistance as did members of the Nutrition Project Planning Team and officers of the Nutrition Section of the Commonwealth Department of Community Services and Health.

CONTENTS

ABBREVIATIONS

ABS	Australian Bureau of Statistics
ACHPER	Australian Council for Health, Physical Education and Recreation
ACTHA	Australian Capital Territory Health Authority
ACV	Anti-cancer Council of Victoria
AIH	Australian Institute of Health
CSIRO	CSIRO Division of Human Nutrition
CTHC	Capital territory Health Commission (now ACTA)
CVD	Cardiovascular Disease
DCSH	Commonwealth Department of Community Services and Health
HCV	Health Commission of Victoria
HTIC	Health Targets Implementation Committee
MSHR	Menzies School of Health Research, Darwin
NCSCH	National Cancer Statistics Clearing House
NHMRC	National Health and Medical Research Council
NHF	National Heart Foundation
NOHSC	National Occupational Health and Safety Commission
NSWDAA	New South Wales Drug and Alcohol Authority
VME	Victorian Ministry of Education

1. INTRODUCTION

1.1 Purpose of the report

The Australian Institute of Health (AIH) is preparing a series of reports on data for the priority areas of the National Better Health Program (NBHP). There will be five reports, one for each of the priority areas identified by the Health Targets and Implementation Committee (HTIC) in their 1988 report 'Health for all Australians'. The priority areas are:

- high blood pressure
- health of older people
- improved nutrition
- preventable cancers, and
- injury prevention.

Data monitoring and evaluation are integral components of the NBHP. In particular, the terms of reference of the Nutrition Project Planning Team (PPT) include:

- to assess the available data and other information relevant to the achievement of set goals and targets for its specified priority area;
- to review the goals and targets set by the Health for All Australians report and recommend any amendments or amendment processes; and
- the identification of inequalities in health status between population subgroups.

The purpose of this report is to identify all relevant data sources for the nutrition priority area, collate and assess available statistical information relating to the goals and targets in a standardised format, and to identify gaps and deficiencies for monitoring purposes.

The AIH plans to use these reports as the basis for a series of publications presenting the baseline picture in each of the priority areas.

1.2 Overview of the problem

Unbalanced nutrition is one of the three major risk factors for premature death in Australia, along with smoking and high alcohol consumption (HTIC 1988).

Diseases related to diet include coronary heart disease, high blood pressure, stroke, some cancers, maturity onset diabetes and gall bladder disease (HTIC 1988). These diseases, which are also related to other life-style factors, are major causes of death in this country. The table below shows that, in 1987, diseases in part due to diet accounted for 55 per cent of all deaths in Australia.

Table: Deaths in Australia, 1987

Cause of death	Number	Percent
Cardiovascular diseases(a)(in part due to diet)		
Coronary heart disease	32 093	27.4
Stroke	12 568	10.7
Atherosclerosis	1 166	1.0
Hypertensive disease	1 056	0.9
Some cancers(b)	10 999	9.4
Diseases of the digestive system	2 831	2.4
Alcohol related diseases(c)	1 391	1.2
Diabetes mellitus	2 067	1.8
Specific nutritional diseases(d)	153	0.1
All diet related disease (in part due to diet)	64 326	54.8
Other cardiovascular disease	8 793	7.5
Respiratory diseases	8 491	7.2
Motor vehicle accidents	2 783	2.4
Other accidents	2 601	2.2
All other causes (incl. other cancers)	30 327	25.8
Total	117 321	100.0

(a) Excludes some cardiovascular diseases.
(b) Includes cancers of digestive system, breast cancer, endometrial cancer.
(c) Includes cirrhosis of the liver, alcoholic psychosis, alcohol dependent syndrome, alcohol abuse.
(d) Includes nutritional deficiencies, obesity.
Source: ABS, Causes of death, Australia 1987 Cat No 3303.0

Other conditions associated with diet include overweight and obesity, diverticulitus and constipation, iron deficiency anaemia, dental caries and under-nutrition.

Part of the problem is the overconsumption of foods combined with less active lifestyles. A contributing factor to overconsumption is the

increase in the energy density of the food supply due to the addition of fat and/or refined sugar to many foods. Unbalanced nutrition leading to nutritional disorders is also linked with excessive consumption of sodium and alcohol, and low intakes of complex carbohydrates and dietary fibre. Australian data confirms this as a description of the Australian diet (HTIC 1988).

As would be expected, excess body weight is very common in Australia. Some 6 percent of men and 9 percent of women are obese. A further 36 per cent of men and 26 per cent of women are overweight (National Heart Foundation of Australia 1985). Overweight and obesity are associated with a number of chronic diseases and their reduction and prevention would greatly improve health (HTIC 1988).

Improved nutrition provides a major opportunity to achieve better health for all Australians. The Better Health Commission, established to advise the Federal government on measures to improve the health of Australians, identified eating nutritious foods as the single most important foundation for good health. The National Health and Medical Research Council said at its 102nd session that nutrition was one of the most important determinants of health and welfare in human populations and that assessment of nutritional status should be one of the most important activities in monitoring the health of Australians. It is in this context that the 'Health for all Australians' report gives improved nutrition as a priority area and sets seven targets to be achieved by the year 2000. These are detailed in Section 2.

In addition to specifying nutrition targets, the 'Health for all Australians' report also gives specific targets for some conditions associated with diet; namely coronary heart disease, breast cancer, diabetes mellitus Type 2, high blood pressure, stroke and dental caries. These are provided in Appendix A.

2. GOALS AND TARGETS

2.1 Nutrition related goal and targets

The Health Targets and Implementation Committee (1988) in their report 'Health for all Australians' set the following nutrition related goals and targets for Australia. They are based on those of the Nutrition Task Force of the Better Health Commission.

Goal

To reduce the incidence and prevalence of diet related health disorders.

Targets

To reduce the prevalence of overweight and obesity from 38 percent (1983) to 25 percent or less in people aged 25-64 years by the year 2000.

To reduce the contribution of fat to dietary energy from 38 percent (1983-84) to 33 percent or less by the year 2000.

To reduce the contribution of refined sugars to dietary energy from 14 percent (1983-84) to 12 percent or less by the year 2000.

To reduce dietary sodium intake to 100 millimoles (2.3 grams) per day or less by the year 2000.

To reduce the contribution of alcoholic beverages to dietary energy from 6 percent (1983-84) to 5 percent or less by the year 2000.

To increase dietary fibre intake to 30 grams per day or more by the year 2000.

To increase the level of breast-feeding at 3 months of life to 80 percent or more by the year 2000.

2.2 Equity goal and target groups

Equity goal

The Committee recommended that the reduction of inequalities should become a major goal of projects aimed at health promotion and disease prevention undertaken by Commonwealth, States and Territories. The principal inequalities to be addressed are those related to socioeconomic disadvantage and to Aboriginality. By the year 2000 the actual differences in health status between groups in Australian society should be reduced by at least 25 percent.

Equity target groups

The Committee endorsed WHO's European target of reducing the differences in health status between disadvantaged and advantaged groups by 25 percent by the year 2000. This should be translated to cover differences in health status amongst:

- socioeconomic or occupational groups;
- Aboriginal and non-Aboriginal Australians;
- ethnic groups, especially those born in non English speaking countries;
- geographical areas such as between States and Territories, or urban and rural locations;
- sexes (except where the differences are sex determined);
- age groups (insofar as the differences reflect preventable factors)

Diet related health problems are far more prevalent in those of low socioeconomic status and among Aboriginal people (HTIC 1988).

2.3 Major sources of dietary information

The table below illustrates the major sources of dietary information for use in nutritional surveillance in Australia (adapted from James 1988).

Food chain sector	Type of data	Scope and limitations
National food supply	Apparent consumption data	Based on production, imports, exports, stocks and wastage
Market distribution	Industry data	Yet to be determined
Household expenditure	Economic data	Financial outlay of whole households
Personal behaviour	Knowledge, opinions, attitudes	Opinion poll type data. Survey data
Individual nutrition	Individual food and nutrient intake	A variety of methods of varying reliability

Apparent consumption data is published annually by the Australian Bureau of Statistics (ABS Cat No 4306.0). The figures are total and per capita estimates and are not capable of disaggregation to population subgroups.

Industry data could be a valuable source of time series data and this needs to be explored further.

The household expenditure data is also published by the Australian Bureau of Statistics on a periodic basis and provides financial data on some 90 food items (ABS Cat Nos 6528.0, 6535.0).

The use of commercial market research organisations in a monitoring and evaluation strategy needs to be investigated further. The types of measures obtainable from consumers include awareness and comprehension (of public health campaigns, food ingredients); knowledge, beliefs and concerns (about food values, health risks, food principles, additives); experience, habits and repertoire (of food types, cooking methods); priorities (taste, nutrition, convenience, self-esteem); shopping habits and their influence on food selection; influence on decision-making by members of the household not responsible for the main shopping; seeking of and receptiveness to dietary advice from different sources; diet (balance, excesses, deficiencies, foods not eaten)(Grant 1987).

The best indicator of nutrient intake and dietary patterns comes from data collected on the food consumption of individuals. These surveys are expensive and labour intensive and are conducted on an ad hoc basis.

3. AN ASSESSMENT OF BASELINE DATA

3.1 Overview of data sources

This section gives an overview of the major national or State data collections relevant to the monitoring of targets in the Nutrition priority area and the development of priorities for intervention projects. Only collections of statistically representative data are discussed. An inventory of all such relevant data collections is given in Appendix B of this report.

Overweight and obesity

There are few collections which provide information on the prevalence of overweight and obesity or undernutrition amongst Australians. The 1980 and 1983 Risk Factor Prevalence Surveys, conducted by the National Heart Foundation (NHF), collected height and weight measures for adults aged 25 to 64 years living in the six State capital cities, which enabled the study population to be classified as underweight, acceptable weight, overweight and obese according to their body mass. The same protocol was followed in the 1983 Risk Factor Study component of the Hunter Region Heart Disease Programme which surveyed the age range 35 to 64 years. The same protocol was also adopted in a survey to measure the Prevalence of Cardiovascular Disease Risk Factors in Darwin 1985-86. The 1985 Australian Health and Fitness Survey collected height, weight, arm girth, waist girth, hip girth as well as triceps, biceps, subscapular, suprailiac and midabdominal skinfolds, for students aged 7 to 15 years. In all collections, the information was obtained from measurements taken by trained nursing sisters. Other surveys have collected self reported height and weight; for example, the 1984 and 1988 ACT Health Surveys. As well, the hospital morbidity and mortality collections provide some information on undernutrition and overnutrition problems amongst Australians.

Nutrient intake

A number of the nutrition related targets require information on the total food consumption and nutrient intakes of Australians in order to monitor progress towards their attainment. To-date, there have been few collections providing such information for Australians.

The only collection providing a time series of data from which trends in food consumption patterns can be monitored is the 'Apparent Consumption of Foodstuffs and Nutrients, Australia'. This is presently published on an annual basis and data are available from 1936-37. The figures are based on production and import type statistics to which factors are applied to derive the intake of energy and 12 nutrients. The estimates so derived are 'per capita' figures and cannot be disaggregated to socio-demographic sub-groups in Australia. Because the figures are based on national estimates of food disappearance, it is important to recognise that the time series overestimates total food intake. Waste and losses resulting from storage and preparation of food, garbage waste and non-human use of food is not taken into account. However, this reference source is invaluable as it provides the only data available on trends in food availability and it is the data source on which several of the targets were based.

In 1983, the National Dietary Survey of Adults collected the first comprehensive data on the dietary habits of adult Australians since 1944. The survey provides information on the food consumption and nutrient intake of a random sample of Australians aged 25 to 64 years, living in State capital cities, and enables comparisons to be drawn between various subgroups of the population. The method used for the collection of the data was the 24-hour dietary recall. A dietary survey using the same protocol was conducted in Darwin in 1985, however the data collected has yet to be processed.

In 1985, the National Dietary Survey of Schoolchildren was conducted in all States and Territories and in both rural and urban areas. It collected food intake data on a random sample of boys and girls aged 10 to 15 years. The method of data collection was the 24-hour diet record.

To convert food consumption to nutrient intake these surveys used a special database. It was based on McCance and Widdowson's 'The Composition of Foods'. Values were adjusted to accommodate differences between British and Australian foods, and to allow for known ingredient information for Australian processed foods. Data from a major food analytical program for the revision of the national reference 'Tables of Composition of Australian Foods' were also used to modify the food composition database.

In 1985, a random State-wide nutrition survey of the population of Victoria was conducted by CSIRO. The Victorian Nutrition Survey used a mail food frequency questionnaire and covered the age range 18 years and over. The Victorian survey based the conversion of foods to nutrients on the British food tables.

In 1988, a postal nutrition survey was conducted in South Australia - the South Australian Dietary Survey. The dietary questionnaire was a quantified food frequency with additional questions relating to food preparation and handling techniques. The questionnaire was a refinement of the one used in the Victorian Nutrition Survey in 1985. The age range was 18 years and over with no upper age limit and covered the metropolitan and non-metropolitan area.

Sodium intake

The sodium target is the only target within the nutrition priority area on which there is no baseline data. The target was based on a recommendation of the National Health and Medical Research Council's working party on sodium in the Australian diet. There are no national figures available on the average sodium intake of Australians. The working party had to base their deliberations on data from 6 studies in which the sample sizes were small and not representative of the range of food practices in Australia. A major factor in the lack of national data is the practical difficulty of collecting urinary specimens in random population based sample. 24 hr urinary excretion is believed to provide the best estimate of sodium intake.

The Victorian Nutrition Survey and the South Australian Dietary Survey have published estimates of the daily intake of sodium. Both surveys used the food frequency method and estimates from the surveys do not take into account sodium in cooking additives, table use, sodium in the water supply, sodium in vitamin and mineral supplements or sodium in

pharmaceuticals. In addition there inadequacies in the sodium estimates in the nutrient data base. Estimates from these surveys have been included in this report for for the purpose of setting these minimum estimates in the context of the sodium target for the year 2000.

Dietary behaviour

Surveys which collect data on dietary related behaviour are more common. For example, the 1980 and 1983 Risk Factor Prevalence Surveys provide some information on dietary behaviours such as usual way of eating and use of salt. Also, data on the use of vitamin and mineral supplements are available from the Risk Factor Prevalence Surveys and the 1977/78 and 1983 Australian Health Surveys.

Household expenditure surveys conducted by the Australian Bureau of Statistics provide estimates of expenditure on some 90 food items. The last survey for which data have been published was conducted in 1984. Data from the 1988 Household Expenditure Survey is not yet available.

The CSIRO Division of Human Nutrition has conducted state surveys of nutritional practices and beliefs e.g. Worsley & Crawford 1983, 1984.

The New South Wales Department of Agriculture has recently surveyed factors affecting fruit and vegetable consumption.

Alcoholic beverages (or alcohol)

Direct measures of the contribution of alcoholic beverages or alcohol to energy intake are available from the nutrition surveys mentioned previously. Measures of alcoholic intake per se are available from a number of surveys undertaken in recent years by various agencies which provide information on the alcohol consumption patterns of groups of Australians.

For adults, data are available from the 1980 and 1983 Risk Factor Prevalence Surveys. As well, the Australian Bureau of Statistics has conducted a number of surveys of alcohol use including the national 1977 Survey of Alcohol and Tobacco Consumption Patterns; Lifestyle - Health Risk Factors, NSW, October 1985; Alcohol Consumption Patterns, WA, October 1985; Alcohol Consumption Patterns, SA, October 1983; and Alcohol, Tobacco and Analgesic Consumption, NT, October 1986.

Data for school students are available from the 1985 Australian Health and Fitness Survey and the 1984 Anti-Cancer Council of Victoria National Survey of Tobacco and Alcohol Use. Surveys of the use of alcohol (and other drugs) by secondary students have been conducted regularly in NSW since 1971, the most recent being in 1983 and 1986. In 1985, the Victorian Ministry of Education and the Health Commission of Victoria conducted a survey of drug use, including alcohol, among Victorian post-primary students. None of these surveys however provide a direct measure of the contribution of alcoholic beverages (or alcohol) to energy.

In November 1985, as part of the National Campaign Against Drug Abuse, a national survey was conducted on behalf of the then Commonwealth Department of Health among people aged 14 years and over to establish attitudes to a range of social issues in Australia including alcohol

usage. The 1984 Household Expenditure Survey provides estimates of expenditure on beer, wine and spirits.

Obtaining accurate measurements of alcohol consumption is a difficult task with under-reporting being a major problem, and differences in the approaches used make it difficult to compare results across these many data collections.

Breast feeding

Studies undertaken of infant feeding practices, including of the establishment and duration of breast feeding, of bottle feeding, and of the introduction of solids, present a confusing picture of trends that are a product of different methods of sampling and population selection rather than true differences.

Sampling is often opportunistic. For example, Borda et al's study (1978) is based on all women who delivered at Royal Women's Hospital (Sydney) in a two month period; Gracey et al's study (1983) of Aboriginal children draws from population sites accessible to investigators in a limited time period, with different numbers within comparative study groups (196 in location A, 376 in B, and 73 in C). Urban studies and so-called State studies have paid no greater attention to comparability: e.g. Hitchcock and Coy's study (1988) of infant feeding in western Australia and Tasmania compares a stratified metropolitan and rural sample, with self-weighted sub-sampling of infants from baby health centres in each area (W.A.) with all infants presenting at all clinics in three regions of Tasmania, without information that might justify the selection of these and not other regions in this latter State. Similarly, Lilburne et al's study (1988) of bottle feeding seeks to draw conclusions based on a sample of 223 infants from 14 clinics in the inner West, compared with 51 infants from five clinics in a middle class area. Hartmann (1987) does not discuss sample size or sampling procedure in his 1987 study of lactogenesis, although from other reports it is known that members of the Nursing Mothers Association of Australia were used.

Arbitrary and opportunistic sampling procedures, poorly defined populations, and use of questionnaires for infant feeding practice surveys without supplementary qualitative methodology to verify data, mean that material that has been published is at best suggestive of trends of practices. There have been very few studies since the early 1980s (Manderson 1989) and none provide a statistically valid picture or identify State-wide or national trends (Manderson L personal correspondence June 1989).

Palmer (1985) surveyed 60 hospitals, using proportional sampling to represent major maternity hospitals, private nursing homes, regional hospitals, district base hospitals and smaller country hospitals on the basis of the number of deliveries and on the socio-demographic profile of the populations serviced. The resulting estimate of the incidence of breast-feeding at time of discharge was based on almost 84 000 live births for 1982. The incidence of breast-feeding at 3 months was estimated indirectly using supplementary data and constructed time frames.

Future data collections

The Australian Bureau of Statistics series of National Health Surveys will provide every five years, beginning 1989/90, a range of data which will assist in the monitoring and evaluation of the nutrition targets. This includes information on:

- changes in dietary behaviours and attitudes
- alcohol consumption patterns of persons aged 18 years and over
- the use of vitamin and mineral supplements
- self-reported height and weight

and
- the breastfeeding of children.

The 1989 Risk Factor Prevalence Survey will obtain objective height and weight measures, thus providing three comparable cross-sectional estimates of weight for height spanning nine years. It will also collect self-reported height and weight which will allow the ABS National Health Survey data to be calibrated. It will also repeat some of the dietary behaviour questions first asked in 1980.

Western Australia is conducting a dietary survey in conjunction with the Perth component of the 1989 NHF Risk Factor Survey using 24-hour recall methodology which is consistent with that used in the 1983 National Dietary Survey of Adults. The data collection period is June to November 1989.

The Hunter Region Heart Disease Prevention Programme's risk factor study includes some dietary food frequency questions aimed primarily at assessing dietary fat intake. The study also measures height and weight and hence provides estimates of the proportion of overweight or obese persons in the Newcastle region. It is a repeat of a similar survey conducted in 1983 and the general survey procedures are consistent with those of the 1989 NHF Risk Factor Prevalence Survey. Data collection spans 1988 and 1989 and covers the age range 35 to 69 years.

The Queensland Health Department conducted a state-wide health survey in May 1989 which collected food frequency data. The Food and Nutrition Project in Victoria is planning to repeat in 1990 their 1985 state-wide survey of dietary intake which uses a food frequency questionnaire. The Health Department of New South Wales is planning a dietary survey of selected ethnic groups.

The data collected in the 1985 Darwin Dietary Survey conducted in association with a cardiovascular disease risk factor prevalence survey is yet to be processed.

A preliminary bulletin with results from the first 6 months of the 1988 Household Expenditure Survey (ABS) is scheduled for release in September 1989.

Data availability from the food industry and from private market research organisations remains to be assessed.

3.2 Graphical presentation

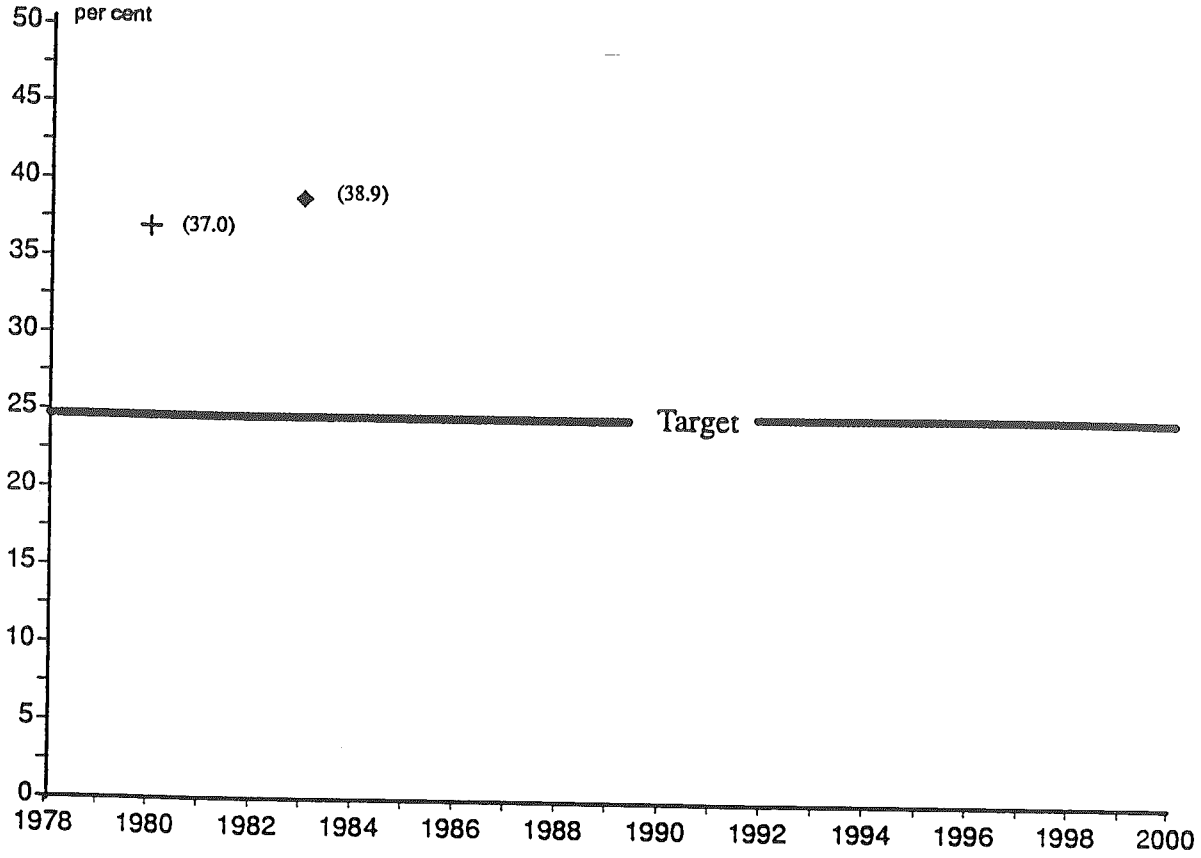
This section provides a visual display of the baseline data and current trends for each of the target areas. The following figures are included:

Figure	
1	Prevalence of overweight and obesity
2	Contribution of fat to dietary energy
3	Refined sugars to dietary energy
4	Dietary sodium intake
5a	Alcoholic beverages to dietary energy
5b	Alcohol to dietary energy
6	Dietary fibre intake
7	Breastfeeding at 3 months of life
8	Prevalence of overweight and obesity - States
9	Contribution of fat to dietary energy - States
10	Refined sugars to dietary energy - States
11	Dietary sodium intake - States
12	Alcohol to dietary energy - States
13	Dietary fibre intake - States

Figures 1 to 7 illustrate recent Australian data for each of the 7 targets thus providing a baseline picture. Figures 8 to 13 show State data where these are available.

Figure 1: Prevalence of overweight and obesity

Target: To reduce the prevalence of overweight and obesity from 38 percent (1983) to 25 percent or less in people aged 25–64 years by the year 2000.



+	NHF Risk Factor Prevalence Survey, 1980	25–64 yrs
◆	NHF Risk Factor Prevalence Survey, 1983	25–64 yrs

Comment:

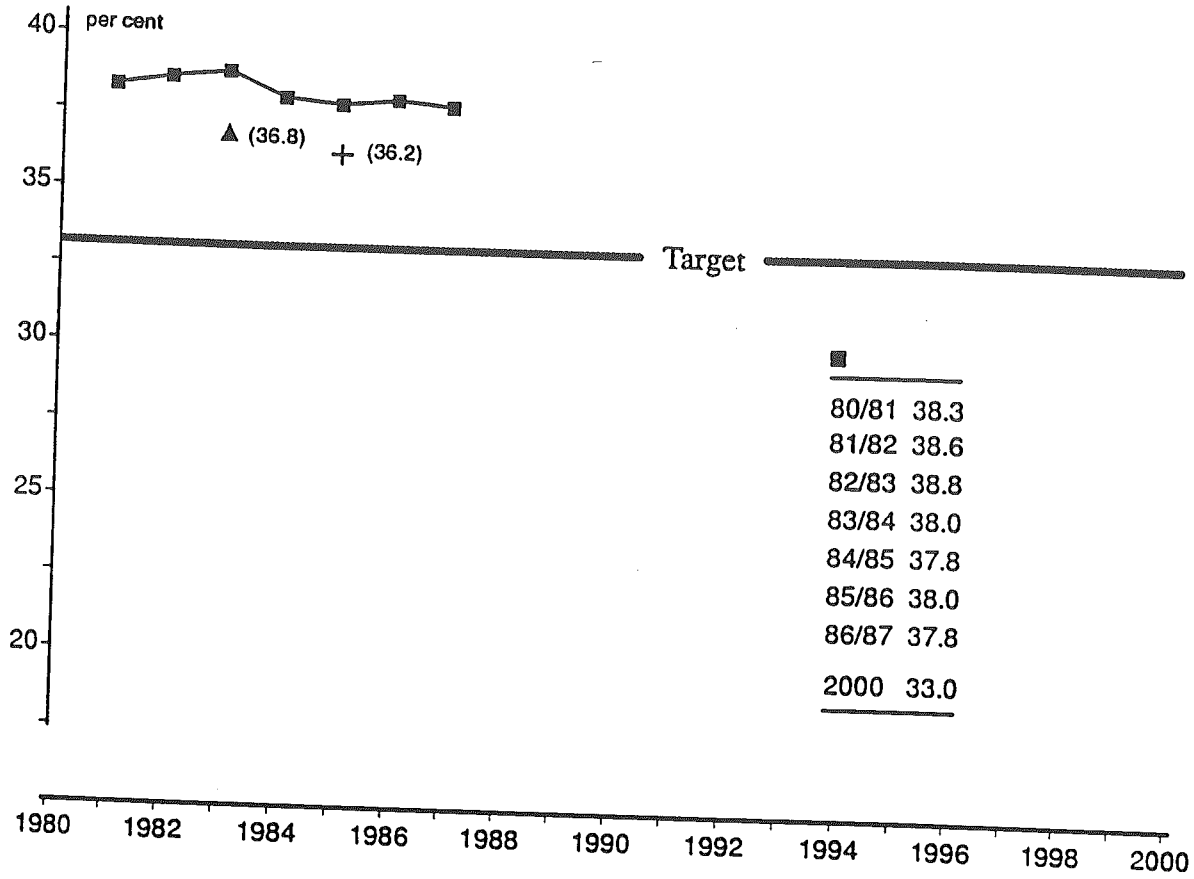
The target was based on estimates from the NHF Risk Factor Prevalence Surveys.

The most recent 'national' estimates based on physical measurement are for 1983. The estimates are for people living in the State capital cities. Data collection for a third risk factor survey commenced in June 1989. The ABS National Health Survey commences data collection in October 1989 for 12 months and collects self reported height and weight.

Prevalence is higher for men (42.6%) than women (35.1%) and increases with age.

Figure 2: Contribution of fat to dietary energy

Target: To reduce the contribution of fat to dietary energy from 38 percent (1983–84) to 33 percent or less by the year 2000.



■	Apparent consumption of foodstuffs, ABS	per capita
▲	National Dietary Survey of Adults, 1983	25–64 yrs
+	National Dietary Survey of Schoolchildren, 1985	10–15 yrs

Comment:

The target was based on data from Apparent Consumption of Foodstuffs and Nutrients and as such is a per capita figure.

In addition to using different dietary data collection methodology and covering different age ranges (See Appendix C) the data sources also differed in the way fat data are collected and processed.

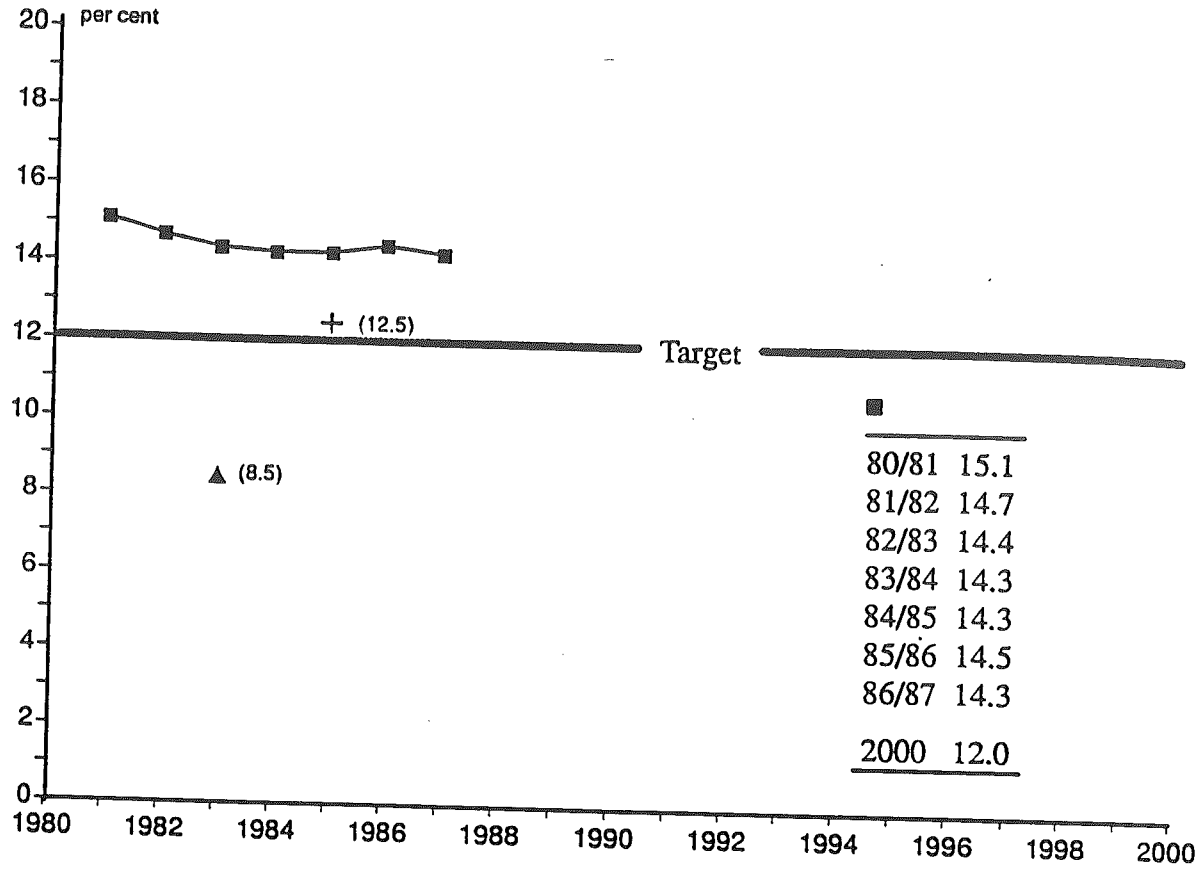
The apparent consumption figures includes fat on meat. It makes no allowances for trimming and no allowance for cooking loss. It does allow for butchering waste.

The National Dietary Survey of Adults collected information on fats and optional fat sources e.g. type of milk used in cooking. It specifically sought information on trimming of meat.

For both the National Dietary Survey of Adults and of Schoolchildren the nutrient data bank used to convert food intake to nutrient intake was based on British food tables supplemented by Australian food composition data.

Figure 3: Refined sugars to dietary energy

Target: To reduce the contribution of refined sugars to dietary energy from 14 percent (1983–84) to 12 percent or less by the year 2000.



■	Apparent consumption of foodstuffs, ABS	per capita
▲	National Dietary Survey of Adults, 1983	25–64 yrs
+	National Dietary Survey of Schoolchildren, 1985	10–15 yrs

Comment:

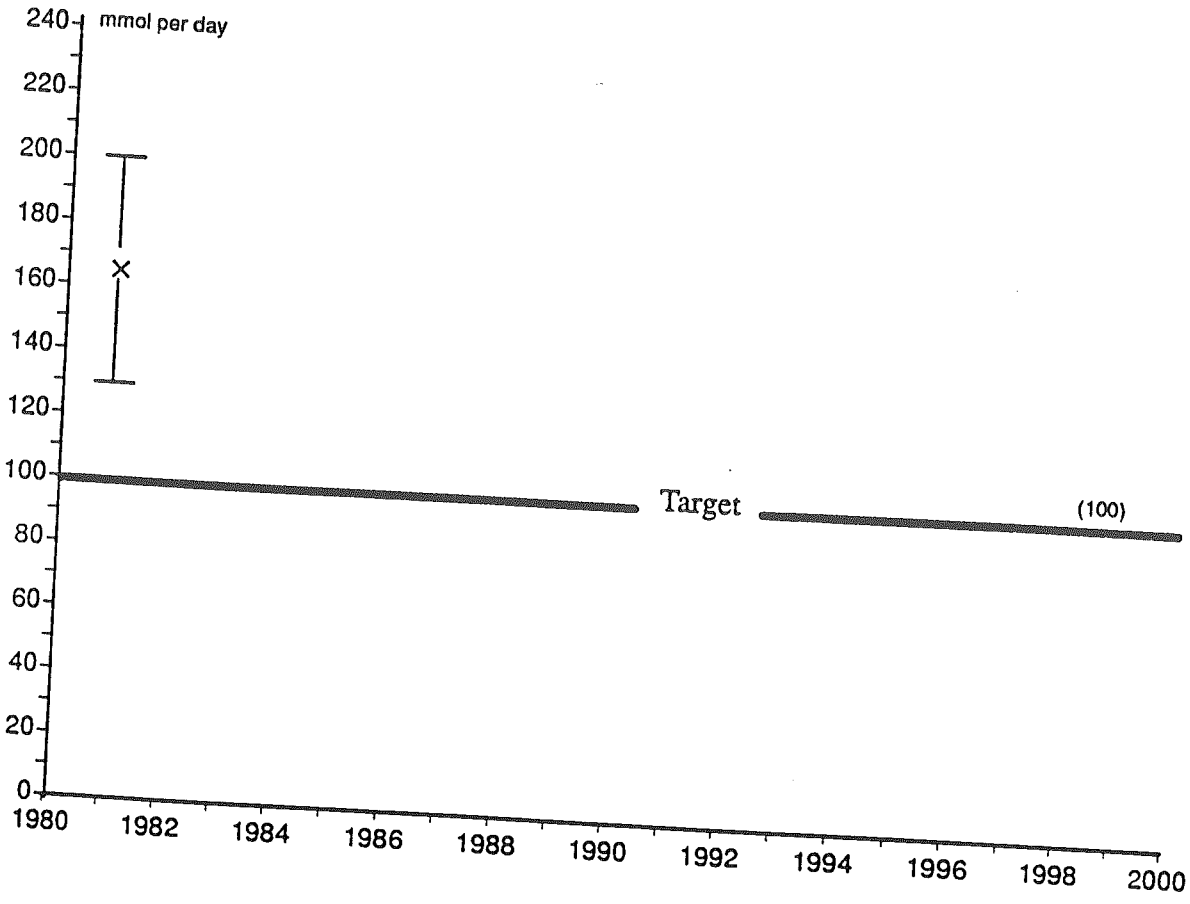
The target was based on data from Apparent Consumption of Foodstuffs and Nutrients and as such is a per capita figure. Changes in the intake of refined sugars will be reflected in this time series.

Estimates of intake from the national dietary surveys are below the apparent consumption figures. One explanation is that the nutrient data base which is used to derive refined sugars intake assume the maximum amount of natural sugars for each food. The refined sugars estimates are thus minimum values. The difficulty of providing valid estimates of refined sugars consumption from dietary survey data arises because of the problem of obtaining valid values of refined sugars content in many products. U.S. authorities prefer not to provide estimates for refined sugars contribution to diet because of the lack of valid data for refinied sugars contents of foods.

The biggest growth area in sugar usage is soft drinks and confectionery. Data on adolescent consumption, missing at present, is therefore a very important component of the total picture.

Figure 4: Dietary sodium intake

Target: To reduce dietary sodium intake to 100 millimoles (2.3 grams) per day or less by the year 2000.



× National Health and Medical Research Council, 1982

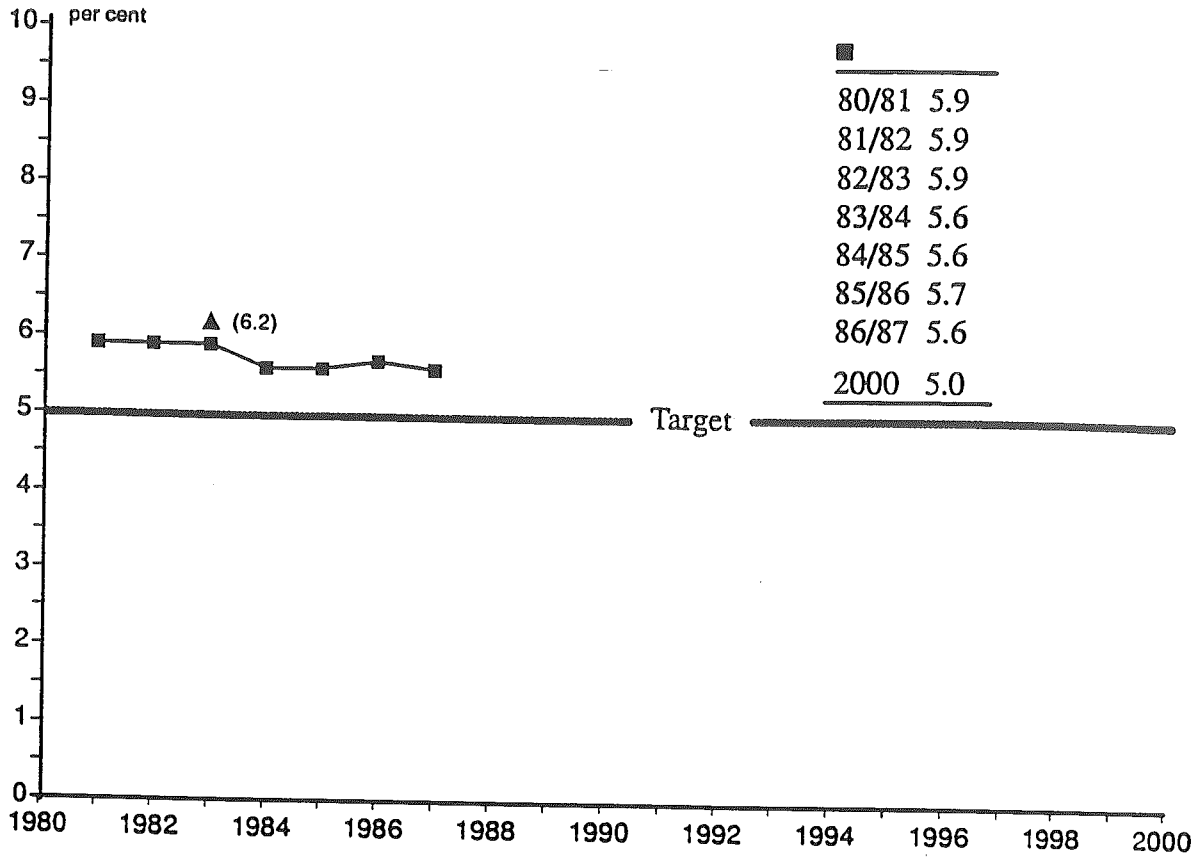
Comment:

The target was based on a recommendation of the National Health and Medical Research Council's working party on sodium in the Australian diet, that the aim should be to achieve a community sodium intake of under 100 mmol/day (2.3 g).

There are no comprehensive national figures available on the average sodium intake of Australians. In the few studies which are available the number of subjects has been small and the samples are not representative of the range of food practices characterising the Australian community this decade. Information on sodium intake has been almost entirely by 24–hour urinary excretion. From these few studies the average sodium intake of Australians appears to range from 130mmol/day to over 200mmol/day.

Figure 5a: Alcoholic beverages to dietary energy

Target: To reduce the contribution of alcoholic beverages to dietary energy from 6 percent (1983–84) to 5 percent or less by the year 2000.



■ Apparent consumption of foodstuffs, ABS per capita

▲ National Dietary Survey of Adults, 1983 25–64 yrs

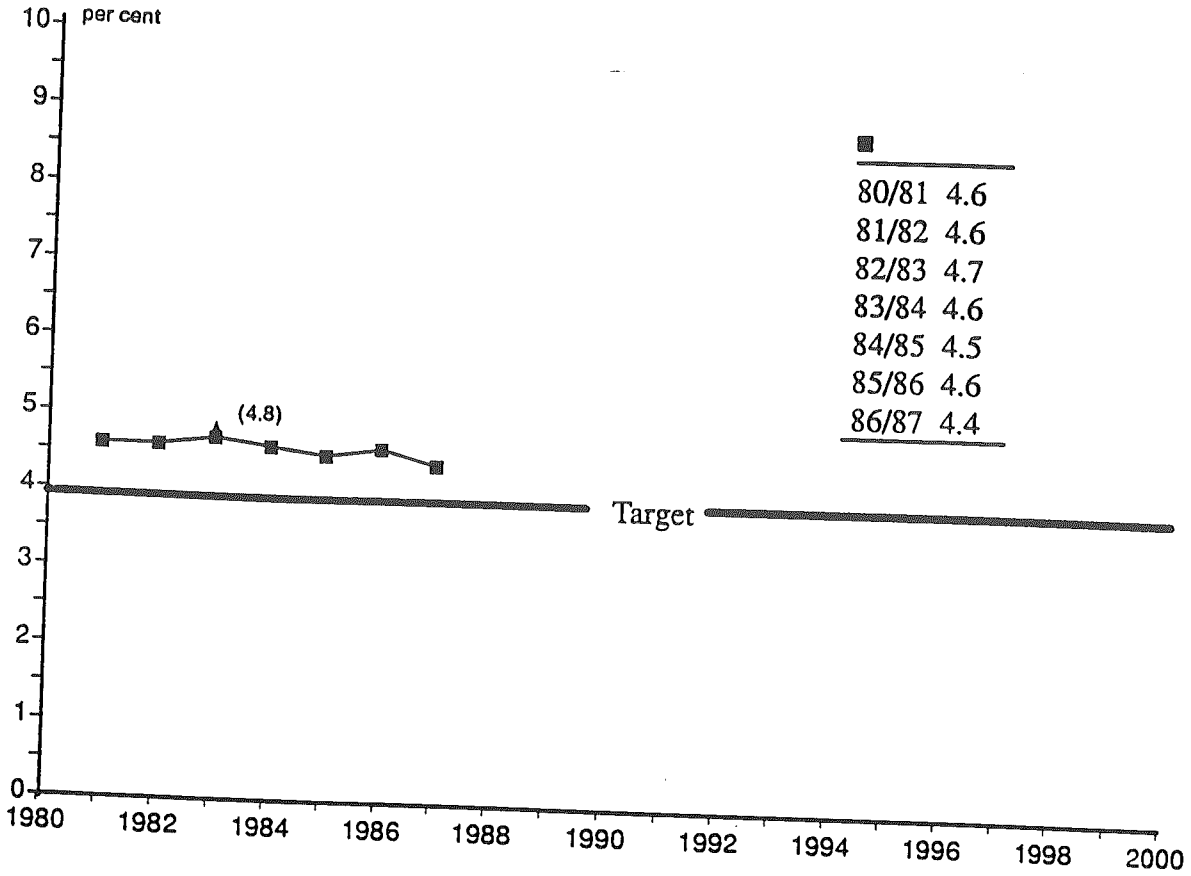
Comment:

The target was based on data from Apparent Consumption of Foodstuffs and Nutrients and as such is a per capita figure.

A reduction in alcohol consumption by changing from standard to reduced alcoholic beer and wine will not necessarily reduce the contribution to energy of alcoholic beverages. Figure 5b shows the equivalent target for the contribution of alcohol to energy.

Figure 5b: Alcohol to dietary energy

Target: To reduce the contribution of alcohol to dietary energy to 4 percent or less by the year 2000.



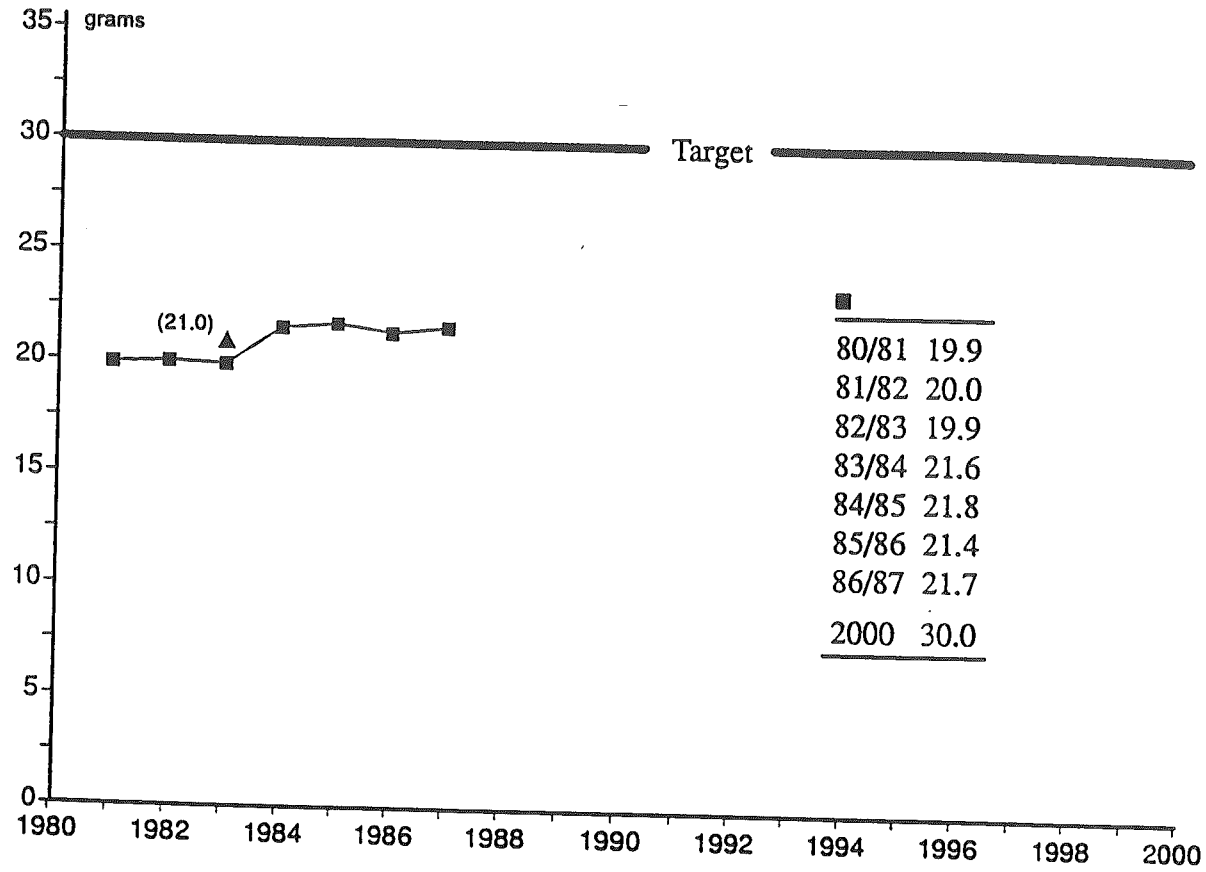
Comment:

The target of 5 per cent for the contribution of alcoholic beverages to energy intake converts to a target of 4 per cent for the contribution of alcohol. The time series is derived from apparent consumption figures.

Alcohol consumption is notoriously under–reported in survey collections. The National Dietary Survey of Adults used the 24 hour recall method which tends to reduce under–reporting as alcohol consumption is reported along with other food intake data. Since interviews were conducted during weekdays only, the NDSA estimate relates to intakes for Sunday to Thursday. Data for Fridays and Saturdays were not collected.

Figure 6: Dietary fibre intake

Target: To increase dietary fibre intake to 30 grams per day or more by the year 2000.



■ Apparent consumption of foodstuffs, ABS per capita

▲ National Dietary Survey of Adults, 1983 25–64 yrs

Comment:

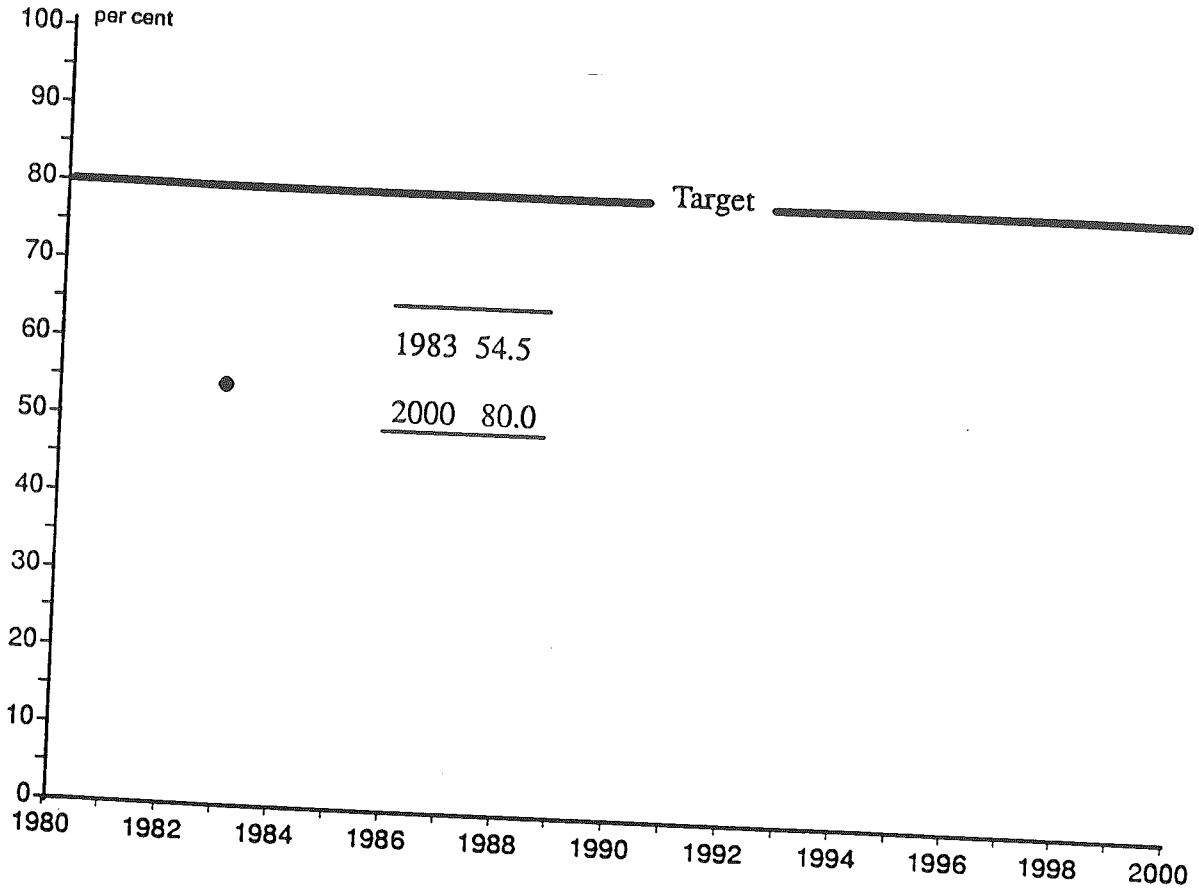
The target needs careful interpretation for children and the elderly who have lower food intakes and persons on a very high food intake.

The time series for dietary fibre intake is derived from ABS apparent consumption of foodstuffs data by applying edible portion factors and fibre content estimates to detailed apparent consumption figures for fruit, vegetables and grain.

The estimates are based on British dietary fibre data. Using the Australian dietary fibre data that is available produces slightly lower estimates.

Figure 7: Breast–feeding at three months of life

Target: To increase the level of breast–feeding at 3 months of life to 80 percent or more by the year 2000.



● N Palmer, Breast–feeding – the Australian situation. J Food Nutr. 42:1

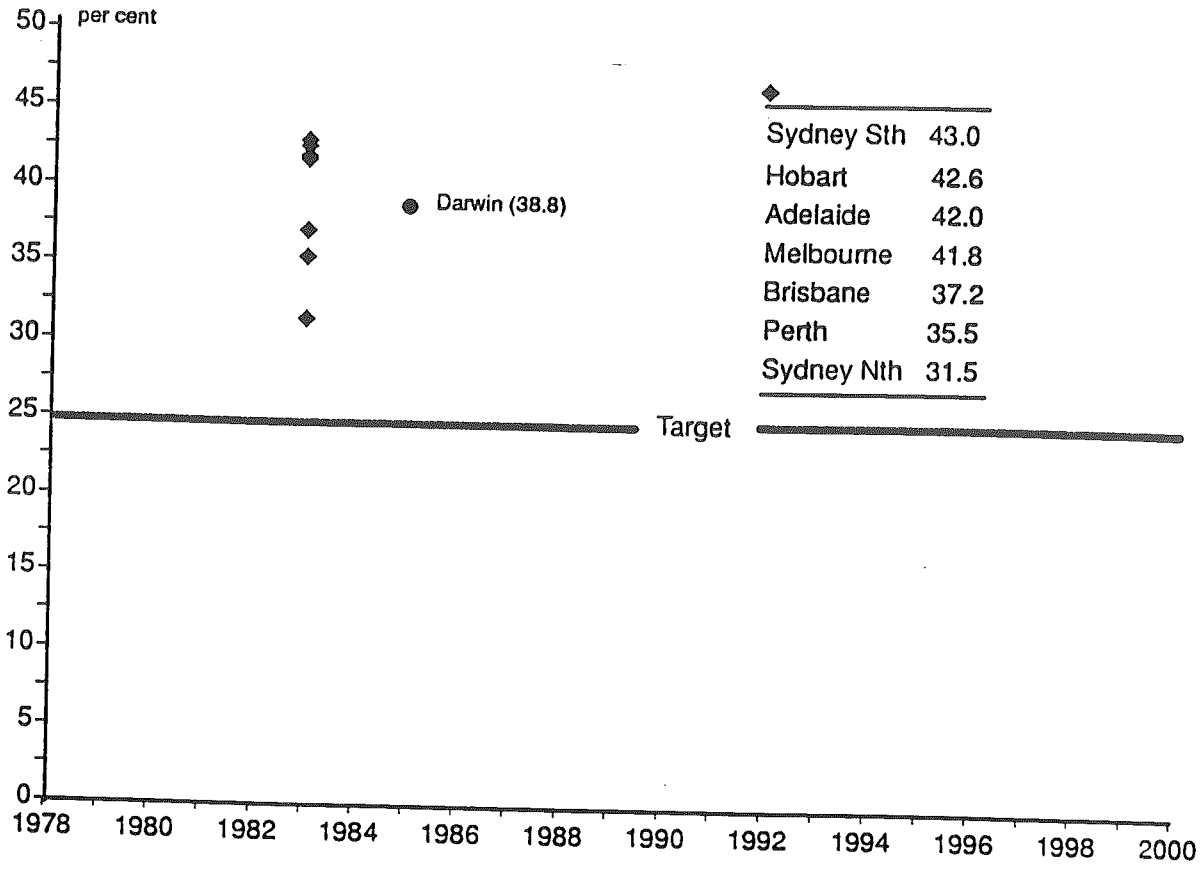
Comment:

The target was based on estimates from data collected in a survey of 60 hospitals sampled throughout Australia in 1983 and supplemented by administrative statistics.

Little increase in the overall present high prevalence of breast–feeding at time of discharge from hospital of the mother is suggested. The intention is to lengthen the breast–feeding period.

Figure 8: Prevalence of overweight and obesity – States

Target: To reduce the prevalence of overweight and obesity from 38 per cent (1983) to 25 per-cent or less in people aged 25–64 years by the year 2000.



◆ NHF Risk Factor Prevalence Survey, 1983 — 25–64 yrs

● Prevalence of Cardiovascular Disease Risk Factors in Darwin, 1985–86 — 25–64 yrs

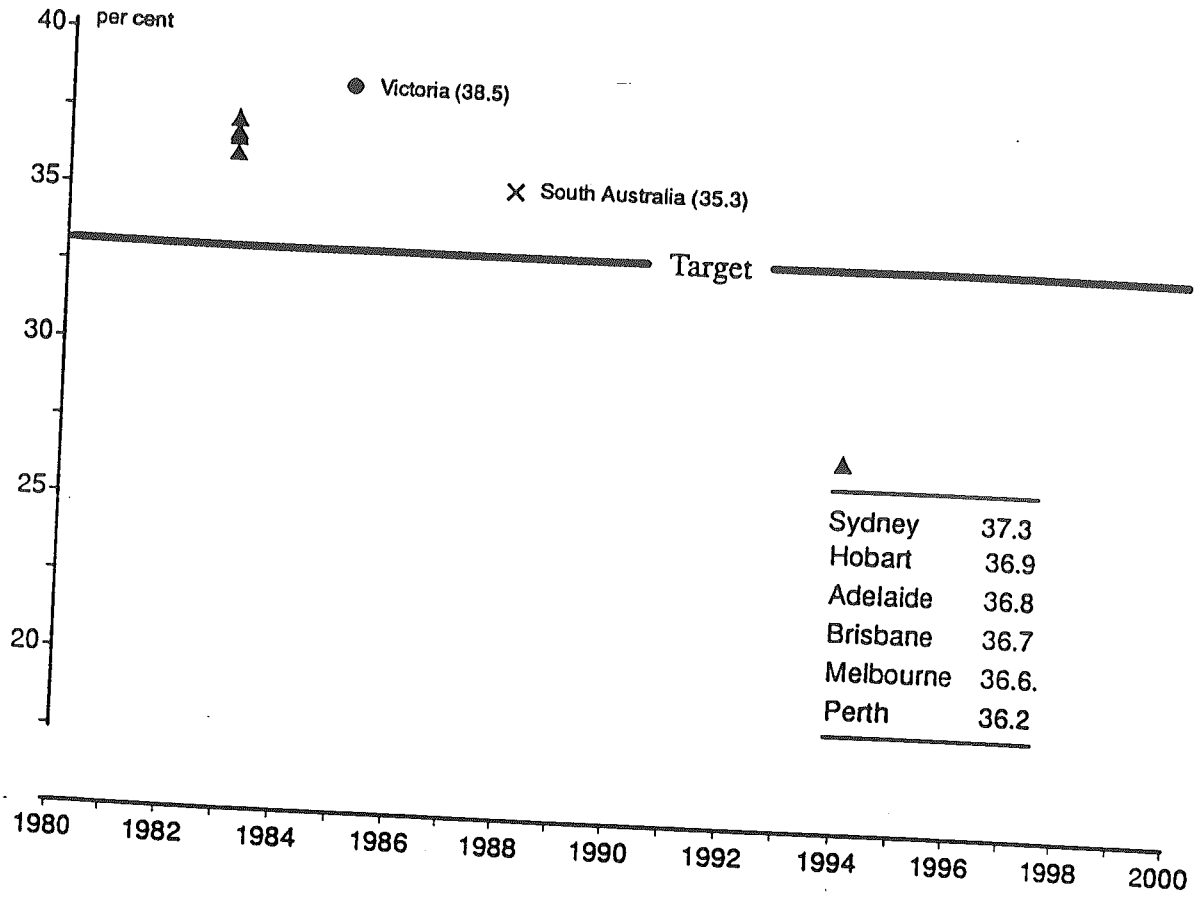
Comment:

The most recent 'State' estimates of overweight and obesity based on pysical measurement are for 1983 and relate to people living in the State capital cities. The survey in Darwin followed the same protocol as that used in the NHF Risk Factor Prevalence Surveys.

Data collection for a third risk factor survey commenced in June 1989. The ABS National Health Survey commences data collection in October 1989 for 12 months and collects self reported height and weight.

Figure 9: Contribution of fat to dietary energy – States

Target: To reduce the contribution of fat to dietary energy from 38 percent (1983–84) to 33 per-cent or less by the year 2000.



▲ National Dietary Survey of Adults, 1983 25–64 yrs

● The Victorian Nutrition Survey, 1985 18+ yrs

× South Australian Dietary Survey, 1988 18+ yrs

Comment:

The target was based on data from Apparent Consumption of Foodstuffs and Nutrients and as such is a per capita figure.

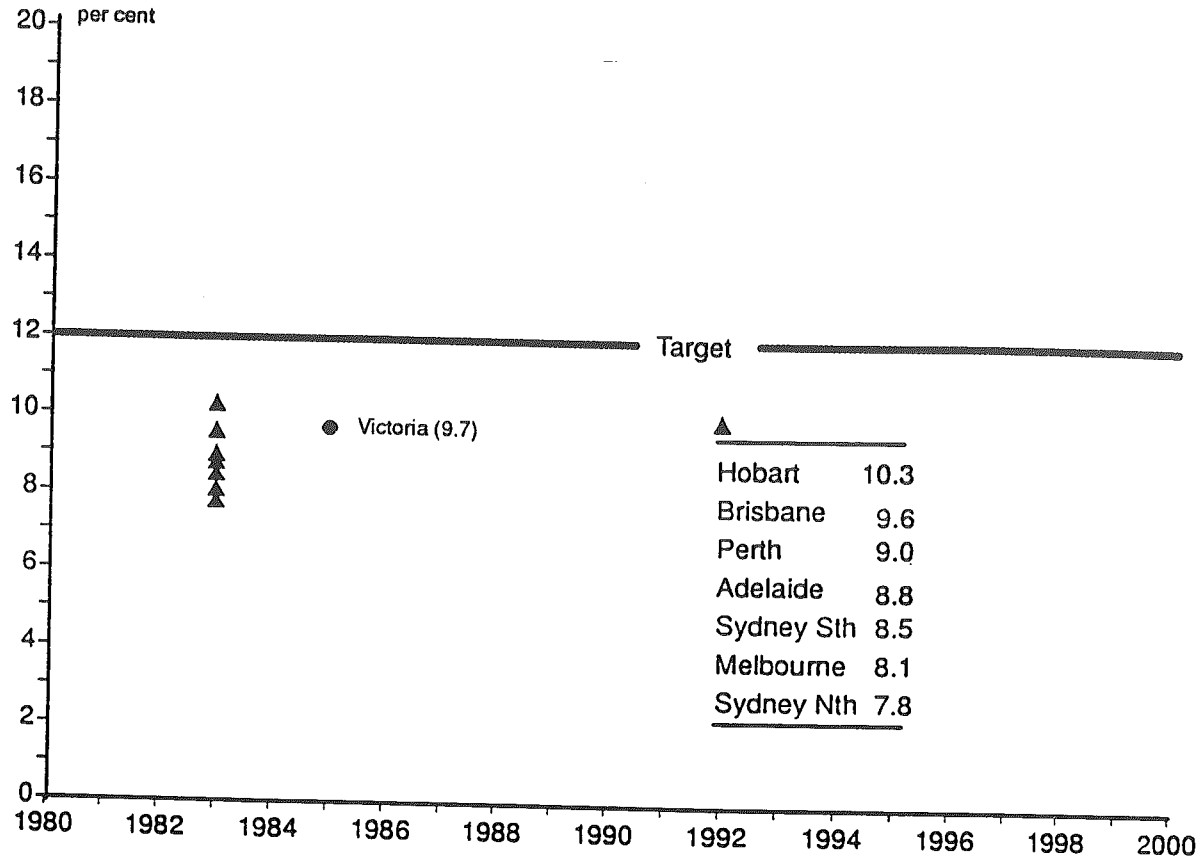
In addition to using different dietary data collection methodology and covering different age ranges (See Appendix C) the data sources also differed in the way fat data were collected and processed.

The National Dietary Survey of Adults collected information on fats and optional fat sources e.g. type of milk used in cooking. It specifically sought information on trimming of meat. The nutrient data bank used to convert food intake to nutrient intake was based on British food tables supplemented by Australian food composition data.

The Victorian Nutrition Survey and the South Australian Dietary Survey used the UK nutrient data bank.

Figure 10: Refined sugars to dietary energy – States

Target: To reduce the contribution of refined sugars to dietary energy from 14 percent (1983–84) to 12 percent or less by the year 2000.



▲ National Dietary Survey of Adults, 1983 — 25–64 yrs

● The Victorian Nutrition Survey, 1985 — 18+ yrs

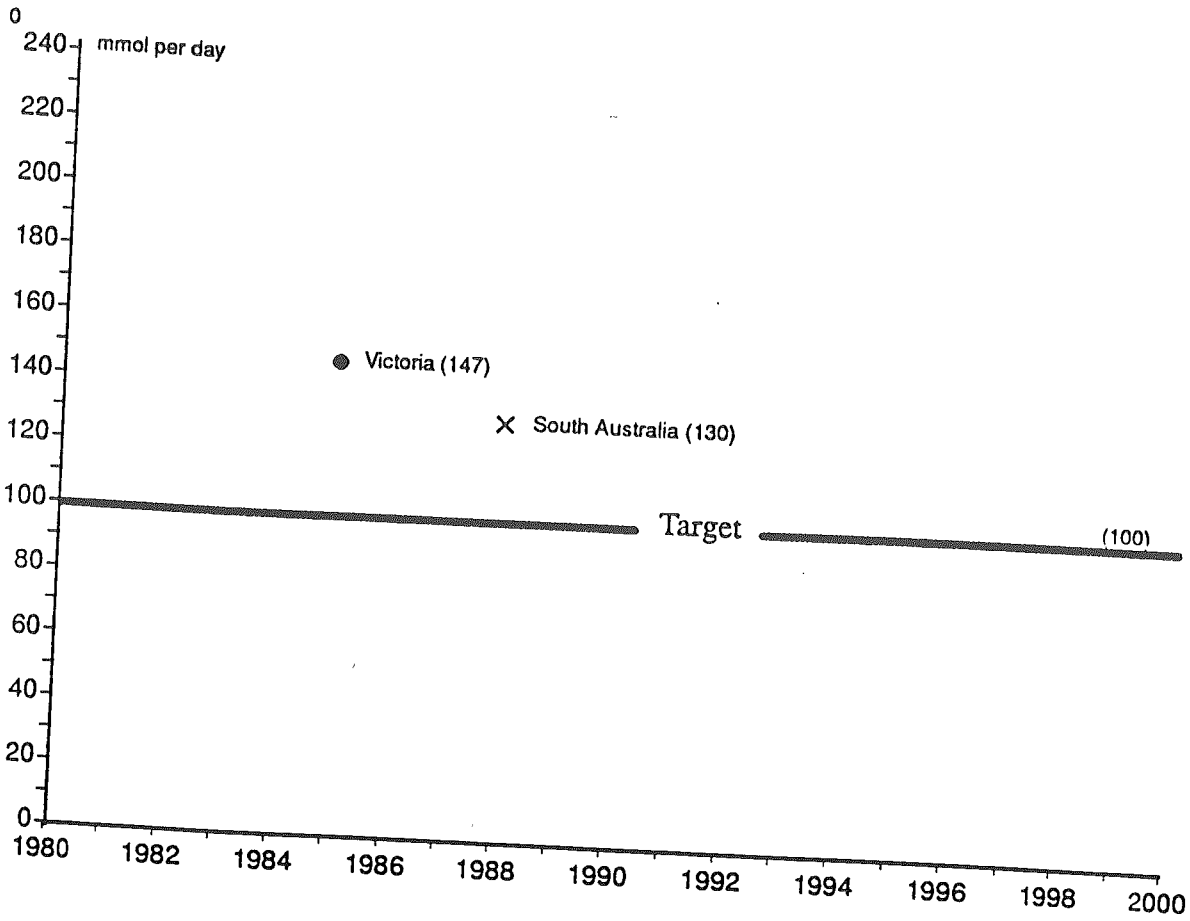
Comment:

The target was based on data from Apparent Consumption of Foodstuffs and Nutrients and as such is a per capita figure. Changes in the intake of refined sugars will be reflected in this time series.

The nutrient data bases which are used to derive refined sugars intake assume the maximum amount of natural sugars for each food. The refined sugars estimates are thus minimum values. (see comments Figure 3) The biggest growth area in sugar usage is soft drinks and confectionery.

Figure 11: Dietary sodium intake – States

Target: To reduce dietary sodium intake to 100 millimoles (2.3 grams) per day or less by the year 2000.



●	The Victorian Nutrition Survey, 1985	18+ yrs
×	South Australian Dietary Survey, 1988	18+ yrs

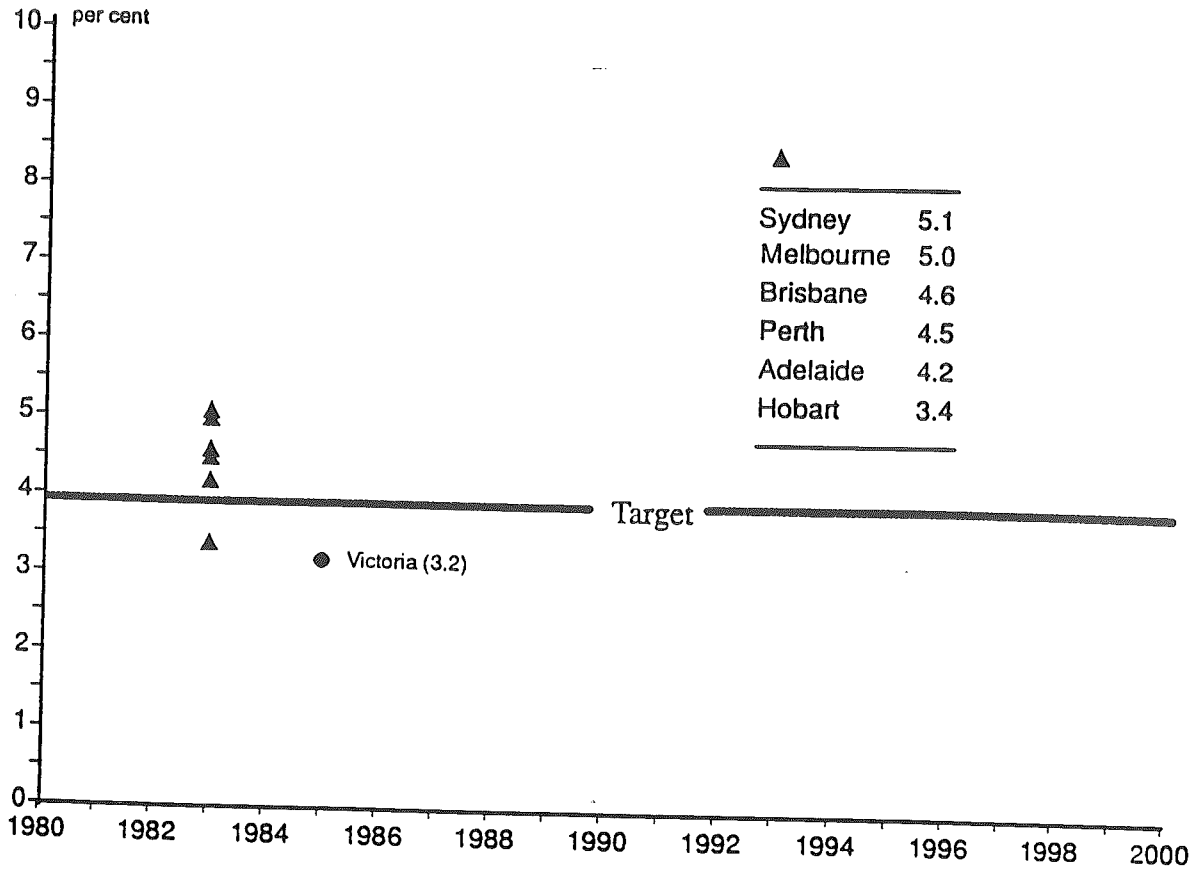
Comment:

The target was based on a recommendation of the National Health and Medical Research Council's working party on sodium in the Australian diet, that the aim should be to achieve a community sodium intake of under 100 mmol/day (2.3 g).

The Victorian Nutrition Survey and the South Australian Dietary Survey both used the food frequency method and estimates from the surveys do not take into account sodium in cooking additives, table use, sodium in the water supply, sodium in vitamin and mineral supplements or sodium in pharmaceuticals. A similarly based estimate could be produced from the national dietary surveys of adults and schoolchildren but would be considered to have little validity because of the omissions listed above and inadequate sodium estimates in the nutrient data bank.

Figure 12: Alcohol to dietary energy – States

Target: To reduce the contribution of alcohol to dietary energy from 6 percent (1983–84) to 4 percent or less by the year 2000.



▲ National Dietary Survey of Adults, 1983 — 25–64 yrs

● The Victorian Nutrition Survey, 1985 — 18+ yrs

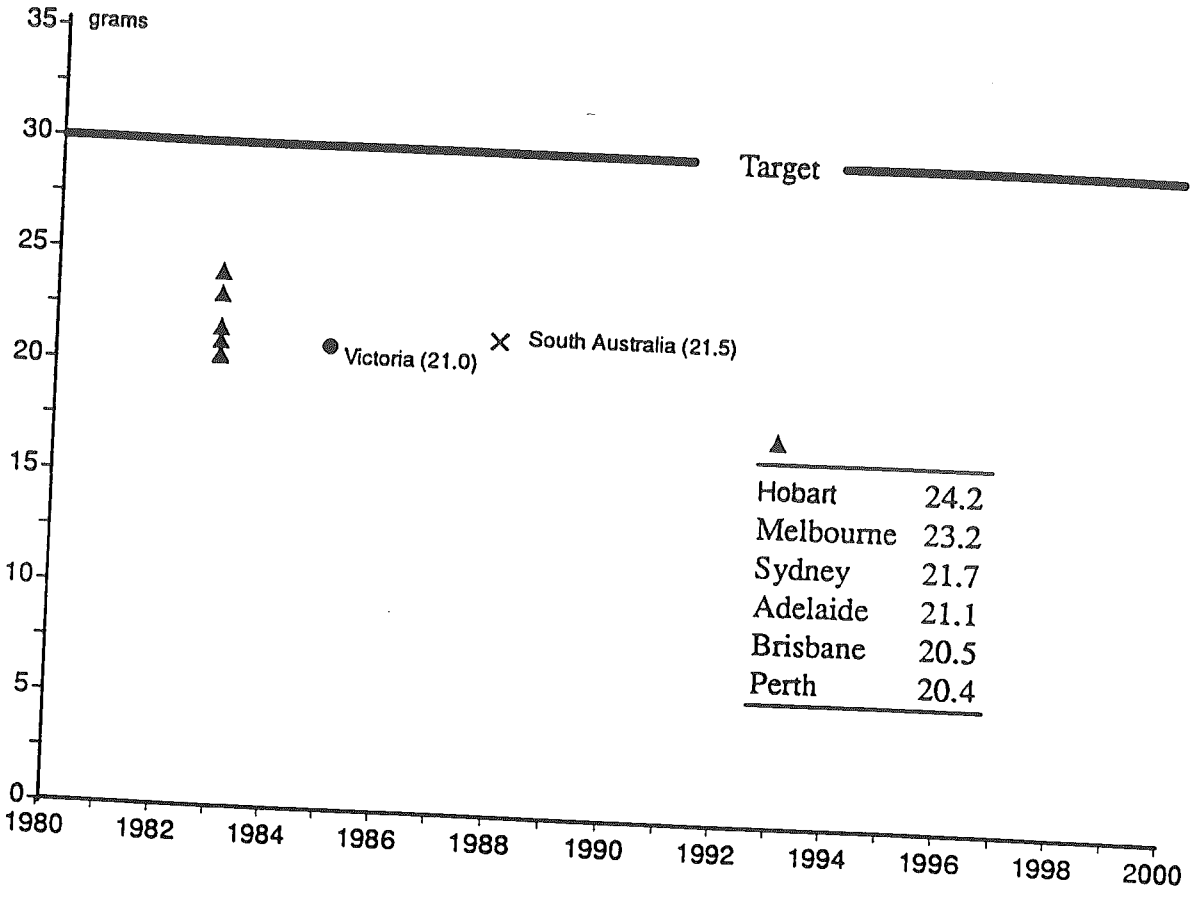
Comment:

The target of 5 per cent for the contribution of alcoholic beverages to energy intake converts to a target of 4 per cent for the contribution of alcohol. The time series is derived from apparent consumption figures.

Alcohol consumption is notoriously under–reported in survey collections.

Figure 13: Dietary fibre intake – States

Target: To increase dietary fibre intake to 30 grams per day or more by the year 2000.



▲	National Dietary Survey of Adults, 1983	25–64 yrs
●	The Victorian Nutrition Survey, 1985	18+ yrs
×	South Australian Dietary Survey, 1988	18+ yrs

Comment:

The target needs careful interpretation for children and the elderly who have lower food intakes and persons on a very high food intake.

The National Dietary Survey of Adults, the Victorian Nutrition Survey and the South Australian Dietary Survey all used the U.K. nutrient data bank for estimates of dietary fibre.

3.3 Socio-demographic analysis

This section provides, where possible, disaggregated data for each of the target areas by the following demographic data items.

- Age
- Sex
- Region of birth
- City of residence
- Occupation rating (head of household)
- Area of residence (metropolitan, townships, rural)

Disaggregated data are important for indicating those population subgroups whose nutritional profile compares unfavourably with the Australian average. It is important to note that the estimates are not standardised by age, that is differences between cities, for example, will partially reflect differences in age distribution between cities if the variable under consideration is associated with age. Standard errors of most estimates can be found in the source reports specified.

The tables and data sources are as follows. The data sources are the most recent available.

Table		Data source
1	Prevalence of overweight and obesity	AHFS RFPS
2a	Contribution of fat to total energy intake	NDSS NDSA
2b	Contribution of fat to total energy intake	VNS
3a	Contribution of refined sugars to total energy	NDSS NDSA
3b	Contribution of refined sugars to total energy	VNS
4	Studies on sodium intake	NHMRC
5a	Contribution of alcohol to total energy intake	NDSS NDSA
5b	Contribution of alcohol to total energy intake	VNS
6a	Dietary fibre intake	NDSS NDSA
6b	Dietary fibre intake	VNS
7a	Breastfeeding at 3 months of life	various
7b	Breastfeeding at 3 months of life- Aboriginal communities	various

Data source

AHFS	Australian Health and Fitness Survey 1985
RFPS	National Heart Foundation Risk Factor Prevalence Survey 1983
NDSA	National Dietary Survey of Adults 1883
NDSS	National Dietary Survey of Schoolchildren 1985
VNS	Victorian Nutrition Survey 1985
NHMRC	National Health and Medical Research Council

Table 1: Prevalence of overweight and obesity

(percent)

	O'wt or obese		Obese		
Age	**Boys**	**Girls**	**Boys**	**Girls**	
10 years 11 years 12 years 13 years 14 years 15 years	Sufficient data exists but criteria need to be developed				Australian Health and Fitness Survey 1985
Age	**Men**	**Women**	**Men**	**Women**	
25-64 years	42.6	35.1	6.4	8.7	NHF Risk Factor Prevalence Survey 1983
25-29 years	29.8	21.8	3.1	4.6	
30-34 years	32.5	23.3	3.5	5.3	
35-39 years	39.9	26.3	4.2	6.1	
40-44 years	45.4	34.9	8.3	10.0	
45-49 years	45.8	44.6	7.7	9.4	
50-54 years	59.8	49.4	11.6	14.8	
55-59 years	51.6	49.3	9.9	11.0	
60-64 years	53.1	50.2	8.0	14.4	
Region of birth					
Australasia	41.1	31.9	6.6	7.9	
United Kingdom	33.7	35.3	2.6	5.8	
Northern Europe	49.0	46.1	9.7	11.4	
Southern Europe	64.4	52.9	9.7	16.8	
Asia	38.9	30.5	5.4	8.5	
Other regions	35.8	44.9	4.9	12.5	
City of residence					
Sydney North	26.7	26.3	4.7	5.1	
Sydney South	45.8	40.1	6.9	9.7	
Melbourne	45.5	38.0	6.3	9.6	
Brisbane	42.6	31.8	8.5	10.9	
Adelaide	44.5	39.4	7.5	10.4	
Perth	37.8	33.1	5.2	7.0	
Hobart	43.7	41.5	9.5	9.2	
Darwin	44.4	32.2	10.6	8.5	Prevalence of CVD Risk Factors in Darwin 85-86

Higher prevalence:

- Older men and women
- Prop. more overweight men than women, more obese women than men
- Southern Europe

Table 2a: Contribution of fat to total energy intake

(per cent)

	Mean	Mean	>45%	>45%	
Age	**Boys**	**Girls**	**Boys**	**Girls**	
10 years	35.8	35.7	8.6	5.2	National Dietary Survey of Schoolchildren 1985 (Confidential)
11 years	36.6	35.6	8.1	8.2	
12 years	36.3	36.6	10.1	9.3	
13 years	36.3	36.6	9.1	10.0	
14 years	36.5	36.3	8.7	9.9	
15 years	36.0	36.0	7.4	9.6	
Age	**Men**	**Women**	**Men**	**Women**	
25-64 years	36.6	37.0	14.2	15.7	National Dietary Survey of Adults 1983
25-34 years	37.5	37.3	14.8	16.0	
35-44 years	36.2	37.8	13.8	16.5	
45-54 years	36.1	36.6	14.8	16.2	
55-64 years	35.9	36.0	12.9	13.5	
Region of birth					
Australasia	37.3	37.5	15.2	16.2	
United Kingdom	36.1	36.8	10.0	14.9	
Northern Europe	36.7	35.4	16.6	10.9	
Southern Europe	33.3	37.0	14.7	19.9	
Asia	35.1	34.4	7.5	11.4	
Other regions	34.7	34.7	20.8	11.7	
City of residence					
Sydney	36.8	37.7			
Melbourne	36.4	36.7			
Brisbane	36.3	37.0			
Adelaide	37.2	36.3			
Perth	35.8	36.6			
Hobart	36.7	37.1			

Higher contribution:

- Men aged 25-34 years
- Women aged 25-44 years
- Australasia
- Northern Europe (Men)
- Southern Europe (Women)
- Sydney

Table 2b: Contribution of fat to total energy intake

(per cent)

	Mean	Mean	90th centile	
Age	**Men**	**Women**	**Men**	**Women**
18 years plus	38.1	38.9	44.8	45.9
18-29 years	39.6	38.9	45.1	45.3
30-39 years	38.1	39.6	44.8	45.9
40-49 years	38.1	40.0	44.0	46.3
50-59 years	37.7	38.1	45.5	45.1
60 years plus	36.6	37.7	43.7	45.5
Occupation*				
Top rating	37.4	38.9	43.7	45.9
2nd rating	38.1	39.2	44.4	45.9
3rd rating	37.7	39.2	44.8	45.9
4th rating	38.5	39.2	44.4	45.5
5th rating	39.2	40.3	46.3	47.0
Retired	37.7	37.4	44.8	46.3
Home duties		38.5		44.0
Unknown	39.6	37.4	45.5	45.1
Area of residence				
Metropolitan	37.7	38.9	44.4	45.9
Townships	39.2	38.9	44.8	45.5
Rural	39.6	39.2	45.9	45.5

The Victorian Nutrition Survey 1985

* Occupation of head of household

Higher contribution:

- Men aged 18-29 years
- Women aged 30-49 years
- Occupation: 5th rating
- Rural

Table 3a: Contribution of refined sugars* to total energy intake (per cent)

	Mean	Mean	>18%	>18%	
Age	Boys	Girls	Boys	Girls	
10 years	11.7	12.4	17.4	18.5	National Dietary Survey of Schoolchildren 1985 (Confidential)
11 years	11.7	12.9	16.3	20.0	
12 years	12.7	13.0	21.5	21.7	
13 years	12.5	12.4	20.6	18.0	
14 years	13.0	12.5	21.6	17.8	
15 years	13.1	11.9	21.9	19.6	
Age	Men	Women	Men	Women	
25-64 years	8.4	8.6	6.6	7.9	National Dietary Survey of Adults 1983
25-34 years	9.1	9.2	7.9	8.8	
35-44 years	8.4	8.6	6.5	7.3	
45-54 years	7.8	8.3	5.5	8.9	
55-64 years	7.8	7.7	5.4	5.9	
Region of birth					
Australasia	8.5	8.9	6.6	9.1	
United Kingdom	8.8	8.0	8.9	4.3	
Northern Europe	6.8	7.8	5.1	8.6	
Southern Europe	7.8	7.9	5.7	5.0	
Asia	8.5	7.9	4.7	4.5	
Other regions	7.5	7.0	0.8	7.3	
City of residence					
Sydney North	7.7	7.9	4.2	6.0	
Sydney South	8.3	8.7	7.9	9.4	
Melbourne	8.0	8.3	4.4	6.6	
Brisbane	9.5	9.7	9.2	11.3	
Adelaide	9.0	8.7	8.1	6.8	
Perth	9.2	8.7	9.9	8.7	
Hobart	10.1	10.5	11.3	15.9	

* See comments Figure 3

Higher contribution:

- Hobart and Brisbane

Table 3b: Contribution of refined sugars* to total energy intake (per cent)

	Mean	Mean	90th centile	
Age	**Men**	**Women**	**Men**	**Women**
18 years plus	10.2	9.1	17.0	16.2
18-29 years	10.6	10.4	16.2	19.0
30-39 years	10.6	8.5	17.8	15.4
40-49 years	9.6	8.6	16.6	15.4
50-59 years	9.3	8.2	17.0	13.8
60 years plus	10.4	9.0	17.6	16.5
Occupation+				
Top rating	9.8	7.8	16.8	14.1
2nd rating	9.9	9.1	17.0	17.0
3rd rating	9.9	9.1	16.5	16.6
4th rating	10.1	9.6	16.3	16.8
5th rating	10.7	9.6	17.3	16.6
Retired	10.2	9.1	17.6	16.8
Home duties		8.8		15.0
Unknown	10.9	9.1	17.8	16.2
Area of residence				
Metropolitan	10.1	8.8	16.8	15.7
Townships	10.1	10.1	17.1	17.4
Rural	10.2	9.4	17.3	16.8

The Victorian Nutrition Survey 1985

* See comments Figure 3
\+ Occupation of head of household

Higher contribution:

- Men and women: 18-29, 60 years plus
- Occupation: 4th and 5th rating

Table 4: Studies on sodium intake

Type of Subject	Sex	n	Sodium intake (mmol/day) Mean ± SEM	Range	Reference
Blood pressure screening program	F	222	128 ± 3.6	–	1
Young adults	F	26	134 ± 10.8	40–274	2
Aged in retirement village	F	17	135 ± 15.3	25–300	3
50 consecutive outpatients July 1980	F	50	137 ± 10.5	3–354	4
Dietetic students	F	11	139 ± 14.8	54–234	5
Blood pressure screening program	M	259	147 ± 3.5	–	1
Repatriation hospital outpatients	M	107	191 ± 5	–	6
Hypertensives	M	19	205 ± 15.4	105–356	7
50 consecutive outpatients July 1980	M	50	178 ± 8.8	17–287	4
Young adults	M	33	197 ± 14	38–407	2

References

1. Doyle, A. E., Chua, K. A. and Duffy, S. (1976), Urinary sodium, potassium and creatinine excretion in hypertensive and normotensive Australians, *Med. J. Aust. 2*:898.
2. Dale, N. (1968), A study of the urinary calcium, phosphorus, creatinine and sodium excretion of young adults in Sydney, *Med. J. Aust. 1*:791.
3. Dale, N. (1975), Personal communication.
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6. Morgan, T., Adam, W., Gillies, A., Wilson, M., Morgan, G. and Carney, S. (1978), Hypertension treated by salt restriction, *Lancet 1*:227.
7. Carney, S., Morgan, T., Wilson, M., Matthews, G. and Roberts, R. (1975), Sodium restriction and thiazide diuretics in the treatment of hypertension, *Med. J. Aust. 1*:803.

Extracted from the National Health and Medical Research Council's 'Report of the working party on sodium in the Australian diet' AGPS Canberra 1984.

No later figures on statistically representative samples are available.

Table 5a: Contribution of alcohol to total energy intake

(per cent)

	Mean	Mean	>15%	>15%
Age	Men	Women	Men	Women
25-64 years	6.3	3.3	15.0	6.9
25-34 years	5.0	3.0	10.5	4.9
35-44 years	6.7	3.9	16.1	9.3
45-54 years	6.9	3.4	18.3	7.6
55-64 years	7.2	3.0	17.6	6.2
Region of birth				
Australasia	6.5	3.6	14.5	7.5
United Kingdom	6.5	3.8	19.6	8.1
Northern Europe	5.7	1.7	13.6	4.8
Southern Europe	7.4	2.3	18.4	1.4
Asia	3.3	2.5	5.7	6.9
Other regions	4.3	1.3	11.5	4.9
City of residence				
Sydney	6.6	3.5		
Melbourne	6.3	3.6		
Brisbane	6.3	2.9		
Adelaide	5.6	2.7		
Perth	6.0	3.0		
Hobart	5.0	1.7		

National Dietary Survey of Adults 1983

Higher contribution:

- Men aged 55-64 years
- Women aged 35-44 years
- Southern Europe and United Kingdom (Men)
- Australasia and United Kingdom (Women)
- Sydney

Table 5b: Contribution of alcohol to total energy intake

(per cent)

	Mean	Mean	90th centile	
Age	Men	Women	Men	Women
18 years plus	4.4	1.9	11.7	5.3
18-29 years	3.4	1.6	8.6	4.2
30-39 years	4.6	1.7	11.5	5.1
40-49 years	4.7	2.4	11.4	7.0
50-59 years	5.2	2.6	15.2	7.3
60 years plus	5.0	1.6	13.7	5.1
Occupation*				
Top rating	4.4	2.3	10.2	6.3
2nd rating	3.9	2.0	9.5	5.7
3rd rating	5.4	2.1	12.9	5.6
4th rating	4.4	1.9	11.7	5.3
5th rating	5.2	1.4	13.5	3.7
Retired	5.2	2.0	12.1	6.1
Home duties		1.3		4.4
Unknown	2.8	1.5	7.9	4.1
Area of residence				
Metropolitan	4.6	2.1	11.9	5.5
Townships	4.3	1.5	11.7	4.3
Rural	4.1	1.6	11.5	5.2

The Victorian Nutrition Survey 1985

* Occupation of head of household

Higher contribution:

- Men aged 50 years or more
- Metropolitan

Table 6a: Dietary fibre intake

(grams)

	Mean	Mean	90th centile		
Age	**Boys**	**Girls**	**Boys**	**Girls**	
10 years	17.7	15.1	28.6	23.1	**National Dietary Survey of Schoolchildren 1985 (Confidential)**
11 years	18.4	15.7	28.5	24.1	
12 years	18.6	16.2	29.0	25.3	
13 years	20.8	16.6	33.8	27.3	
14 years	22.3	17.9	35.7	28.0	
15 years	24.5	17.3	40.7	28.8	
Age	**Men**	**Women**	**Men**	**Women**	
25-64 years	23.2	18.7	39.6	31.4	**National Dietary Survey of Adults 1983**
25-34 years	24.6	18.9	41.4	32.0	
35-44 years	23.1	17.6	38.1	30.8	
45-54 years	22.5	19.2	39.0	30.8	
55-64 years	21.7	19.3	38.4	33.2	
Region of birth					
Australasia	23.6	18.3	40.0	30.2	
United Kingdom	23.1	20.1	38.1	32.6	
Northern Europe	21.4	20.9	35.8	34.5	
Southern Europe	21.1	18.2	34.4	33.8	
Asia	24.2	16.9	49.6	26.6	
Other regions	24.6	22.1	47.5	38.6	
City of residence					
Sydney	23.8	19.6	40.6	33.1	
Melbourne	26.0	20.4	43.2	32.9	
Brisbane	22.8	18.2	38.0	28.8	
Adelaide	22.4	19.8	38.0	34.0	
Perth	22.7	18.1	37.9	31.0	
Hobart	27.4	20.9	43.1	32.7	

Lower intake:

- Men aged 55-64 years
- Women aged 35-44 years
- Northern and Southern Europe (Men)
- Asia (Women)
- Brisbane and Perth

Table 6b: Dietary fibre intake

(grams)

	Mean	Mean	90th centile	
Age	Men	Women	Men	Women
18 years plus	21	21	33	33
18-29 years	22	21	35	32
30-39 years	22	21	34	35
40-49 years	20	21	30	32
50-59 years	20	22	33	34
60 years plus	21	22	32	33
Occupation*				
Top rating	23	23	36	41
2nd rating	21	22	33	41
3rd rating	21	21	31	35
4th rating	20	20	30	35
5th rating	21	20	35	38
Retired	20	22	31	39
Home duties		22		37
Unknown	23	23	38	42
Area of residence				
Metropolitan	21	21	33	37
Townships	21	21	32	34
Rural	21	22	32	40

* Occupation of head of household

Lower intake:

No markedly low values

Table 7a: Breast-feeding at 3 months of life

(per cent)

Year	State	Initial	3 months
1980	S.A*	86	52
1982	Qld*	79	63
1983	S.A	78	40
1983	W.A	-	71
1983	Aus	85	54
1984	S.A	82	53
1984	W.A	86	62
1984	Tas	81	60
1985	S.A	80	52
1985/86	Vic	-	56
1986	S.A	80	50
1986/87	Vic	-	56
1987/88	Vic	-	57

* Ipswich

Figures include all infants breastfeeding, exclusively or with complementary feeds.

Sources: Hitchcock and Coy (1988); Palmer (1985); Eaton-Evans and Townsend (1985).
Department of Community Services & Health, Victoria
Queensland Department of Health, Queensland
Child and Family Health Services, South Australia

Table 7b: Breast-feeding at 3 months of life - Aboriginal communities

(per cent)

Year	State	Cases	Initial	3 months
1980-82	W.A*	127	82	50
1981	W.A*	196	100	100
1981	W.A+	376	-	71

* Location: remote, partly tribal, semi-autonomous;
+ Location: in and around country towns.
Data for W.A 1980-82 is from Phillips and Dibley (1983) and refers to women living in Perth.

Sources: Phillips and Dibley (1983); Gracey et al (1983).
Extracted from 'Infant feeding practice in Australia: A review of research of recent trends' L. Manderson. Aust J of Early Childhood 14(1) 1989.

3.4 Equity group differentials

Except where stated, comparisons between groups are not standardised for differences in age distribution. Comments on age differentials are made in the context of cross-sectional studies, not cohort studies.

Overweight and obesity

Socioeconomic An inverse relationship between highest level of education attained and prevalence of overweight and obesity was found in the NHF Risk Factor Prevalence Survey 1980. After adjusting for age, the difference in prevalence of overweight and obesity between those with tertiary education and whose highest level of education was primary school was approximately ten percentage points. The effect was strongest in women. Employment status and marital status had little or no effect on the prevalence of overweight and obesity (English & Bennett 1985).

Occupation From the same data source, the more sedentary occupations - clerical and professional for men and clerical, professional and administrative for women- were associated with lower prevalence of overweight and obesity (English & Bennett 1985). Dobson, Gibberd, Leeder and O'Connell (1985) found that mean body mass index was lower among the professional group and higher among the trades/labour and 'other employed' groups, after adjusting for covariates.

Aboriginality Aboriginal adults are more likely to be obese (Men 16%, Women 33%) than their non-Aboriginal counterparts (Men 6%, Women 9%). The prevalence of overweight adults is less amongst Aboriginals (Men 34%, Women 31%) than amongst non-Aboriginals (Men 43%, Women 36%). There was little difference between aboriginals living in remote, rural or metropolitan areas. The figures for Aboriginals come from a study of almost 1700 Aboriginal adults from throughout South Australia conducted in the early 1980s. (Aboriginal Health Organisation of South Australia 1986) Reference to the high level of obesity among Aboriginal adults also comes from a number of other sources and for a variety of areas throughout Australia (Thomson 1989 citing Anderson 1985, Bastian 1978, Edwards et al 1976, Simons et al 1981).

Ethnicity Migrants from Southern Europe (59%) and Northern Europe (48%) show a higher prevalence, migrants from the United Kingdom and Asia a lower prevalence (35%) (Table 1). An age adjusted analysis conducted on 1980 data found that place of birth was a statistically significant factor. The same ranking of birthplaces was seen (English & Bennett 1985).

Geographical The capital cities may be ranked as follows (Table 1).

Sydney South, Hobart, Adelaide and Melbourne (42-43%)
Darwin (39%), Brisbane (37%), Perth (35%)
Sydney North (26%)

Gender	Prevalence is greater in men (43%) than women (35%). Obesity is more prevalent in women (9%) than men (6%) (Table 1).
Age	Prevalence of overweight and obesity increases with age. At age 60-64 years (52%) it is double that at age 25-29 years (26%) (Table 1).

Fat to dietary energy

Socioeconomic	Analysis of data from the National Dietary Survey of Adults 1983 has shown that, after adjusting for any age effect, there is no association with education level, employment status or marital status.
Occupation	Estimates from the Victorian Nutrition Survey 1985 suggest that higher fat intake as a percentage of energy is associated with lower occupational status of head of household (Table 2b). Analysis of the National Dietary Survey of Adults 1983 shows that occupation is not a significant factor after adjusting for age.
Aboriginality	No data available
Ethnicity	The highest contribution is found amongst Australasians (37.4%), the lowest amongst Asians (34.7%). There is a noticeable difference between Southern European men (33.3%) and women (37.0%) (Table 2a). Analysis of the National Dietary Survey of Adults 1983 shows that place of birth is a significant factor after adjusting for age.
Geographical	Sydney has the highest contribution (37.2%), Perth the lowest (36.2%) (Table 2a). Results from the Victorian Nutrition Survey 1985 suggest a lower contribution amongst men living in the metropolitan area (Melbourne) than men in townships or rural areas (Table 2b).
Gender	There is little difference between men and women (36.6% and 37.0% respectively) nor between boys and girls (36.2% and 36.1% respectively) (Table 2a).
Age	For schoolchildren aged 10-15 years the contribution of fat to energy is 36.2%. The contribution for 25-34 year olds is 37.4%, and for 55-64 year olds is 36.0% (Table 2a confidential).

Refined sugars to dietary energy (all figures are minimum estimates)

Socioeconomic	Analysis not performed.
Occupation	Estimates from the Victorian Nutrition Survey 1985 suggest that higher contribution of refined sugars to dietary energy is associated with lower occupational status of head of household (Table 3b).
Aboriginality	No data available
Ethnicity	The highest contribution of refined sugars is found in Australasians (8.7%), the lowest in Northern Europeans (7.3%) (Table 3a).
Geographical	The contribution of refined sugars to dietary energy is highest in Hobart (10.3%) and Brisbane (9.6%), and lowest in Sydney North (7.8%) (Table 3a).
Gender	There is little difference between men and women (8.4% and 8.6% respectively) nor between boys and girls (12.4% and 12.5% respectively) (Table 3a).
Age	There is a marked difference in the contribution of refined sugars to total energy intake between schoolchildren 10-15 years (12.5%) and adults 25-64 years (8.5%). For adults, the contribution falls from 9.2% at age 25-34 years to 7.8% at age 55-64 years (Table 3a confidential).

Dietary sodium

The only published data available is from the Victorian Nutrition Survey which used a food frequency questionnaire approach. The figures are underestimates of sodium intake (see comments Figure 11) but do suggest equity group differentials.

Socioeconomic	No data available
Occupation	For men, a higher daily dietary intake of sodium is associated with lower occupational status of head of household (Top occupational rating:151 mmol, 5th occupational rating:174 mmol). A difference is not apparent for women.
Aboriginality	No data available
Ethnicity	No data available
Geographical	Area differences are suggested for men (Metro: 154 mmol, Townships:164 mmol, Rural 172 mmol) but not for women.
Gender	Dietary sodium intake is estimated as 159 mmol per day for men and 134 mmol per day for women.

Age — An age differential is suggested for men (18-29 years: 178 mmol, 60 years and over:141 mmol) but not for women.

Alcohol to dietary energy

Socioeconomic — Analysis of data from the National Dietary Survey of Adults 1983 has shown statistically significant associations with education level, employment status and marital status, after adjusting for age.

Occupation — Analysis of the National Dietary Survey of Adults 1983 shows that occupation is a significant factor after adjusting for age.

Aboriginality — There is no data on the relative contribution of alcohol to total energy intake amongst Aborigines. There is, however, some useful data on alcohol consumption behaviour.

A recent survey of drug use patterns of over 1700 adult Aboriginal residents of the Northern Territory (excluding urban households) found that 65% of men and 20% of women consume alcohol (Thomson N citing Watson, Fleming and Alexander 1988). These figures are lower than those for urban Australians (men 88%, women 75%) (NHF Risk Factor Prevalence Survey 1983). The survey found that harmful drinking was very prevalent amongst Aborigines. Amongst the drinkers, 69% of men and 68% women were defined as drinking at a harmful level using NH&MRC guidelines 1987. A study of the relative proportions of hazardous drinking among Aboriginal and non-Aboriginal drinkers showed that two-thirds of male Aboriginal drinkers did so hazardously compared with a tenth of non-Aboriginals. A fifth of all female Aboriginal drinkers drank hazardously, as did a twentieth of non-Aboriginal female drinkers (Thomson N citing Chegwidden & Flaherty 1977).

Ethnicity — The highest contribution of alcohol to energy intake is found amongst Southern European men (7.4%), the lowest amongst Asian men (3.3%). For women, the highest contribution is from Australasia (3.6%) and the United Kingdom (3.8%) (Table 5a).Analysis of the National Dietary Survey of Adults 1983 shows that place of birth is a significant factor after adjusting for age.

Geographical — Higher contributions are found in Sydney and Melbourne (5%), the lowest in Hobart (3.3%) (Table 5a). Analysis of the National Dietary Survey of Adults 1983 shows that city is a significant factor after adjusting for age. Results from the Victorian Nutrition Survey 1985 suggest a higher contribution in the metropolitan area (Table 5b).

Gender

There is a marked difference between men (6.3%) and women (3.3%) (Table 5a).

Age

Schoolchildren aged 10-15 years reported consuming very little alcohol, on average. The data suggests a higher contribution of alcohol to energy for older men (Table 5a).

Dietary fibre intake

Socioeconomic

Analysis of data from the National Dietary Survey of Adults 1983 has shown that, after adjusting for any age effect, there is a statistically significant association between dietary fibre intake and education level, employment status and marital status.

Occupation

Estimates from the Victorian Nutrition Survey 1985 indicate that the highest category for occupational status of head of household has higher fibre intake (Table 6b). Analysis of the National Dietary Survey of Adults 1983 shows that occupation is a significant factor after adjusting for age.

Aboriginality

No data available

Ethnicity

For men, intake ranges from 21.1g for Southern Europeans to 24.2 for Asians. Women from Asia have the lowest intake (16.9g) (Table 6a). Analysis of the National Dietary Survey of Adults 1983 shows that place of birth is a significant factor after adjusting for age.

Geographical

Fibre intake is lowest in Perth and Brisbane (20.5g) and highest in Hobart (24.1g) (Table 6a). Analysis of the National Dietary Survey of Adults 1983 shows that the variation between cities is statistically significant after adjusting for age. Results from the Victorian Nutrition Survey 1985 suggest little variation between urban and rural areas (Table 6b).

Gender

Men eat more fibre than women (23.2g cf 18.7g). Boys eat more than girls (Table 6a).

Age

For both boys and girls, fibre intake is greater at the older ages. Fibre intake is less for older men. At age 25-34 years it is 24.6g, at age 55-64 years it is 21.7g. Such a difference is not apparent for women (Table 6a).

Breastfeeding at 3 months of life

Socioeconomic

From a survey of infant-feeding practices in Western Australia and Tasmania conducted during 1984-85, Hichcock and Coy (1988) report that "more mothers from the higher social groups breast-fed their infants on discharge from hospital than did mothers from lower social groups, and more of the higher-ranked mothers continued to breastfeed throughout the year".

Prevalence of breastfeeding* at 3 months of life by social rank+

	A	B	C	D
Western Australia	96	78	64	50
Tasmania	92	76	63	39

* Includes complementary feeding
\+ Congalton (1969): A,highest rank; D,lowest rank.

Manderson (1989) notes that the patterns of infant feeding practice among non-Australian born women and within urbanised Australian Aboriginal communities do not differ markedly from those of working-class women generally.

Occupation

No data available

Aboriginality

Amongst Aboriginal women in remote Western Australia, living along subsistence patterns with strong tribal ties, 100% were breastfeeding at 3 months. Among women living in and around country towns, such as Derby, Broome and Kalgoorie, only 71% were breastfeeding at 3 months. (Table 7b).

Ethnicity

Research among women from Southern Europe (Boulton & Coote 1979) and among Vietnamese women (Manderson & Mathews 1980; Ward et al 1981; Breakey 1983) indicate a lower incidence and shorter duration of breastfeeding. Low socio-economic status appears to be a major explanation for this pattern amongst recent immigrants (Manderson 1989) and Aborigines (Cox 1981).

Geographical

The latest available State data is given in Table 7a

In a study in Western Australia, Hichcock, McGuiness and Gracy (1982) reported that 69% of metropolitan infants and 55% of country infants were breastfed at 3 months.

Gender

Not applicable. No data on the prevalence of breastfeeding at 3 months of life for male or female babies.

Age

No data by age of mother

4. ISSUES ARISING

4.1 Data gaps and deficiencies

The data available to monitor progress towards attainment of the nutritional targets by the year 2000 are assessed in relation to the equity target groups given in Section 2.2. The availability of data from the NHF Risk Factor Prevalence Survey 1989 and the ABS National Health Survey 19989/90 is assumed.

Overweight and obesity

Recent surveys which collected anthropometric measures are the National Heart Foundation Risk Factor Prevalence Surveys conducted in 1980 and 1983, and the Australian Health and Fitness Survey of Schoolchildren, 1985. The third Risk Factor Prevalence Survey (NHF) is taking place in 1989. The National Health Survey (ABS) will take place from October 1989 to September 1990. The table below lists, for each survey, those data items which are relevant to measuring differentials between the equity target groups.

	NHF80	NHF83	NHF89	AHFS85	NHS89/90
Anthropometric measures	Ht,Wt	Ht,Wt	Ht,Wt, waist,hip	Ht,Wt, girths skinfolds	self-reported Ht,Wt
Social	Yes(a)	Yes(a)	Yes(b)	Yes(c)	Yes
Economic	No	No	Yes(d)	No	Yes
Occupation	CCLO(e)	CCLO(e)	ASCO(f)	No	Yes
Aboriginality	No	No	No	No	Yes
Ethnicity	Yes(g)	Yes(g)	Yes(g)	Yes(h)	Yes
Geographical	6 capital cities	6 capital cities	All capital cities	Urban Rural	National coverage
Sex	Yes	Yes	Yes	Yes	Yes
Age	25-64	25-64	20-69	7-15	All ages

(a) marital status, highest level of education, employment status.
(b) as for (a) plus no. children, students living at home, living arrangements, employment status of partner eg spouse.
(c) no. older/younger siblings, where live during school week.
(d) gross income (and main source) of self and partner eg spouse.
(e) Classification and Classified List of Occupations.
(f) Australian Standard Classification of Occupations.
(g) Country of birth (COB), years lived in Australia.
(h) Father's COB, mother's COB, language spoken at home.

In response to the need for data on the differentials between the equity target groups, the NHF Risk Factor Prevalence Study is attempting to collect economic data for the first time. The Management Committee for the study decided to transfer to the recent ASCO rather than repeat the CCLO used in the previous two surveys.

The NHF Risk Factor Prevalence Surveys are not designed to collect data on Aborigines. They cover capital cities only and using the current survey design they would expect to obtain only 40-60 Aboriginal respondents.

A question on Aboriginal descent was included in the survey of cardiovascular risk factors conducted in Darwin during 1985-86, however only 16 men and 41 women identified themselves as of Aboriginal descent in the sample.

Although the ABS National Health Survey will include Aboriginality as a data item, the survey is not specifically designed to obtain a statistically representative sample. It is expected that about 600 Aborigines will be included in the survey. Non-national estimates of the prevalence of overweight and obesity amongst Aborigines are available from a variety of sources and a variety of areas throughout Australia (Section 3.4) and these can provide a baseline picture.

The NHF Risk Factor Prevalence Survey has an extended age range to include 20-24 and 65-69 for the first time.

The 1989 NHF Risk Factor Prevalence Survey is also collecting self-reported height and weight as well as the physical measurement. It will therefore be possible to use the NHF Risk Factor Prevalence Survey data to calibrate self reported data collected in the 1989/90 ABS National Health Survey and thus to estimate overweight and obesity in age ranges not covered by the NHF Risk Factor Prevalence Survey (16-19 and 70 years or more) and in rural areas.

DATA GAPS AND DEFICIENCIES

- There are no major gaps in baseline data, assuming that the estimates of the prevalence of overweight and obesity in Aborigines from individual surveys (Section 3.4) are accepted as baseline estimates.

- Future NHF Risk Factor Surveys or the series of ABS National Health surveys will provide trend data for monitoring progress towards the target.

Fat to dietary energy

This can be monitored on a yearly basis by the Apparent Consumption of Foodstuffs and Nutrients data collection. It produces per capita estimates however, and cannot be used to assess differentials between the equity target groups. This is the important function of the recent National Dietary of Adults 1983, the National Dietary Survey of Schoolchildren 1985, and the Victorian Nutrition Survey 1985. The data items collected in these surveys are detailed below.

	NDSA83	NDSS85	VNS85
Dietary method	24hr recall	24hr record	Food frequency
Social	Yes(a)	Yes(b)	Yes(c)
Economic	No	No	No
Occupation	CCLO(d)	No	ASCO(e)
Aboriginality	No	No	No
Ethnicity	Yes(f)	Yes(g)	Yes(h)
Geographical	6 capital cities	Australia	Victoria: Metro Townships Rural
Sex	Yes	Yes	Yes
Age	25-64	10-15	18 plus

(a) marital status, highest level of education, employment status.
(b) number of older/younger siblings, where live during school week.
(c) highest level of education, employment status, domestic situation, number of children under 18 living in household.
(d) Classification and Classified List of Occupations.
(e) Occupation of self and partner eg spouse.
(f) Country of birth (COB), years lived in Australia.
(g) Father's COB, mother's COB, language spoken at home.
(h) Country of birth (COB), years lived in Australia, father's COB, mother's COB, language spoken at home.

None of these surveys included economic variables as data items.

The coding system for occupation used in the national surveys has been superseded by ASCO.

It was not feasible for any of the surveys to include Aboriginality as a data item using the current sample designs.

The National Dietary Survey of Adults did not cover rural areas. The National Dietary Survey of Schoolchildren could be analysed to give urban and rural estimates for the age range 10-15 years.

Age ranges not covered nationally are 0-9 years, 16-24 years and 65 years and over. The Victorian Nutrition Survey did cover the age range 18-24.

DATA GAPS AND DEFICIENCIES

- Economic variables
- Aboriginality
- National estimates for rural Australia
- National estimates for 0-9 years, 16-24 years and 65 years or over.

- Collect occupation using ASCO
- Monitor equity differentials via a regular national dietary survey.

Refined sugars to dietary energy

The relative contribution of refined sugar to dietary energy can be monitored on a yearly basis by the Apparent Consumption of Foodstuffs and Nutrients data collection. It produces per capita estimates however, and cannot be used to assess differentials between the equity target groups.

This important function is partially met by data from the recent National Dietary of Adults 1983, the National Dietary Survey of Schoolchildren 1985, and the Victorian Nutrition Survey 1985. The data items collected in these surveys are detailed in previous section on fat.

All survey estimates are below the estimates from the apparent consumption of foodstuffs and nutrients time series. This reflects the fact that the nutrient data bases used to derive refined sugars intake give minimum estimates, that is the maximum amount of natural sugars is assumed for each food (see comments Figure 3).

DATA GAPS AND DEFICIENCIES

- Economic variables
- Aboriginality
- National estimates for rural Australia
- National estimates for 0-9 years, 16-24 years and 65 years or over.

- Collect occupation using ASCO
- Improve estimates of refined sugars in the nutrient data base.
- Monitor equity differentials via a regular national dietary survey.

Dietary sodium

No comprehensive measurements of sodium intake have been carried out in Australia and hence there is no baseline data of substance for monitoring purposes and to help evaluate the effectiveness of interventions. The little data that are available are from small samples which are not representative of Australian food practices. A major factor in the lack of national data is the practical difficulty of collecting urinary specimens in random population-based samples. With the exception of two State surveys which used a dietary history technique, investigation of sodium intake has been by 24 hr urinary excretion. This method is believed to provide the best estimate of sodium intake.

DATA GAPS AND DEFICIENCIES

- Little data are available and there are no data collection mechanisms in place.
- The NHMRC working party on sodium in the Australian diet saw a need to determine alternative convenient ways of estimating long-term, mean sodium intakes.

Alcoholic beverages to dietary energy

Data on indirect measures of alcoholic intake are relatively plentiful and can be useful in monitoring change in consumption patterns.

Perhaps the best source of economic data are the ABS Household Expenditure Surveys. These surveys can provide estimates of expenditure on beer, wine and spirits by a variety of economic indicators. They cannot, however, estimate the contribution of alcoholic beverages to dietary energy.

The contribution of alcoholic beverages to dietary energy can be monitored on a yearly basis by the Apparent Consumption of Foodstuffs and Nutrients data collection. It produces per capita estimates, however, and cannot be used to assess differentials between the equity target groups.

Recent survey data on the contribution of alcoholic beverages to dietary energy is confined to the National Dietary Survey of Adults and the Victorian Nutrition Survey. The data items collected in these surveys are given in the previous section on fat.

A 24 hr recall dietary survey was conducted in Darwin in 1985 but the results of this are not yet available. The data items for this survey were the same as for the National Dietary Survey of Adults. A 24 hr recall dietary survey is scheduled for Perth starting in June 1989.

DATA GAPS AND DEFICIENCIES

- Economic variables
- Aboriginality
- National estimates for rural Australia
- National estimates for 16-24 years and 65 years or over.

- Collect occupation using ASCO
- Monitor equity differentials via a regular national dietary survey.

Dietary fibre intake

The consumption of fibre can be monitored on a yearly basis by applying factors to estimates from the Apparent Consumption of Foodstuffs and Nutrients data collection. These factors, for the edible portion and for fibre concentration, can be applied to the apparent consumption estimates for individual foods within the fruit, vegetables and grain foodgroups. This produces per capita estimates however which cannot be used to assess differentials between the equity target groups.

Recent survey data on the contribution of fibre to dietary energy is confined to the National Dietary Survey of Adults, the National Dietary Survey of Schoolchildren and the Victorian Nutrition Survey. The data items collected in these surveys are given in the previous section on fat.

Published estimates from these surveys are based on fibre estimates in the British food tables. Substituting available Australian estimates of fibre content for British figures results in lower estimates of fibre consumption.

DATA GAPS AND DEFICIENCIES

- Economic variables
- Aboriginality
- National estimates for rural Australia
- National estimates for 0-9 years, 16-24 years and 65 years or over.

- Collect occupation using ASCO
- Increase the number of Australian fibre estimates in the nutrient data base.
- Monitor equity differentials via a regular national dietary survey.

Breastfeeding at 3 months of life

There is no data collection which provides regular estimates of the level of breastfeeding at 3 months of life. The 1983 study by Palmer provides the most recent national estimate.

The ABS National Health Survey 1989/90 will collect 2 data items which will provide baseline estimates viz:

Data item: Whether currently breastfeeding or have breastfed children
Population: Females 18-50 years with children aged 0-5 years

Data item: Length of time child/children breastfed
Population: Females 18-50 years who have breastfed child(ren) currently aged 0-5 years

This data will be collected on 5500-6000 children. The data items relevant to measuring differentials between the equity target groups are as follows.

	ABS National Health Survey 89/90
Social	Marital status, education (7 questions), family and household characteristics (5 questions each)
Economic	Gross income, source of income, characteristics of income unit (5 questions), health insurance (11 questions)
Occupation	Labour force (8 questions including occupation (ASCO))
Aboriginality	Yes (a)
Ethnicity	Birthplace, year of arrival, language spoken at home, inability to speak English
Geographical	Australia, State & Territory
Sex	Yes
Age	All persons

(a) Although Aboriginality will be collected as a data item, the survey is not specifically designed to obtain a statistically representative sample. About 600 Aborigines will be included in the survey.

Questions on breastfeeding form part of a voluntary set of questions on a range of women's health issues for women aged 18-64. Data collection will use a self-completion questionnaire to be returned in a sealed envelope. At present the breastfeeding questions are considered to form part of the core set of questions which will be repeated every 5 years.

DATA GAPS AND DEFICIENCIES

- Aboriginality

Summary of gaps and deficiencies

Target	Data gaps*			
Overweight and obesity	-	-	-	-
Fat to dietary energy	Economic variables	Aboriginality	0-9,16-24,65+	Rural
Refined sugars to dietary energy	Economic variables	Aboriginality	0-9,16-24,65+	Rural
Dietary sodium	No data	No data	No data	No data
Alcoholic beverages to dietary energy	Economic variables	Aboriginality	16-24,65+	Rural
Dietary fibre	Economic variables	Aboriginality	0-9,16-24,65+	Rural
Breastfeeding at 3 months of life	-	Aboriginality	-	-

	Deficiencies
National dietary survey	Conduct a regular national dietary survey to monitor equity differentials
Nutrient data bank	Improve estimates of refined sugars Increase number of Australian fibre estimates
Occupation	Collect occupation using ASCO coding system

* Assumes data from the NHF Risk Factor Prevalence Survey 1989 and the ABS National Health Survey 1989/90

Overcoming gaps and deficiencies in the available data is not an easy task. The options available for meeting data gaps and deficiencies include establishing new data collections, modifying existing ones, or piggy-backing on existing collections. However, data does not come cheaply. New data collections take time and resources to develop, implement, process and analyse with the cost dependent on a collection's size, conceptual and methodological complexity, etc. Changes to existing data collections are not always easy and usually involve compromise.

4.2 Comments on the targets

Background

The targets were initially set by the Nutrition Taskforce of the Better Health Commission (1986) and were based on the best data available at that time. The targets were subsequently endorsed by the Heath Targets Implementation Committee (1988) in their 'Health for All Australians' report.

The time series of the apparent consumption of foodstuffs and nutrients (ABS Cat No 4306.0) is the only data source which can be used to monitor dietary trends on an annual basis. For this reason several of the dietary targets were based on estimates from the apparent consumption time series. It was intended that this time series be used to monitor progress towards the targets and that data from irregular surveys, essential to identify population sub-groups at risk, be used for developing strategies and programs.

It is not the intention of this report to presume to recommend changes to the targets. The Nutrition Committee of the NHMRC has the expertise and representation to perform this task. The aim of this section is merely to review the targets in the light of recent data developments and to include some deliberations of the Nutrition Project Planning which recently reported to the Management Committee of the National Better Health Program. International comparisons are made where data are available.

The targets are considered in the order given by HTIC (1988).

Targets

To reduce the prevalence of overweight and obesity from 38 percent (1983) to 25 percent or less in people aged 25-64 years by the year 2000.

- Some population sub-groups are closer to the target than others. For example, the prevalence of overweight and obesity is different for men and women. Prevalence increases with age, is greater in Southern European migrants and groups with less formal education. Such differentials exist for all targets however and the level of the target seems appropriate as an average. The age group specified, viz 25-64 years, reflects the data source from which the baseline was determined, namely the 1983 NHF Risk Factor Prevalence Survey.

- Use of the term 'overweight and obesity' as one entity should be reviewed. For example, men are more likely to be overweight than women, women are more likely to be obese than men.

- A target for children could be developed now that data from the Australian Health and Fitness survey are available (7-15 years). This dataset was not available when the target for adults was determined. Estimates of the prevalence have not been published however and further analysis of the dataset would be necessary.

To reduce the contribution of fat to dietary energy from 38 percent (1983-84) to 33 percent or less by the year 2000.

- This target was based on estimates from the apparent consumption of foodstuffs time series and it was intended by the Nutrition Taskforce of the Better Health Commission that it be monitored by this trend data. It is the only available data base for measuring trends within the next 3-4 years.

- The following table summarises recent qualitative recommendations by other countries for overall health maintenance (rather than for specific diseases).

Table: International comparison of general dietary recommendations regarding fat intake to energy

Country	Body	Limit (%)
United States	U.S. Senate,1977	27-33
United States	National Research Council,1989	≤30
Sweden	Swedish National Food Admin,1981	25-35
	Expert Group for Diet & Health,1985	
France	Dupin et al.,1981	30-35
Norway	Royal Ministry of Health and Social Services,1981-82	<35
Canada	Dept National Health & Welfare,1982	35
New Zealand	National Advisory Committee,1982	35
Netherlands	Food and Nutrition Council,1983-84	30-35
United Kingdom	NACNE,1983	30
Ireland	Department of Health,1984	≤35
Japan	Ministry Health and Welfare,1985	20-25

- Some expert panels have also suggested that saturated fatty acids be limited to below 10 percent of energy (Diet and Heart 1989, American Heart Association 1988, NACNE United Kingdom 1983). However, this would require a significant change in dietary patterns.

- The Australian target appears to be broadly consistent with recommendations of other countries.

To reduce the contribution of refined sugars to dietary energy from 14 percent (1983-84) to 12 percent or less by the year 2000.

- This target was also set using estimates from the apparent consumption of foodstuffs time series and it was intended that monitoring should use the same series. It is the basis on which international comparisons are made and it is the only time series available for monitoring over the next few years.

- Data from other collections is vital for identifying those at risk and developing strategies and programs.

- There are problems with estimating refined sugars intake and estimates for adults from recent surveys are below the target. The figure from the National Dietary Survey of Adults 1983 is a minimum estimate, however. If the maximum value for the possible content of refined sugars in foods had been used its contribution would have been considerably higher. The USA is hesitant in giving estimates because of inadequacies in the food composition data base (see comments Figure 3).

- The following table summarises recent qualitative recommendations by other countries for overall health maintenance (rather than for specific diseases).

Table: International comparison of general dietary recommendations regarding refined sugars intake to energy

Country	Body	Limit (%)
Sweden	Swedish National Food Admin,1981	<10
Norway	Expert Group for Diet & Health,1985	<10
United Kingdom	Royal Ministry of Health and Social Services,1981-82	to 20kg/year
Ireland	NACNE,1983 Department of Health,1984	≤70g/day after weight reduction

- Many other organisations recommend limiting refined sugars intake without being specific. There are no statistical reasons for reviewing the target at this stage. It should be monitored using the apparent consumption of foodstuffs time series and data from surveys should be used to identify and focus on those with high refined sugar intake.

To reduce dietary sodium intake to 100 millimoles (2.3 grams) per day or less by the year 2000.

- The target is based on a recommendation of the NHMRC's working party on sodium that the aim should be to achieve a community sodium intake of under 100 mmol/day. The target is the upper limit of the recommended dietary intakes (RDI) for persons aged 8 or more.

- At this level (100 mmol), sodium intake is highly associated with energy intake and consideration should be given to expressing the sodium target in relative terms.

- The following table summarises recent qualitative recommendations by other countries for overall health maintenance (rather than for specific diseases).

Table: International comparison of general dietary recommendations regarding sodium intake

Country	Body	Limit
United States	U.S. Senate,1977	8g
United States	Council on Scientific Affairs,1979	12g
	National Research Council,1980	3- 8g
	National Research Council,1989	≤6g/day
		4.5g/day goal
Sweden	Swedish National Food Admin,1981	7- 8g/day
	Expert Group for Diet & Health,1985	
United Kingdom	NACNE,1983	Decrease by 3g/day
Ireland	Department of Health,1984	<9g/day
Japan	Ministry Health and Welfare,1985	<10g/day

- There is no hard data available on which to base a national baseline estimate for Australia. The feasibility of urinary sodium population measurement should be addressed along with more convenient methods of estimating sodium intakes.

- It is recommended that the target be reviewed unless as a practical method for monitoring can be developed.

To reduce the contribution of alcoholic beverages to dietary energy from 6 percent (1983-84) to 5 percent or less by the year 2000.

- Again the target was set on apparent consumption data with the intention that it be monitored using that data source. There are no existing mechanisms for monitoring targets which focus on high consumers although data from surveys can be used to identify and target such groups.

- Expressing the target in terms of absolute units of alcohol may provide a more appropriate reference than alcoholic beverages because of the market changes to the ratio of alcohol to non-alcohol kJ in alcoholic beverages (eg wine coolers, LA beer).

- The following table summarises recent qualitative recommendations by other countries for overall health maintenance (rather than for specific diseases).

Table: International comparison of general dietary recommendations regarding alcohol intake

Country	Body	Limit
United States	National Research Council,1989	<1oz/day
France	Dupin et al.,1981	<10% kcal
United Kingdom	NACNE,1983	≤4% of cals
Ireland	Department of Health,1984	<5% kcal

- It is recommended that consideration be given to expressing the target in terms of absolute alcohol rather than as percentage of energy intake from alcoholic beverages.

To increase dietary fibre intake to 30 grams per day or more by the year 2000.

- For monitoring purposes, a time series has been derived from the apparent consumption estimates by applying edible portion factors and fibre concentration figures to estimates of consumption for foods within the fruit, vegetables and grain foodgroups. These factors are based on British data.

- The current intake of adults is about 22g per day. The target of a level of 30g represents a significant movement to achieve by the year 2000 (an increase of around 36%) but is considered to be feasible.

- The following table summarises recent qualitative recommendations by other countries for general health maintenance (rather than for specific diseases).

Table: International comparison of general dietary recommendations regarding dietary fibre intake

Country	Body	Limit
Sweden	Swedish National Food Admin,1981	>30g/day
	Expert Group for Diet & Health,1985	
United Kingdom	NACNE,1983	To 30g/day
Ireland	Department of Health,1984	To 20-35g/day

- The target would have more relevance to population sub-groups who have a lower food intake, for example children and the elderly, if it were expressed relative to total energy intake.

To increase the level of breast-feeding at 3 months of life to 80 percent or more by the year 2000.

- The target can be monitored by using data from the forthcoming series of ABS National Heath Surveys.

- The intention of the target is to primarily increase the duration of breastfeeding rather than to merely increase prevalence at time of discharge, hence the reference to 3 months.

- As with other nutrition targets there is considerable variation between socioeconomic and ethnic groups. Rates at three months are lower in some migrant and lower income groups, and urbanised Aboriginal women. Marked inter-State differences also exist.

- It is not recommended that any changes be made to this target however the definition of breastfeeding and how it relates to mixed breast and bottle feeding could be addressed.

Use of the targets

There is a need to clarify how these targets relate to the diets of individuals and how they should be used to monitor progress of population sub-groups towards the nutrition targets.

5. A MINIMUM NUTRITIONAL MONITORING AND SURVEILLANCE SYSTEM

5.1 Background

Monitoring the nutritional objectives of the National Better Health Program involves assessing progress towards the attainment of population goals and targets and reductions in inequalities in nutritional status. Effective monitoring depends upon the identification of quantifiable goals and targets, and the availability of timely, relevant and reliable data. It involves establishing the current state of nutritional health of the population, periodically measuring the extent to which the population is approaching the specified goals and targets, and reporting on the progress. Where targets are not directly or conveniently measurable, it will be necessary to devise and test performance indicators of their attainment.

The terms monitoring and surveillance are often used interchangeably. This report adopts the following usage.

Surveillance:	Systematic collection, evaluation and dissemination of information relating to the occurrence and/or spread of a disease. Surveillance => systematic observation
Monitoring:	The performance and analysis of routine measurements aimed at detecting changes in the environment or health status of a population. Monitoring => system for identifying statistically significant deviations from baseline levels.

Monitoring carries the implication of continuous oversight to ensure that actions are proceeding to plan. There is an implication that there may be intervention in the light of observation to ensure progress towards a target.

Thus, regular publication of statistics relating to the apparent consumption of foodstuffs and nutrients represents nutritional surveillance, whereas regular reporting on progress towards a target for fibre intake represents monitoring.

5.2 Components of a national monitoring and surveillance system

At its 102nd session held in November 1986, the National Health and Medical Research Council made the following statements about monitoring the nutritional health of Australians.

> 'The Council noted the advice of the Public Health Committee that a national nutrition monitoring system was necessary to keep under surveillance the nutritional status of the Australian population. Assessment of nutritional status should be one of the most important activities in monitoring the health of Australians. A national monitoring and surveillance system was needed both to develop and keep under review national nutrition policy such as the Dietary Guidelines for Australians and to evaluate associated nutrition programs.
>
> Essential to any review and indeed evaluation process was the development and maintenance of ongoing national nutrition data bases to monitor:
>
> - the nutritional quality of the Australian food supply
> - food consumption patterns at national level and of sub-groups in the community
> - public knowledge, beliefs and practices relating to nutrition
> - indices of nutritional status, e.g. anthropometric measurements, blood lipids, iron status.
>
> The council noted that these data bases are the minimum requirements for the establishment of a national nutrition monitoring and surveillance program. Some work was already being carried out at both national and State level to establish these data bases. It was agreed that it was important for government, professional and industry organisations to recognise the need for adequate data bases for the monitoring and surveillance of the nutritional status of Australians and to give a firm commitment to their establishment and maintenance.'

The council considered that co-ordination of a national monitoring and surveillance system should be the specific responsibility of the (now) Commonwealth Department of Community Services and Health in conjunction with the Australian Institute of Health.

A fundamental addition to the above data bases is the database on the nutrient composition of foods in the Australian market place.

Section 5.4 outlines a minimal data system for monitoring progress towards the seven nutritional targets. Because it focuses on the seven targets it is necessarily less comprehensive than the system described by the National Health and Medical Research Council.

5.3 Addressing the gaps and deficiencies

Section 4.1 identified data gaps and deficiencies between data requirements for monitoring purposes and the existing and expected availability of data in the nutrition priority area. These would be addressed by the following measures:

- Conducting periodic (e.g. 10 yearly) national dietary surveys. Review the methodology used in the National Dietary Survey of Adults 1983, giving consideration to:
  - appropriateness of the dietary method
  - broadening the age range in both directions
  - including rural areas in the coverage of the survey
  - including economic data items among the sociodemographic variables
  - measuring within-person variation on a sub-sample (a)
  - including anthropological measures
- Conducting appropriate studies of Aborigines to identify dietary and associated practices that may influence nutrition and health
- Developing and implementing methodology for monitoring population dietary sodium levels
- Maintaining the nutrient data bank and endeavouring to improve estimates of refined sugars and increase the proportion of Australian estimates of fibre.
- Supporting studies of infant feeding practices among Aboriginal women, particularly those at risk.
- Conducting further analyses of existing data sets to identify equity group differentials. This includes initiating processing of the Darwin Dietary Survey conducted in 1985.

These measures are assumed to form part of the minimum monitoring system for the nutritional targets.

(a) National Research Council. Subcommittee on Criteria for Dietary Evaluation (1986)

5.4 Monitoring the targets: a minimum system

Proposed for each target are at least one baseline dataset, datasets which can be used in monitoring progress towards the target, and datasets which can be analysed for differences in nutritional status between equity groups of the population.

Since the targets are set for Australia, only collections with a national coverage are classified as suitable for use in monitoring progress towards the targets. Data collections which relate to a specific geographical area add to the body of data on equity differentials.

Dietary surveys differ in the method of data collection e.g. recall, record or food frequency, and this influences the level of the estimates. For this reason some collections are more useful for identifying trends and equity differentials.

None of the data collections provide precisely the data item required to monitor the target. It is therefore necessary to use performance indicators which reflect the scope and coverage of the collection. This will commonly involve the inclusion of age or geographical coverage in the definition and this information is given for each data collection included in the minimum data system. For monitoring equity group differentials a variety of performance indicators, such as relative risk controlling for appropriate covariates, can be readily developed.

Overweight and obesity

To reduce the prevalence of overweight and obesity from 38 percent (1983) to 25 percent or less in people aged 25-64 years by the year 2000.

Baseline:	1983 NHF Risk Factor Prevalence Survey	25-64 years	Cities
	1983 Hunter Region Risk Factor Survey	35-64 years	Hunter
	1985 CVD Risk Factors in Darwin	25-64 years	Darwin
Monitoring:	1989 NHF Risk Factor Prevalence Survey	20-69 years	Cities
	1988/89 Hunter Region Risk Factor Survey	35-69 years	Hunter
	1990 ABS National Health Survey*	All ages	Aust.
	1995 ABS National Health Survey	All ages	Aust.
	2000 ABS National Health Survey	All ages	Aust.
Equity groups:	1983 NHF Risk Factor Prevalence Survey	24-64 years	Cities
	1985 Australian Health and Fitness Survey	7-15 years	Aust.
	1989 NHF Risk Factor Prevalence Survey*	20-69 years	Cities
	1990 ABS National Health Survey	All ages	Aust.
	1995 ABS National Health Survey	All ages	Aust.
	2000 ABS National Health Survey	All ages	Aust.

* Self reported height and weight calibrated by data from the 1989 NHF Risk Factor Prevalence Survey

Fat to dietary energy

To reduce the contribution of fat to dietary energy from 38 percent (1983-84) to 33 percent or less by the year 2000.

Baseline:	ABS Apparent Consumption of Foodstuffs	per capita	Aust.
	1983 National Dietary Survey of Adults	24-65 years	Cities
	1985 Nat. Dietary Survey of Schoolchildren	10-15 years	Aust.
Monitoring:	ABS Apparent Consumption of Foodstuffs	per capita	Aust.
	Proposed National Dietary Survey		
Equity groups:	1983 National Dietary Survey of Adults	24-65 years	Cities
	1985 Nat. Dietary Survey of Schoolchildren	10-15 years	Aust.
	1985 Darwin Dietary Survey	24-65 years	Darwin
	1985 Victorian Nutrition Survey	18+ years	Vic.
	1988 South Australian Dietary Survey	18+ years	S.A.
	1989 Western Australian Dietary Survey	20-69 years	W.A.
	Proposed National Dietary Survey		

Refined sugars to dietary energy

To reduce the contribution of refined sugars to dietary energy from 14 percent (1983-84) to 12 percent or less by the year 2000.

Baseline:	ABS Apparent Consumption of Foodstuffs	per capita	Aust.
	1983 National Dietary Survey of Adults	24-65 years	Cities
	1985 Nat. Dietary Survey of Schoolchildren	10-15 years	Aust.
Monitoring:	ABS Apparent Consumption of Foodstuffs	per capita	Aust.
	Proposed National Dietary Survey		
Equity groups:	1983 National Dietary Survey of Adults	24-65 years	Cities
	1985 Nat. Dietary Survey of Schoolchildren	10-15 years	Aust.
	1985 Darwin Dietary Survey	24-65 years	Darwin
	1985 Victorian Nutrition Survey	18+ years	Vic.
	1988 South Australian Dietary Survey	18+ years	S.A.
	1989 Western Australian Dietary Survey	20-69 years	W.A.
	Proposed National Dietary Survey		

Nutritional data bank: Improve estimates of refined sugars.

Dietary sodium intake

To reduce dietary sodium intake to 100 millimoles (2.3 grams) per day or less by the year 2000.

Baseline: No baseline data available

Equity groups: No data on equity groups

Monitoring: No data collection mechanisms in place

Action: Develop a feasible method of measuring population dietary sodium levels in Australia.

Alcoholic beverages to dietary energy

To reduce the contribution of alcoholic beverages to dietary energy from 6 percent (1983-84) to 5 percent or less by the year 2000.

Baseline:	ABS	Apparent Consumption of Foodstuffs	per capita Aust.
	1983	National Dietary Survey of Adults	24-65 years Cities
Monitoring:	ABS	Apparent Consumption of Foodstuffs	per capita Aust.
		Proposed National Dietary Survey	
Equity groups:	1983	National Dietary Survey of Adults	24-65 years Cities
	1985	Darwin Dietary Survey	24-65 years Darwin
	1985	Victorian Nutrition Survey	18+ years Vic.
	1988	South Australian Dietary Survey	18+ years S.A.
	1989	Western Australian Dietary Survey	20-69 years W.A.

Action: Monitor contribution of alcohol to dietary energy as well as alcoholic beverages

Dietary fibre intake

To increase dietary fibre intake to 30 grams per day or more by the year 2000.

Baseline:	ABS	Apparent Consumption of Foodstuffs	per capita Aust.
	1983	National Dietary Survey of Adults	24-65 years Cities
Monitoring:	ABS	Apparent Consumption of Foodstuffs	per capita Aust.
		Proposed National Dietary Survey	
Equity groups:	1983	National Dietary Survey of Adults	24-65 years Cities
	1985	Nat. Dietary Survey of Schoolchildren	10-15 years Aust.
	1985	Darwin Dietary Survey	24-65 years Darwin
	1985	Victorian Nutrition Survey	18+ years Vic.
	1988	South Australian Dietary Survey	18+ years S.A.
	1989	Western Australian Dietary Survey	20-69 years W.A.

Nutritional data bank: Increase the number of Australian fibre estimates.

Breastfeeding at 3 months of life

To increase the level of breast-feeding at 3 months of life to 80 percent or more by the year 2000.

Baseline:	1990 ABS National Health Survey	Women 18-50 Aust.
	State Health Authority collections	State
Monitoring:	1995 ABS National Health Survey	Women 18-50 Aust.
	2000 ABS National Health Survey	Women 18-50 Aust.
	State Health Authority collections	State
	Proposed survey of Aborigines	
Equity groups:	1990 ABS National Health Survey	Women 18-50 Aust.
	1995 ABS National Health Survey	Women 18-50 Aust.
	2000 ABS National Health Survey	Women 18-50 Aust.
	Research findings in the literature	
	Proposed survey of Aborigines	Local

5.4 Other data

As previously explained, the system outlined above is a minimum monitoring system focusing on the seven nutrition targets. There are a wealth of other data sources which can be used in a nutritional monitoring and surveillance system but these are outside the scope of this report. The use of these and other data sets will need to be explored, however, as part of the evaluation process. In this regard the potential of data sources such as commercial market research companies, primary industry commodity boards and other sources of time series data need to be investigated fully.

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APPENDIX A: GOALS AND TARGETS FOR CONDITIONS ASSOCIATED WITH DIET

Heart disease and stroke

Goal

To reduce avoidable illness and premature death from heart disease and stroke

Targets

To reduce the death rate from heart disease by 20 percent or more by the year 2000.

To reduce the death rate from stroke by 25 percent or more by the year 2000.

To reduce the prevalence of smokers from 33.5 percent (1983) to 28 percent or less by the year 1990 and to 15 percent or less by the year 2000.

To reduce the proportion of adults who persistently have a diastolic bood pressure of greater than 90 millimetres of mercury to 5 percent or less by the year 2000.

To reduce the prevalence of plasma cholesterol levels of 6.5 millimoles per litre or more from 20 percent (1983) to 8 percent or less in people aged 25-64 years by the year 2000.

To reduce the mean fasting plasma cholesterol level from 5.6 millimoles per litre (1983) to 4.8 millimoles per litre or less in people aged 25-64 years by the year 2000.

To reduce the prevalence of overweight and obesity from 38 percent (1983) to 25 percent or less in people aged 25-64 years by the year 2000.

To reduce the contribution of fat to dietary energy from 38 percent (1983-84) to 33 percent or less by the year 2000.

To reduce dietary sodium intake to 100 millimoles (2.3 grams) or less per day by the year 2000.

To increase participation in sufficient activity to achieve and maintain physical fitness and health to 40 percent or more of adults by the year 1990 and to 60 percent or more by the year 2000.

Breast cancer

Goal

To reduce illness and death from breast cancer.

Targets

To reduce the death rate from breast cancer by 25 percent or more by the year 2005.

To increase participation in breast cancer screening to 70 percent or more of eligible women by the year 1995.

Diabetes

Goals

To reduce preventable illness, handicap and premature death due to diabetes.

Targets

To establish a national data base to record the incidence of diabetes and its complications by the year 1990.

To slow down the increase in the prevalence of diabetes in Australia such that prevalence begins to decline by the year 2000.

Dental disease

Goals

To reduce the incidence of dental disease.

To reduce inequalities in dental health status.

Targets

To reduce the prevalence of dental caries to 35 percent or less in children aged 5-6 years by the year 2000.

To reduce the mean index of decayed, missing or filled permanent teeth to 1 or less in children aged 12 years by the year 2000.

To reduce the proportion of people having no natural teeth from 14 percent (1979) to 7 percent in adults aged 35-44 years by the year 2000.

To reduce the proportion of people having no natural teeth from 53 percent (1979) to 40 percent or less in adults aged 65 years by the year 2000.

Alcohol misuse

Goals

To reduce the incidence and prevalence of alcohol dependence and other alcohol related problems.

To reduce consumption of alcohol per capita.

Targets

The draft National Policy on Alcohol, within the policy areas it discusses, outlines where targets can be set and states "indices" which are markers against which progress towards them could be measured. As stated, this document has not yet received endorsement by the Ministerial Council. The Committee believes that it is one of the most advanced examples of policy development in the health promotion field in Australia and could prove a strong basis for determining Australia's approach to alcohol problems in the years to come.

High blood pressure

Goal

To reduce the incidence and prevalence of high blood pressure.

Targets

To reduce the proportion of adults who persistently have a diastolic blood pressure greater than 90 millimetres of mercury to 5 percent or less by the year 2000.

To increase the proportion of adults who have had their blood pressure accurately measured within the last two years to 90 percent or more by the year 1992.

High blood cholesterol

Goal

To reduce the incidence and prevalence of high blood cholesterol levels.

Targets

To reduce the prevalence of plasma cholesterol levels of 6.5 millimoles per litre or more from 20 percent (1983) to 8 percent or less in people aged 25-64 years by the year 2000.

To reduce the mean fasting plasma cholesterol level from 5.6 millimoles per litre (1983) to 4.8 millimoles per litre or less in people aged 25-64 years by the year 2000.

APPENDIX B. RELEVANT DATA COLLECTIONS

This section lists the datasets that are currently available, or soon to be available, to help monitor the nutritional targets and targets for conditions associated with diet. It is not an inventory of all existing data collections but focuses on major national and State or Territory collections. Data collections relating to smaller geographical regions are included if they complement one of the major collections. Some of the collections provide baseline data and some are useful for monitoring trends and equity differentials.

A major collecting agency is given for each collection. Abbreviations are listed at the end of the appendix.

Collections relevant to the nutrition targets

Reduce prevalence of overweight and obesity (25-64 years)

Risk Factor Prevalence Survey (NHF)	1980
Risk Factor Prevalence Survey (NHF)	1983
Risk Factor Prevalence Survey (Newcastle Uni.)	1983
ACT Health Survey (Adults)* (CTHC)	1984
Prevalence of CVD Risk Factors* in Darwin (MSHR)	1985
Canberra Health Survey* (ACTHA)	1988
Risk Factor Prevalence Survey* (NHF)	1989
National Health Survey* (ABS)	1989/90
ACT Health Survey (yr6-12)* (CTHC)	1984
Australian Health and Fitness Survey of Schoolchildren (ACHPER)	1985

* Based on self reported height and weight

Reduce contribution of fat to dietary energy

Apparent Consumption of Foodstuffs & Nutrients (ABS)	1936/37 -->
National Dietary Survey of Adults (DCSH)	1983
National Dietary Survey of Schoolchildren (DCSH)	1985
Darwin Dietary Survey (MSHR)	1985
Victorian Nutrition Survey (CSIRO)	1985
South Australian Dietary Survey (CSIRO)	1988
Western Australian Dietary Survey (Health W.A)	1989

Reduce contribution of refined sugars to dietary energy

Apparent Consumption of Foodstuffs & Nutrients (ABS)	1936/37 -->
National Dietary Survey of Adults (DCSH)	1983
National Dietary Survey of Schoolchildren (DCSH)	1985
Darwin Dietary Survey (MSHR)	1985
Victorian Nutrition Survey (CSIRO)	1985
South Australian Dietary Survey (CSIRO)	1988
Western Australian Dietary Survey (Health W.A)	1989

Reduce dietary sodium intake

Victorian Nutrition Survey (CSIRO)	1985
South Australian Dietary Survey (CSIRO)	1988

Reduce contribution of alcoholic beverages to dietary energy

Apparent Consumption of Foodstuffs & Nutrients (ABS)	1936/37 -->
National Dietary Survey of Adults (DCSH)	1983
Darwin Dietary Survey (MSHR)	1985
Victorian Nutrition Survey (CSIRO)	1985
South Australian Dietary Survey (CSIRO)	1988
Western Australian Dietary Survey (Health W.A)	1989

Increase dietary fibre intake

Apparent Consumption of Foodstuffs & Nutrients (ABS)	1936/37 -->
National Dietary Survey of Adults (DCSH)	1983
National Dietary Survey of Schoolchildren (DCSH)	1985
Darwin Dietary Survey (MSHR)	1985
Victorian Nutrition Survey (CSIRO)	1985
South Australian Dietary Survey (CSIRO)	1988
Western Australian Dietary Survey (Health W.A)	1989

Increase breast-feeding at 3 months of life

Breast-feeding - the Australian situation (Palmer)	1983
National Health Survey (ABS)	1989/90
State and Territory Health Departments	

Collections relevant to targets for conditions associated with diet

The Health Targets and Implementation (Health for All) Committee gave goals and targets for the following risk factors and causes of sickness and death which are associated with diet.

Heart disease and stroke

Causes of Death (ABS)

Hospital morbidity data collections

Aboriginal Hospitalisation (AIH)	1985,86 (NSW,WA) 1986 (SA),84(NT)
Aboriginal Hospitalisation - Northern Territory (AIH)	1977-80,82
Australian Health Survey (ABS)	1977/78
Risk Factor Prevalence Survey (NHF)	1980
Handicapped Persons (ABS)	1981
Australian Health Survey (ABS)	1983
Risk Factor Prevalence Survey (NHF)	1983
Hunter Risk Factor Prevalence Study (Newcastle Uni.)	1983
Prevalence of CVD Risk Factors in Darwin (MSHR)	1985/86
Risk Factor Prevalence Survey (NHF)	1989
National Health Survey (ABS)	1989/90

Breast cancer (Incidence and mortality)

State and Territory Cancer Registries, published data sets.

New South Wales	1972-83
Australian Capital Territory	1972-77
Queensland	1982-83
Victoria	1982-84
South Australia	1977-87
Western Australia	1982-85
Northern Territory	1981-85
Tasmania	1982-85
Australia (NCSCH)	1982

Data are collected from pathology laboratories, hospitals, nursing homes, oncology clinics, radiation oncology clinics, and clinicians.

Mortality data are collected through tapes supplied by the ABS (on behalf of the Registrars of Births, Deaths and Marriages), and confirmed through reports from hospitals and coroners. The data are published as ABS Causes of Death Statistics.

Hospital morbidity data collections provide information on cancer cases treated in hosptital.

Diabetes

Hospital morbidity data collections	
Risk Factor Prevalence Survey (NHF)	1983

Dental disease

Child Dental Health Survey (DCSH, now AIH)	1977 -->
Dental Health of South Australians (ABS)	1980
Children's Dental Survey (ABS)	1983
Survey of Oral health in Australia (DCSH)	1988

Alcohol misuse

Risk Factor Prevalence Survey (NHF)	1980
Risk Factor Prevalence Survey (NHF)	1983
Hunter Risk Factor Prevalence Study (Newcastle Uni.)	1983
National Dietary Survey of Adults (DCSH)	1983
Alcohol Consumption Patterns, S.A. (ABS)	1983
Survey of Drug Use by Secondary School Students in New South Wales (NSWDAA)	1983
Tobacco and Alcohol Use among Australian Secondary School Children (ACV)	1984
Household Expenditure Survey (ABS)	1984
Survey of Drug Use among Victorian Postprimary Students (VME & HCV)	1985
Australian Health and Fitness Survey of Schoolchildren (ACHPER)	1985
Survey of Social Issues in Australia (DCSH)	1985
Life Style - Health Risk Factors, N.S.W. (ABS)	1985

Alcohol Consumption Patterns, W.A. (ABS)	1985
Prevalence of CVD Risk Factors in Darwin (MSHR)	1985/86
Alcohol, Tobacco and Analgesic Cosumption, N.T. (ABS)	1986
Survey of Drug Use by Secondary School Students in New South Wales (NSWDAA)	1986
Household Expenditure Survey (ABS)	1988
Risk Factor Prevalence Survey (NHF)	1989

High blood pressure

Blood Pressure Study (NOHSC)	1977-85
Risk Factor Prevalence Survey (NHF)	1980
Risk Factor Prevalence Survey (NHF)	1983
Hunter Risk Factor Prevalence Study (Newcastle Uni.)	1983
Australian Health and Fitness Survey of Schoolchildren (ACHPER)	1985
Prevalence of CVD Risk Factors in Darwin (MSHR)	1985/86
Risk Factor Prevalence Survey (NHF)	1989

High blood cholesterol

Risk Factor Prevalence Survey (NHF)	1980
Risk Factor Prevalence Survey (NHF)	1983
Hunter Risk Factor Prevalence Study (Newcastle Uni.)	1983
Australian Health and Fitness Survey of Schoolchildren (ACHPER)	1985
Prevalence of CVD Risk Factors in Darwin (MSHR)	1985/86
Risk Factor Prevalence Survey (NHF)	1989

Historical data collections

Survey of domestic food budgets in 5 State capitals (National Advisory Council on Nutrition)	1938
The food consumption and dietary levels in 2730 Australian family households (NHMRC)	1944

APPENDIX C: INDEX OF PRIMARY DATA SOURCES

ACT Health Survey (Adults) 1984

ACT Health Survey (yr6-12) 1984

Apparent Consumption of Foodstuffs and Nutrients

Australian Health and Fitness Survey of Schoolchildren 1985

Australian Health Survey 1977-78

Australian Health Survey 1983

Breast-feeding - the Australian situation 1983

Causes of Death

Children's Dental Survey 1983

Darwin Dietary Survey 1985

Dental Health of South Australians 1980

Food consumption/dietary levels in 2730 Households 1944

Hospital morbidity data collections

Household Expenditure Survey 1984

National Dietary Survey of Adults 1983

National Dietary Survey of Schoolchildren 1985

National Health Survey 1989

Risk Factor Prevalence Survey 1980

Risk Factor Prevalence Survey 1983

Risk Factor Prevalence Survey 1989

Risk Factor Prevalence Survey - Darwin 1985-86

Risk Factor Prevalence Survey - Hunter 1983

South Australian Dietary Survey 1988

Survey of Oral Health in Australia 1986-87

Victorian Nutrition Survey 1985

Title: A.C.T. HEALTH SURVEY ADULTS 18 YEARS AND OVER 1984

Time Period: March 1984

Organisation: Capital Territory Health Commission, ACT.

Purpose: To obtain information about the health of the ACT population and their use of and need for various health services and facilities.

Target Population: ACT residents between the ages of 18 to 94 years of age.

Sample Coverage: A multi-stage area sample of private dwellings (almost 1500 houses,flats,etc,) in the ACT. 2500 persons were surveyed which represents approximately 1.5% of the population in the ACT.

Content: Information was obtained from the occupants of selected dwellings by specially trained interviewers. The questions were asked of respondents personally. Information on alcohol and tobacco consumption, cigarette advertising, self perception of health, incidence of recent sickness, type and duration of vigorous exercise and sleep.

Relevant Data Items: Demographic: Sex, age, marital status, occupation, height, weight, Quetlets' body mass index.

Cancers: Tobacco - smoking consumption, brand of cigarette, tried giving up, approval of banning advertising.

Nutrition: Proportion overweight/obese based on self-reported height and weight.

Other data: Self perception of health, sickness or injury during last 4 wks, reason for consulting with a medical specialist or doctor, admissions to hospital or nursing home, alcohol - index of consumption. Usual hours of sleep, vigorous exercise during last 4 wks, most popular forms of vigorous exercise

Publications: ACT Health Authority, 1984 ACT Health Survey, Bulletin 2: Survey of Adults 18 years of Age and over.

Availability: ACT Health Authority

Title: A.C.T. HEALTH SURVEY (years 6-12 schoolchildren) 1984

Time Period: April 1984

Organisation: Capital Territory Health Commission ACT.

Purpose: To obtain information about the health of ACT school children in years 6-12, and their use of and need for various health services and facilities.

Target Population: Students attending ACT schools and secondary colleges in years 6 to 12.

Sample Coverage: A sample of 2125 students, 984 males and 1141 females, from 48 schools and secondary colleges.

Content: Information was obtained on alcohol and tobacco consumption, self perception of health, incidence of recent sickness, breakfast consumption, and frequency, type and duration of vigorous exercise.

Relevant Data Items: Demographic: Sex, School year level.

Cancers: tobacco - experimentation, category of smoker, consumption, source of supply, approval of advertising.

Nutrition: Proportion overweight/obese based on self-reported height and weight.

Other data: Self perception of health, breakfast consumption, sickness or injury during last 4 wks, alcohol - experimentation, category of drinker, consumption, self assessment of happiness, vigorous exercise during last 4 wks, most popular forms of vigorous exercise.

Publications: ACT Health Authority, 1984 ACT Health Survey, Bulletin 1: Survey of year 6 to year 12 school students.

Availability: ACT Health Authority

Title: APPARENT CONSUMPTION OF FOODSTUFFS AND NUTRIENTS AUSTRALIA

Time Period: Data is published on a financial year basis. Time series is available from 1938-39 to the present.

Organisation: Australian Bureau of Statistics

Purpose: To measure trends in the patterns of consumption in Australia. The information collected deals with the supply and utilisation of foodstuffs and the level of nutrient intake.

Target Population: The total Australian population.

Coverage: The technical notes of the ABS publications contain a discussion of the components used to estimate consumption (see Content below) and provides additional information related to some individual food groups. It also discusses the basis for the calculations of estimated supplies of nutrients available for consumption.

Content: The general consumption equation is as follows:

Apparent consumption=(Commercial production + Estimated home production = Imports + Opening stocks) minus (Exports + Usage for processed food + Non-food usage + Wastage + Closing stocks).

(This equation is not used for those foodstuffs where a more appropriate technique is available.)

Per capita consumption=Apparent consumption divided by the mean population for that period.

Nutrient calculations are dependent on conversion factors calculated from Metric Tables of Composition of Australian Foods (Sucy Thomas and Margaret Corden, AGPS Canberra 1977).

Relevant Data Items: Nutrition: Apparent per capita consumption of selected foodstuffs; Total apparent consumption of selected foodstuffs; Estimated supply and utilisation of foodstuffs; Estimated supply of nutrients,unadjusted; Adjustments to the availability of specific vitamins; Percentage of total energy derived from each commodity group; Estimated nutrients available for consumption, adjusted; Nutrients available for consumption, adjusted, compared with dietary allowances.

Publications: Australian Bureau of Statistics Apparent Consumption of Foodstuffs and Nutrients: Australia Cat. No. 4306.0

Australian Bureau of Statistics Apparent Consumption of Foodstuffs and Nutrients (preliminary): Australia Cat. No. 4315.0

Availability: Australian Bureau of Statistics.

Title: AUSTRALIAN HEALTH & FITNESS SURVEY OF SCHOOLCHILDREN 1985

Time Period: Data was collected between May 1985 - October 1985

Organisation: The Australian Council for Health, Physical Education and Recreation Inc. (ACHPER).

Purpose: To establish percentile norms for the fitness and performance tests collected for students from 7 to 15 years of age.

Target Population: School children between 7 and 15 years of age in Australian schools. 500 school children of each sex from each of the age group levels between 7 and 15.

Sample Coverage: There were 52 primary and 52 secondary schools selected where the school had a minimum student enrolment of 200 students, with an additional 5 schools selected to balance single sex schools.

Content: The survey included field tests, technical tests laboratory tests, a questionaire on demography and lifestyle, blood tests and dietary survey.

Relevant Data Items: Demographic: Age, Sex.

Hypertension: cardiovascular endurance.

Nutrition: Proportion overweight/obese based on - height and weight (7-15 yrs); Girths - arm,waist,hip (7-15 yrs); skinfolds - triceps, biceps, subscapular, suprailliac, mid-abdominal (9, 12, 15 yrs).

Other data: muscular strength and endurance, joint mobility, anthropometry, body fat, clinical tests.

Publications: The Australian Council for Health, Physical Education and Recreation Inc., Australian Health and Fitness Survey 1985, South Australia: 1987.

Availability: ACHPER.

Title: AUSTRALIAN HEALTH SURVEY - 1977-78

Time Period: The twelve month period from July 1977 to June 1978.

Organisation: Australian Bureau of Statistics

Purpose: To obtain information about the health of Australians and the use of and need for various health related services and facilities.

Target Population: The total Australian population excluding those groups of the population normally excluded from ABS household surveys, eg. inpatients of hospitals and nursing homes.

Sample Coverage: Based on a sample of about 15,000 private dwellings selected throughout Australia excluding rural Northern Territory and covering 40,650 persons. Households were selected at random using a stratified multi-stage area sample. The occupants of non-private dwellings (e.g. hospitals, motels,hotels), diplomatic personnel and visitors from overseas were excluded from the survey.

Content: The information collected related to recent illness and chronic conditions experienced, including injuries, and any health-related action taken for any reason in the two weeks prior to interview. Any medication taken in the two days prior to interview were recorded. Details were also obtained of accidents occurring in the four weeks prior to interview.

Relevant Data Items: Demographic: Age (in 5 year age groups till 74, then 75 & over), Sex, Occupation, Marital Status, State or Territory.

Injury: Type of illness (ICD8), Injury/Accident, Other.

Older Persons: Age groups in ABS Publications - 45-64 years, 65 years and over.

Other data: Period since last action, Period of hospitalisation, Place of consultation, Days of reduced activity, Days away from school, Days away from work, Type of medication, Place of accident, Injury type, Type of accident, Accident agency, Chronic illness conditions experienced,index of general well being, Hospital episode, Medications taken, Consultations with doctor, Consultations with dentist, Other consultations.

Publications: Australian Bureau of Statistics Australian Health Survey Bulletin No. 1, September Quarter 1977 (Preliminary): Cat. No. 4309.0

ABS. Australian Health Survey Bulletin No. 2, December Quarter 1977 (Preliminary): Cat. No. 4310.0

ABS. Australian Health Survey, 1977-78: Cat. No. 4311.0

ABS. Australian Health Survey, 1977-78 - Chronic Conditions (Illnesses and Permanent Disabilities): Cat. No. 4314.0

ABS. Australian Health Survey, 1977-78 - Sabin and Triple Antigen Vaccination (Persons Aged 2-5 Years): Cat. No. 4316.0

ABS. Australian Health Survey, 1977-78 - Episodes (Admissions and Discharges) in Hospitals: Cat. No. 4317.0

ABS. Australian Health Survey. 1977-78 - Recent Illness: Cat. No. 4318.0

ABS. Australian Health Survey, 1977-78 - Doctor Consultations: Cat. No. 4319.0

ABS. Australian Health Survey, 1977-78 - Days of Reduced Activity due to Illness or Injury: Cat. No. 4321.0

ABS. Australian Health Survey, 1977-78 - Consultations with Health Professionals (Excluding Doctors and Dentists): Cat. No. 4322.0

ABS. Australian Health Survey, 1977-78 - Information Paper: Cat. No. 4340.0

ABS. Australian Health Survey, 1977-78 - Outline of Concepts, Methodology and Procedures Used: Cat. No. 4323.0

Availability: In addition to the above publications a sample file of survey data is available from ABS, and special tabulations are also available from ABS.

Title: AUSTRALIAN HEALTH SURVEY - 1983

Time Period: The twelve month period from February 1983 to January 1984.

Organisation: Australian Bureau of Statistics

Purpose: To obtain information about the health of Australians and their use of and need for various health services and facilities.

Target Population: The total Australian population, excluding those groups of the population normally excluded from the ABS household surveys, eg. inpatients of hospitals and nursing homes.

Sample Coverage: Based on a sample of about 18,000 private dwellings and non-private dwellings selected throughout Australia and covering about one-third of one per cent of the population of Australia. House holds were selected at random using a stratified multi-stage area sample. Non-Australian diplomatic and defence force personnel and institutionalised persons were excluded from the survey.

Content: The information collected related to any illness condition experienced, including injuries, and any health-related action taken for any reason in the two weeks prior to interview. Details were also obtained of accidents occurring in the four weeks prior to interview.

Relevant Data Items: Demographic: Age (in 5 year groups till 74, then 75 & over), Sex, State or Territory.

Injury: Type of illness, Injury/Accident, Other.

Older Persons: Age groups in ABS Publications - 45-64 years, 65 years and over.

Other data: Period since last action, Period of hospitalisation, Days of reduced activity, Days away from school, Days away from work, Type of medication, Place of accident, Injury type, Hospital episode, Medication taken, Consultation with doctor, Consultation with dentist, Other consultation.

Publications: Australian Bureau of Statistics, Australian Health Survey : Preliminary. Cat. No. 4348.0

ABS. Australian Health Survey, 1983: Cat. No. 4311.0

ABS. Australian Health Survey, 1983 - Health Related Actions Taken: Cat. No. 4358.0

ABS. Australian Health Survey, 1983 - Illness Conditions Reported: Cat. No. 4325.0

Availability: In addition to the above publications a sample file of survey data is available from ABS, and special tabulations are also available from ABS.

Title: BREAST-FEEDING - THE AUSTRALIAN SITUATION

Time Period: March 1983.

Organisation: Nancy Palmer

Purpose: To measure the incidence and duration of breast-feeding in Australia.

Target Population: Total live births.

Coverage: Data to estimate the incidence of breast-feeding was obtained from several sources:

(a) hospitals;
(b) administrative statistics of State and territory Departments of Health;
(c) special surveys undertaken in Health Departments; and
(d) independent surveys undertaken by independent investigators.

Hospital data were obtained by a questionnaire sent to 60 hospitals throughout Australia, sampled to represent major maternity hospitals, private nursing homes, regional hospitals, district base hospitals and smaller country hospitals. This survey indicated that 85.3% of Australian mothers were fully breast-feeding their babies at the time of discharge from hospital.

Figures which give an indication of duration of breast-feeding were compiled using data from all four sources.

Content: Whether or not breast-feeding.

Relevant Data Items: Nutrition: Incidence of breast-feeding - Infants age at hospital discharge (6-8 weeks, 3 months, 6 months, 12 months).

Publications: N Palmer, Breast-feeding - the Australian situation: J. Food Nutr.42:1.

Availability: as above

Title: CAUSES OF DEATH AUSTRALIA

Organisation: Australian Bureau of Statistics

Purpose: Presents summary statistics of causes of death in Australia compiled from data provided by the Registrars of Births, Deaths and Marriages in the States and Territories.

Target: All deaths in Australia. This includes persons not normally resident of Australia but who died in Australia. Australian residents who die overseas are not included in these statistics.

Relevant data items: Cause of death, year of death registration, age, sex, State or Territory of usual residence. The statistics are available both by year of registration and by year of occurrence.

Other data items: Demographic: date of birth, sex, marital status, place of usual residence, occupation, country of birth.

Injuries: month of registration of death, date of death, certifier of cause of death, number of years of residence in Australia (if born overseas), age at first marriage, number of children born to deceased.

Publications: Australian Bureau of Statistics, Causes of Death Australia: 1963 - present: (Catalogue No 3303.0)
Australian Bureau of Statistics, Causes of Death New South Wales: (Catalogue No 3302.1)
Australian Bureau of Statistics, Causes of Death Victoria: (Catalogue No 3302.2)
Australian Bureau of Statistics, Causes of Death Queensland: (Catalogue No 3302.3)
Australian Bureau of Statistics, Causes of Death South Australia: (Catalogue No 3306.4)
Australian Bureau of Statistics, Causes of Death Tasmania: (Catalogue No 3301.6)

Prior to 1963, statistics on causes of death compiled in 'Demography'.

Availability: Detailed data are also available on microfiche from the ABS.

Title: CHILDREN'S DENTAL HEALTH SURVEY

Time period: November 1983

Organisation: Australian Bureau of Statistics

Purpose: To obtain information about dental behaviour patterns of children aged 2 to 14 years.

Target population: Children aged 2 to 14 years throughout Australia.

Sample coverage: The survey was conducted as part of the regular population survey, which is based on a multi-stage area sample of private dwellings (about 33,000 houses, flats etc) and covers about two-thirds of one percent of the population of Australia.

Content: Whether enrolled in school; availability, enrolment and use of School Dental Service; whether child has seen anyone at all about teeth or gums; if not, why not; age at first dental visit; whether braces or bands are worn; reason for last dental visit; place of last dental visit, regularity of dental checkups.

Relevant data items: Demographic: age, sex, state.

Nutrition: Dental data - Age of first consultation male/female, Proportion of persons who have had a dental consultation, Most recent consultation, Whether covered by private health insurance, Never had a dental consultation, Treatment received, Whether School dental service available.

Publication: Australian Bureau of Statistics (1985), Children's Dental Survey, Australia : November 1983 Cat no 4350.0.

Availability: Above publication AIH library.

Title: DARWIN DIETARY SURVEY OF ADULTS

Time Period: Data was collected between October 1985 - March 1986

Organisation: Menzies School of Health Research, Darwin in collaboration with the National Heart Foundation.

Purpose: To collect dietary intake data to determine the food intake consumption and nutrient intake in a random sample of Darwin residents aged between 25 and 64 years, and to compare the results with those from the National Dietary Survey of Adults, 1983.

Target Population: Residents of Darwin aged between 25 and 64 years.

Sample Coverage: Because of the younger age structure in Darwin compared to other Australian capital cities, a larger sampling fraction was used in the older age groups. Of the original 1800 selected from the electoral role, 434 were classified as ineligible for inclusion in the survey and over 1200 responded which represented a response rate of 90%.

Content: The survey was conducted in conjunction with the Darwin Risk Factor Prevalence Survey 1985. The dietary method was a 24 hour recall. All persons participating in the survey completed a questionnaire on lifestyle. Physical measurements and blood samples were taken by a nursing sister.

Relevant Data Items: Demographic: Age, Sex, marital status, country of birth (self and parents), years in Aust., years in N.T., Aboriginality, education level, employment status, current occupation, hours worked.

Nutritional: Height and weight, contribution of fat to dietary energy, contribution of refined sugars to dietary energy, contribution of alcohol to dietary energy, contribution of alcoho. to dietary energy, dietary fibre intake.

Other data: Food frequency questionnaire, family history questionnaire, illness conditions, treatment for high blood pressure-blood fat-angina, oral contraceptive use, pregnant, diabetes, alcohol use, exercise for recreation and fitness (last 2 weeks), smoking behaviour, vitamin and mineral supplements, psychological disorder, type A behaviour, vasectomy.

Waist/hips ratio, blood pressure, blood lipids and glucose, forced expiratory volume in one second, forced vital capacity, end-alveolar expired carbon monoxide, urinary nicotine metabolites.

Publications: There are no publications from the dietary survey.

Availability: Not available.

Title: DENTAL HEALTH OF SOUTH AUSTRALIANS

Time period: October, 1980

Organisation: Australian Bureau of Statistics, South Australia

Purpose: To obtain information about dental insurance, entitlement to free dental treatment, types of treatment and denture wearing of South Australian residents. Conducted at request of the Dental Health Branch of the South Australian Health Commission.

Target population: South Australian adults and children aged 5 - 12 (excluding residents of special dwellings e.g. hotels, caravan parks, institutiona, boarding houses, etc).

Sample: Conducted as a supplement to the monthly Labour Force Survey by the Australian Bureau of Statistics. The Labour Force Survey is based on a multi-stage area sample of private dwellings and in SA covered about one per cent of the total number of private dwellings. Included in the survey were usual residents (aged 5 years and over) of selected private dwellings.

Content: Adult questionnaire: questions about current health insurance; pensioner or repatriation health benefit card; entitlement to free dental treatment.
Dental health: details of last visit to a dental practitioner; frequency of dental checkups.
Dentures: whether worn; one or both jaws; full/partial; how long current dentures worn; perceived need for replacement.

Children's questionnaire: enrolment in school dental service; whether covered by private health insurance; entitlement to free dental treatment; name of school and year level; reasons for not enrolling in school dental service; treatment by other dental practitioners while enrolled in school dental service; details of last visit to a dental practitioner; regularity of checkups.

Relevant data items: Demographic: age.

Nutrition: Dental data - Children - last dental visit,reason for visit, service performed, dental insurance or free, enrolled with school dental. Adults - frequency of visits, entitlement to free dental whether insured, denture replacement by health benefit card holders.

Publication: Australian Bureau of Statistics (1980), The Dental Health of South Australians: Adelaide. Cat. no. 4303.4

Availability: ABS.

Title: FOOD CONSUMPTION AND DIETARY LEVELS IN 2730 AUSTRALIAN FAMILY HOUSEHOLDS IN 1944

Time Period: February 1944-February 1945.

Organisation: Australian Institute of Anatomy, Canberra. Under direction from the Nutritional Committee of NH&MRC.

Purpose: To discover whether the diet of the Australian people, which in 1936-38 was found to be generally adequate, had been affected by war-time conditions.

Target Population: The surveyed households were randomly selected from a stratified sample of metropolitan and country in each State. Only households where child endowment payments for two or more children were included.

Sample Coverage: There were 2730 households surveyed comprising of 15,235 persons, and was limited to households containing two or more children.

Content: The information on food consumption was obtained through the cooperation of the housewife by means of the log-book or household dietary budget method. Data collected from these records were then submitted to statistical treatment and figures were converted in various ways to give the mean daily intake for each of the many kinds of foodstuffs useds and for specific nutrients. These means were calculated for the adult male unit and per capita.

Relevant Data Items: Demographic: Age, Sex, marital status, state, metropolitan/country, standard of housing, pregnancy or nursing woman, employment.

Nutritional: Consumption of individual foodstuffs, calorie protien fat carbohydrate calcium iron vitaminA vitaminB2 vitaminC intake.

Publications: The Australian Institute of Anatomy, The Food Consumption and Dietary Levels in 2730 Australian Family Households in 1944, Canberra: Serial Report Series No.1, 1945.

Availability: Nutrition Section - Department of Community Services & Health.

Title: HOSPITAL MORBIDITY DATA COLLECTIONS

Time Period:
NSW: 1979-present (excluding 1982)
Vic: 1982-present
Qld: 1959-present
SA: 1976-present
WA: 1976-present
Tas: 1975-1978 (collection recommenced in 1989)
NT: 1978-present
ACT: late 1970s - present
Repat:

Organisation: State and Territory Health Authorities (in collaboration with ABS in some States), Department of Veterans Affairs (for Repatriation Hospitals).

Purpose: To obtain information on inpatient episodes in acute hospitals for use in health services management, planning and financing and for use in monitoring population health and epidemiological research.

Target Population: All inpatients of Public and Private Hospitals in Australia.

Sample Coverage: All acute hospital inpatients. Coverage is not yet complete in all States and Territories:

	Public Hospitals	Private Hospitals	Repat. Hospitals
NSW	Yes#	Yes#	Yes
Vic	Yes	No	Yes
Qld	Yes	Yes	Yes*
SA	Yes	Some	Yes
WA	Yes	Yes	Yes*
Tas	Yes	?	Yes
NT	Yes	No	-
ACT	Yes	No	-

* Also included in State collection.
\# Sampled collection

Content: Information is collected on each admitted inpatient episode upon separation from hospital. Of major importance are the data items relating to diagnoses and procedures. All States and Territories are planning to or have already moved to ICD-9-CM as follows:

SA	- 1.1.85
Vic	- 1.7.86
NSW & ACT	- 1.7.87
WA	- 1.1.88
Tas, NT & DVA	- 1.1.89
Qld	- future development

All States and Territories except Queensland and Tasmania currently assign Diagnosis Related Group to each patient episode in their hospital morbidity collections.

Relevant Data Items: Demographic: Sex, Date of Birth (Age), Country of Birth, Aboriginality, Marital Status, Area of Usual Residence.

Other data: Clinical - Principal diagnosis, Additional diagnoses, Principal procedure, Additional procedures, External Cause, Place of Occurrence, Diagnosis Related Group (derived in some States). Service/Administrative - Public/Private Patient, Compensable status, Insurance status, Admission date, Separation date, Length of stay (derived).

Publications: ABS. Hospital and Nursing Home In-patients, New South Wales: ABS Cat No. 4306.1. Annually from 1978.

ABS. Public Hospital Morbidity, Victoria: ABS Cat. No. 4301.2. Annually from 1982.

ABS. Hospital Morbidity, Queensland: ABS Cat. No. 4303.3. Annually from 1959.

ABS. Hospital Morbidity Rates, Queensland: ABS Cat. No. 4304.3. yearly 1966-1986.

ABS. Hospital Morbidity, South Australia: ABS Cat. No. 4302.4. Annually from 1975-76 to 1983.

South Australian Health Commission and ABS. Inpatient Separations from Recogonised Hospitals, South Australia: Annually from 1986.

Health Department of Western Australia. Hospital Morbidity Statistics, Short-Stay Hospitals. Annually from 1983.

Northern Territory Health Department. Health Indicators for the Northern Territory 1977-1982.

ACT Health Authority Annual Reports.

ABS, Hospital Inpatient Statistics, WA: ABS Cat. No. 4301.5, Annually 1971-1982.

Availability: Most State Health Authorities will supply tabulations on request (these may be charged for).

AIH has unit record data for some States and Territories for some years:
NSW - 1979-81, 1983-86; NT - 1979-1984; ACT - 1985

As part of the AIH Hospital Utilisation and Costs Study 1987-88, all States and Territories have been requested to supply morbidity data tabulations at the ICD-9 or ICD-9-CM 3 digit level of principal diagnosis and principal procedure. These should be received in machine readable form within the next few weeks.

Title: HOUSEHOLD EXPENDITURE SURVEY

Time period: January to December 1984

Organisation: Australian Bureau of Statistics

Purpose: To find out how the expenditure pattern of private households varies according to income level and other characteristics such as household size, composition, location and principal source of income.

Target population: All private households in Australia.

Sample: 9,500 households.

Content: Household description including demographics of all individuals in the household over 15 years of age; Household expenditure on - current housing costs, fuel and power, food and non-alcoholic beverages, alcoholic beverages, tobacco, clothing and footwear, household furnishings and equipment, household services and operation, medical care and health expenses, transport, recreation, personal care, miscellaneous commodities and services. Family composition of the household, nature of housing occupancy, number of dependent children, age, principal source of income, sex, year of arrival, hours worked in main job, country of birth, duration of unemployment in last 12 months, employment status, marital status, occupation.

Relevant data items: Demographic: Family composition of the household, nature of housing occupancy, number of dependent children; for all Persons > 15 years of age - age, principal source of income, sex, year of arrival, hours worked in main job, country of birth, duration of unemployment in last 12 months, employment status, marital status, occupation.

Nutrition: Expenditure on - food (87 items), alcohol (10 items), cigarettes and tobacco (3 items)

Nutrition - Food items:

151 Bread - home delivered
152 Bread - not home delivered
153 Flour
154 Cakes, tarts and puddings
155 Biscuits
156 Cake/biscuit/pudding/bread mixes
157 Breakfast cereals
158 Pasta (spaghetti, noodles, etc)
159 Rice
160 Cereals, n.e.c.
161 Ham
162 Bacon
163 Canned meats (not bacon/ham)
164 Sausage (not continental)
165 Processed meat (frozen)
166 Process/meat (not frozen/canned)
167 Beef and veal
168 Mutton and lamb
169 Pork (excl bacon and ham)
170 Poultry
171 Game
172 Offal
173 Meat, n.e.c.
174 Meat, undefined
175 Fresh fish/seafood
176 Frozen fish/seafood
177 Canned/bottled fish/seafood
178 Proces/fish and seafood, n.e.c.
180 Fresh eggs
181 Fresh milk and cream - home/deliv
182 Fresh milk/cream not h/deliv
183 Cheese and cheese spreads

184 Butter	185 Powdered milk
186 Dairy products/eggs, n.e.c.	187 Margarine
188 Edible oils and fats, n.e.c.	189 Fresh citrus fruit
190 Fresh stone fruit	191 Fresh apples and pears
192 Fresh fruit, n.e.c.	193 Fresh fruit, undefined
194 Canned/frozen/bottled fruit	195 Dried fruit
197 Nuts	198 Fresh potatoes
199 Fresh onions	200 Fresh root vegetables, n.e.c.
201 Fresh tomatoes	202 Fresh vegetables, n.e.c.
203 Fresh vegetables, undefined	204 Frozen vegetables
205 Other processed vegetables	206 Vegetables, undefined
207 Sugar	208 Marmalades, jams and conserves
209 Honey	210 Syrups
211 Jellies and desserts	212 Potato crisps/other sav/confect
213 Chocolate confectionery	214 Ice confectionery
215 Other confectionery	216 Tea (packaged)
217 Coffee (packaged)	218 Canned and packeted soup
219 Food drinks, n.e.c.	220 Spices and herbs
221 Sauces and salad dressings	222 Spreads and mixes, n.e.c.
223 Food additives, n.e.c.	224 Baked beans and canned spaghetti
225 Canned/bottled baby foods	226 Frozen prepared meals
227 Prepared meals, n.e.c.	229 Food, n.e.c.
230 Food, undefined	231 Soft drinks and aerated waters
232 Fruit juice	233 Vegetable juice
234 Juices, undefined	235 Cordials
236 Milk based beverages, n.e.c.	237 Non-alco beverages, undefined
238 Meals rest'rs/hotels/clubs	239 Snacks/take-away (not frozen)
240 School lunch money	

Alcohol items:

261 Beer consump. off lic/prem	262 Beer consump. on lic/prem
263 Beer, undefined	264 Wine consump. off lic/prem
265 Wine consump. on lic/prem	267 Spirits consump. off lic/prem.
268 Spirits consump. on lic/prem	270 Alco/bev n.e.c. con. off lic/p
271 Alco/bev n.e.c. con. on l/p	272 Alcoholic beverages, undefined

Cancers - Cigarette & Tobacco items:

281 Cigarettes	282 Other tobacco
283 Other tobacco products	

Older Persons: Age groups in ABS Publications - in ten year groups till 64 years, then 65 years and over.

Publications: A series of general and specific publications (Cat Nos 6527.0 to 6540.0). Separate publications also for NSW (6530.1), Vic (6501.2), Qld (6533.3), Tas (6501.6) and NT (6501.7)

Availability: Unpublished information available from the ABS including unit record tapes.

Title: NATIONAL DIETARY SURVEY OF ADULTS 1983

Time Period: Data was collected between May 1983 - November 1983

Organisation: Department of Community Services and Health in collaboration with the National Heart Foundation.

Purpose: To collect dietary intake data to determine the food intake consumption and nutrient intake in a national sample of Australians aged between 25 and 64 years living in the six State capital cities.

Target Population: Australians aged between 25 and 64 living in the six State capital cities.

Sample Coverage: A total of 6295 persons were surveyed which represents a response rate of 75.3%. There were seven catchment areas - Sydney North, Sydney South, Melbourne, Brisbane, Adelaide, Perth and Hobart. Systematic sampling was used to select 1500 persons in each catchment area consisting of 50% males and 50% females. Perth however required a sample size of 2400 to satisfy requirements for its participation in the WHO MONICA Project. The sample for each catchment area was proportionally representative of people on the electoral roll by age (five year groups),sex and electoral division.

Content: The survey was conducted in conjunction with the Risk Factor Prevalence Survey 1983. The dietary method was a 24 hour recall. All persons participating in the survey completed a questionnaire on lifestyle, physical measurements and blood samples were taken by a nursing sister.

Relevant Data Items: Demographic: Age, sex, marital status, country of birth, years in Aust., education level, employment status, current occupation, hours worked.

Nutritional: Height and weight, contribution of fat to dietary energy, contribution of refined sugars to dietary energy, contribution of alcohol to dietary energy, contribution of alcohol to dietary energy, dietary fibre intake.

Older Persons: Age groups 45-54 years, and 55-64 years old.

Other data: Illness conditions, treatment for high blood pressure-blood fat-angina, oral contraceptive use, pregnant, diabetes, alcohol use, exercise for recreation and fitness (last 2 weeks), smoking behaviour, vitamin and mineral supplements, psychological disorder, type A behaviour. Blood pressure, blood lipids and glucose.

Publications: Commonwealth Department of Health, National Dietary Survey of Adults: 1983, No. 1 Food Intakes, Canberra: AGPS, 1987.

Commonwealth Department of Health, National Dietary Survey of Adults: 1983, No. 2 Nutrient Intakes, Canberra: AGPS, 1987.

Availability: AGPS.

Title: NATIONAL DIETARY SURVEY OF SCHOOLCHILDREN (10-15 YEARS) - 1985

Time Period: Data was collected between May 1985 - October 1985

Organisation: Department of Community Services and Health.

Purpose: To collect dietary intake data to determine the food intake consumption and nutrient intake of Australian schoolchildren.

Target Population: Australian schoolchildren aged between 10 and 15 years from all States and Territories, attending both urban and rural schools.

Sample Coverage: A two stage probability sample, firstly the selection of schools and secondly the random selection of boys and girls from each age group. 500 students of each sex from each age group level between 10 and 15 years, in Australian schools on 30 September 1985. There were 52 primary and 52 secondary schools selected, where the school had a minimum student enrolment of 200 students, with an additional 5 schools selected to balance single sex schools.

Content: The survey was conducted in conjunction with the Australian Health and Fitness Survey 1985. The dietary method was 24 hour food record and included only those students aged 10 to 15. All students participating in the survey completed a questionnaire on lifestyle.

Relevant Data Items: Demographic: Age, Sex, marital status, country of birth, years in Aust., education level, Employment Status, occupational status, current occupation, hours worked.

Nutritional: Contribution of fat to dietary energy, contribuition of refined sugars to dietary energy, contribution of alcohol to dietary energy, contribution of alcohol to dietary energy, dietary fibre intake.

Other data: Illnesses, treatment for high-blood-pressure-blood fat-angina,oral contraceptives, pregnant, diabetes, alcohol consumption, recreation and fitness (last 2 wks), smoking habits, vitamin and mineral supplements, self assessment of lifestyle, general health self assessment.

Publications: Commonwealth Department of Health, National Dietary Survey of Schoolchildren (10-15 years) : 1985, No. 1 Food Intakes, Canberra: AGPS, 1989.

Commonwealth Department of Health, National Dietary Survey of Schoolchildren (10-15 years) : 1985, No. 2 Nutrient Intakes, to be published.

Title: NATIONAL HEALTH SURVEY - 1989-90

Time Period: The twelve month period from October 1989 to September 1990.

Organisation: Australian Bureau of Statistics

Purpose: To obtain information about the health status of Australians, their use of and need for various health services and facilities and the prevalence of health risk factors in the community.

Target Population: All persons in private and non-private dwellings excluding those groups of the population normally excluded from ABS household surveys, eg. inpatients of hospitals and nursing homes, students at boarding schools, members of Australian permanent defence forces living on military bases.

Sample Coverage: Based on a sample of about 16,400 dwellings, covering about 0.3 per cent of the population of Australia. Households will be selected at random using a stratified multi-stage area sample.

Content: The information to be collected will relate to recent illness/injury, long-term illness/disability, short-term disability/reduced activity, self-assessment of overall health status, hospital episodes, medical/dental/other health professional consultations, use of medications/vitamins and minerals, and health risk factors including tobacco and alcohol consumption, diet, self-reported height and weight, immunisation, accidents and physical activity. Information on a range of women's health issues will be sought on a voluntary basis from women respondents aged 18-64 years. Demographic and socioeconomic information will also be collected.

Relevant Data Items: Demographic: Age, sex, marital status, birthplace, year of arrival, aboriginality, language spoken at home, inability to speak English, educational attainment, employment, income, health insurance status.

Injury: Recent illness/injury - type, cause and consequences of recent illness/injury or symptoms. Accidents - whether any reported illness, injury or disability was caused by an accident; period since most recent accident reported; place of occurrence (including work place).

Hypertension: Chronic illness/condition - type and cause of chronic illness; whether ever diagnosed as suffering from heart attack, angina, stroke, high blood-sugar levels, diabetes, high cholesterol, high triglycerides, high blood pressure

Cancers: Women's health - knowledge of/had a Pap smear test, time since last test; knowledge of/had a mammogram, time since last mammogram; whether examine own breasts/breasts ever examined by doctor; use of oral contraceptives, whether fitted with IUD; whether had a hysterectomy.
Use of sunscreens - whether used when in strong sun, sun protection factor of screen used.

Risk factors - tobacco - smoking status, type of smoker/ex-smoker (cigarette, pipe, etc), number of cigarettes per day, age started smoking, total duration of smoking (years), whether an attempt made to give up smoking, main reason for giving up smoking.

Nutrition: diet/nutrition (persons 15 years and over) - whether changed kind and/or quantity of food consumed, reason for change; whether amount of selected foods eaten has changed, any other changes to diet (2 year reference period)
women (aged 18-64) - whether currently breastfeeding or have breastfed, length of time breastfed.

Other data: Health related actions - reason for hospital episodes, use of medication/vitamins/minerals, consultation with doctor/dentist/other health professional. Alcohol - whether consumed in survey week, total consumed on each day of survey week, type of beverage consumed in survey week, whether consumption in survey week was more, less or same as usual. Physical activity - whether exercise taken in the two weeks prior to interview, duration of physical activity. Self reported height and weight. Immunisation - (persons 0-6 years) whether triple antigen/CDT/ mumps/measles vaccinations ever received, place where received; (females 18-44 years) whether rubella vaccination received, place where received, main reason not vaccinated. Self assessment of overall health status.

Publications: Not yet determined

Availability: In addition to publications, a sample file of survey data and special tabulations are likely to be available from ABS. The initial results of the survey are expected to be released by June 1991.

Title: RISK FACTOR PREVALENCE SURVEY - 1980

Time Period: May 1980 - November 1980

Organisation: National Heart Foundation and Commonwealth Dept. of Health.

Purpose: To determine the prevalence of factors thought to be associated with an increased risk to cardiovascular disease in Australians aged between 25 and 64 years living in capital cities.

Target Population: Australians, 25 to 64 years, living in State capital cities.

Sample Coverage: A total of 5617 persons were surveyed which represents a response rate of 75.9%. There were seven catchment areas - Sydney North, Sydney South, Melbourne, Brisbane, Adelaide, Perth and Hobart. Systematic sampling was used to select 1200 persons in each catchment area from the Electoral rolls.

Content: Respondents completed a questionnaire and participated in a physical examination which consisted of height and weight measurements; recording of systolic and diastolic blood pressure and pulse rate; and taking of a blood sample later analysed for cholesterol and triglyceride levels.

Relevant Data Items: Demographic: Age (5 year age groups between 25 & 64), sex, marital status, country of birth, years in Aust., education level, employment status, occupational status, current occupation, hours worked.

Nutritional: Proportion of overweight/obese, plasma cholesterol, HDL cholesterol, plasma triglyceride, vitamin and mineral supplements, added salt, type of diet, frequency of eating meat and fat on meat, eggs per week, butter/margarine, weekly consumption of dairy products, sugar.

Hypertension: Systolic and diastolic blood pressure, conditions - high blood pressure, angina pectoris, heart attack, stroke, high cholesterol, high triglycerides, on treatment for blood pressure, on treatment for blood fat.

Cancers: smoking behaviour.

Older Persons: Age groups 50-54, 55-59, 60-64 years old.

Other data: pulse rate, oral contraceptive use, whether pregnant, diabetes, alcohol use, exercise for recreation and fitness, psychological disorder and type A behaviour, use of sleeping pills, tranquillisers and pain relievers, duration and description of sleep.

Publications: National Heart Foundation, Risk Factor Prevalence Study, Report No 1 - 1980 : Canberra, 1981.

Availability: National Heart Foundation.

Title: RISK FACTOR PREVALENCE SURVEY - 1983

Time Period: May 1983 - November 1983

Organisation: National Heart Foundation & Commonwealth Department of Health.

Purpose: To determine the prevalence of factors thought to be associated with an increased risk to cardiovascular disease in Australians aged between 25 and 64 years living in capital cities.

Target Population: Australians, 25 to 64 years, living in State capital cities.

Sample Coverage: A total of 7640 persons were surveyed which represents a response rate of 75.3%. There were seven catchment areas - Sydney North, Sydney South, Melbourne, Brisbane, Adelaide, Perth and Hobart. Systematic sampling was used to select 1500 persons in each catchment area from the Electoral rolls. Perth required a sample size of 2400 to satisfy requirements for its participation in the WHO MONICA Project.

Content: Respondents completed a questionnaire and participated in a physical examination which consisted of height and weight measurements; recording of systolic and diastolic blood pressure; and taking of a blood sample later analysed for cholesterol, triglycerides and glucose levels. A sub-sample also participated in a 24-hour recall survey.

Relevant Data Items: Demographic: Age (5 year age groups between 25 & 64), sex, marital status, country of birth, years in Aust., education level, employment status, occupational status, current occupation, hours worked.

Nutritional: Proportion of overweight/obese, plasma cholesterol, HDL cholesterol, plasma triglyceride, glucose, vitamin and mineral supplements, added salt, type of diet.

Hypertension: Systolic and diastolic blood pressure, conditions - high blood pressure, angina, heart attack, stroke, high cholesterol, high triglycerides, on tablets for blood pressure, on treatment for blood fat or angina.

Cancers: smoking behaviour.

Older Persons: Age groups 50-54, 55-59, 60-64 years old.

Other data: oral contraceptive use, whether pregnant, diabetes, alcohol use, exercise for recreation and fitness, psychological disorder and type A behaviour.

Publications: National Heart Foundation of Australia, Risk Factor Prevalence Study, Report No 2 - 1983 : Canberra, 1985.

Availability: National Heart Foundation.

Title: RISK FACTOR PREVALENCE SURVEY - 1989

Time Period: June 1989 - November 1989

Organisation: National Heart Foundation, Commonwealth Department of Community Services and Health and Australian Institute of Health.

Purpose: To determine the prevalence of factors thought to be associated with an increased risk to cardiovascular disease in Australians aged between 25 and 64 years living in capital cities.

Target Population: Australians, 20 to 69 years, living in State or Territory capital cities.

Sample Coverage: The ten catchment areas and selected sample sizes are as follows: Sydney North (1500), Sydney South (1500), Sydney West (2100), Melbourne (1500), Brisbane (1500), Adelaide (3000), Perth (1500), Hobart (1500), Darwin (1500) and Canberra (1500). The samples were selected from the Electoral rolls.

Content: Respondents will complete a questionnaire and participate in a physical examination consisting of height, weight, waist and hip measurements; recording of systolic and diastolic blood pressure; and taking of a blood sample later analysed for cholesterol, triglycerides and iron levels.

Relevant Data Items: Demographic: Age (5 year age groups between 20 & 69), sex, marital status, living arrangements, country of birth, years in Aust., education level, current occupation, employment status (self and partner), gross income (self and partner) and main source of income (self and partner).

Nutritional: Proportion of overweight/obese, plasma cholesterol, HDL cholesterol, plasma triglyceride, iron, added salt, usual way of eating, fat on meat, dairy products.

Hypertension: Systolic and diastolic blood pressure, conditions - high blood pressure, angina, heart attack, stroke, high cholesterol, high triglycerides, time since blood pressure last measured, time since blood cholesterol last measured, on tablets for blood pressure, on treatment for blood fat or angina.

Cancers: smoking behaviour.

Older Persons: Age groups 50-54, 55-59, 60-64 years old.

Other data: oral contraceptive use, whether pregnant, diabetes, alcohol use, exercise for recreation and fitness, self-reported height and weight.

Publications: Available in 1990.

Availability: National Heart Foundation.

Title: RISK FACTOR PREVALENCE STUDY - DARWIN

Time Period: October 1985 - March 1986

Organisation: Menzies School of Health Research (Darwin NT) & National Heart Foundation.

Purpose: To determine the prevalence of factors thought to be associated with an increased risk to cardiovascular disease in Darwin residents aged between 25 and 64 years.

Target Population: All people aged 25 to 64 years, living in Darwin city. An initial sample size of 1800 was sought using a systematic sampling technique using the electoral roll.

Sample Coverage: Of the total of 1800 selected, 1365 were eligible to participate, 1233 people took part in the study. ie, a sponse rate of 69%.

Content: Respondents completed a general health questionnaire and participated in a physical examination. The questionnaire obtained information on demographics, respiratory symptoms and smoking behaviour. The physical examination consisted of height and weight measurements; recording of systolic and diastolic blood pressure; and taking of a blood sample later analysed for cholesterol, triglycerides and glucose levels, forced expiratory volume and vital capacity, end-alveolar expired carbon monoxide, and urinary nicotine metabolites. As well as a 24 hour dietary recall, participants completed self-administered food frequency and family history questionnaires.

Relevant Data Items: Demographic: Age (5 year age groups between 35 & 64), sex, marital status, country of birth, years in Aust., education level, employment status, occupational status, current occupation, hours worked, Aboriginality, years in NT, country of birth of parents.
Nutritional: Proportion of overweight/obese, plasma cholesterol, HDL cholesterol, plasma triglyceride, glucose, vitamin and mineral supplements, added salt, type of diet, consumption of meat and fish, fat, eggs, butter/magerine, dairy products, breads, biscuits and cakes, sweets, drinks, cereals, spreads, fruit, vegetables, sugar, usual proportions of servings, method of cooking vegetables, dietary supplements.
Hypertension: Systolic and diastolic blood pressure, conditions - high blood pressure, angina, heart attack, stroke, high cholesterol, high triglycerides, on tablets for blood pressure, on treatment for blood fat or angina.
Cancers: smoking behaviour.
Older Persons: Age groups 50-54, 55-59, 60-64 years old.
Other data: oral contraceptive use, whether pregnant, diabetes, alcohol use, exercise for recreation and fitness.

Publications: Menzies School of Health Research, Prevalence of Cardiovascular Disease Risk Factors in Darwin: October 1984, Northern Territory.

Availability: National Heart Foundation.

Title: RISK FACTOR PREVALENCE STUDY - HUNTER

Time Period: May 1983 - December 1983

Organisation: Faculties of Medicine & Mathematics, University of Newcastle; Hunter Region Office of the NSW Department of Health; Hunter Health Statistics Unit; National Heart Foundation & Commonwealth Department of Health.

Purpose: To determine the prevalence of factors thought to be associated with an increased risk to cardiovascular disease in people aged between 35 and 64 years living in the lower Hunter Region.

Target Population: All people aged 35 to 64 years, living in the Local Government Areas (LGAs) of Newcastle, Lake Macquarie, Cessnock, Maitland and Port Stevens. A systematic random sample of over 3600 people was selected using the electoral roll.

Sample Coverage: Of the total of 3670 selected, 2466 eligible people participated in the study representing a response rate of 73%.

Content: Respondents completed a general health questionnaire and participated in a physical examination. The questionnaire obtained information on demographics, alcohol use, smoking behaviour psychological disorder and personality type, physical activity, diet, medical conditions and treatments. The physical examination consisted of height and weight measurements; recording of systolic and diastolic blood pressure; and taking of a blood sample later analysed for cholesterol, triglycerides and glucose levels.

Relevant Data Items: Demographic: Age (5 year age groups between 35 & 64), sex, marital status, country of birth, years in Aust., education level, employment status, occupational status, current occupation, hours worked.
Nutritional: Proportion of overweight/obese, plasma cholesterol, HDL cholesterol, plasma triglyceride, glucose, vitamin and mineral supplements, added salt, type of diet; consumption of meat, fat, eggs, butter/magerine, dairy products, breads, fruit, vegetables, sugar.
Hypertension: Systolic and diastolic blood pressure, conditions - high blood pressure, angina, heart attack, stroke, high cholesterol, high triglycerides, on tablets for blood pressure, on treatment for blood fat or angina.
Cancers: smoking behaviour.
Older Persons: Age groups 50-54, 55-59, 60-64 years old.
Other data: oral contraceptive use, whether pregnant, diabetes, alcohol use, exercise for recreation and fitness, psychological disorder and type A behaviour.

Publications: Alexander HM, Balding DJ, Dobson AJ, Gibberd RW, Hardes G, Leeder SR, Lloyd DM, Shearer W, Young AF, Risk Factor Prevalence Study 1983: Hunter Region Heart Disease Prevention Programme, Oct 1984.

Availability: In addition to the above publication, the data is held by the MONICA study team at the University of Newcastle.

TITLE: SOUTH AUSTRALIAN DIETARY SURVEY

Time Period: August 1988

Organisation: Social Nutrition Program, CSIRO Division of Human Nutrition, Adelaide SA.

Purpose: To assist in the development process for the South Australian Nutrition Policy.

Target Population: The population of South Australia.

Coverage: A random sample of 1500 adults selected from the Commonwealth Electoral Roll for the State of Victoria. The number of completed questionnaires was 1346. Response rates were 67% (metropolitan) and 71% (non-metropolitan).

Content: The dietary intake instrument was a semi-quantitative food frequency questionnaire. The questionnaire contained questions relating to the usual frequency of intake of some 180 food and drink items, to dietary and food preparation practices and to nutrition beliefs and concerns. It was a refinement of the questionnaire used in the Victorian Nutrition Survey 1985.

Relevant Data Items: Demographic: age, sex, occupational status, educational status, occupation of spouse, living arrangements, number of children, country of birth, years in Aust., fathers country of birth, mothers country of birth, language at home, area of residence.

Nutritional: fat to dietary energy, refined sugars to dietary energy, dietary sodium intake, alcohol to dietary energy, dietary fibre intake, and other nutrients.

Other data: perception of appropriateness of government action in nutrition field, perception of adequacy of own diet.

Publication: No publications

Title: SURVEY OF ORAL HEALTH IN AUSTRALIA - 1986/87

Time Period: July 1986 - June 1987

Organisation: Department of Community Services and Health, State Health Authorities, Department of Preventive Dentistry in University of Sydney and University of Queensland.

Purpose: To determine the oral health status and prevalence of oral diseases and abnormalities.

Target Population: A random selection of people aged older than 4 years throughout Australia.

Sample Coverage: A stratified sample of 2500 persons by age group were selected in each of the States and Territories. The survey was restricted to private dwellings in urban localities with a population of more than 3000 persons.

Content: Trained dentists were used to examine individuals and completed the oral health assessment, the participants in the survey provided personal and demographic information and completed a behavioural questionnaire.

Relevant Data Items: Demographic: Age, Sex, Employment Status, State or Territory.

Older Persons: Age groups 45-59, 60-64, 65-69, 70-74, 75 years and over.

Other data: Frequency of dental visits, type of dental treatment, brushing teeth, flouride treatment, orthodontic treatment, oral health assessment, other clinical conditions.

Publications: Commonwealth Department of Health, Survey of Oral Health in Australia 1986/87 :

Availability:

TITLE: VICTORIAN NUTRITION SURVEY

Time Period: September 1985

Organisation: Social Nutrition and Epidemiology Program, CSIRO Division of Human Nutrition, Adelaide SA

Purpose: To help develop a Food and Nutrition Policy for Victoria and to provide baseline data for the education activities.

Target Population: The population of Victoria.

Coverage: A random sample of 5000 adults selected from the Commonwealth Electoral Roll for the State of Victoria. The final analysis included data from 2935 people or 62% of potential responders.

Content: The dietary intake instrument was a semi-quantitative food frequency questionnaire. The questionnaire contained questions relating to the usual frequency of intake of some 180 food and drink items, to dietary and food preparation practices and to nutrition beliefs and concerns.

Relevant Data Items: Demographic: age, sex, occupational status, educational status, occupation of spouse, living arrangements, number of children, country of birth, years in Aust., fathers country of birth, mothers country of birth, language at home, area of residence.

Nutritional: fat to dietary energy, refined sugars to dietary energy, dietary sodium intake, alcohol, to dietary energy, dietary fibre intake, and other nutrients.

Publication: Baghurst K, Crawford D, Record S, Worsley A, Baghurst P, Syrette J, The Victorian Nutrition Survey;
Part 1: Food intakes by age, sex and residence
Part 2: Nutrient intakes by age,sex and residence
Social and Epidemiology Programme, CSIRO Division of Human Nutrition, 1987, Adelaide SA 5000.