NUTRITION *(with particular reference to overweight and obesity)*

Information Circular No. 21

QUEENSLAND HEALTH

EPIDEMIOLOGY AND HEALTH INFORMATION BRANCH

WHY IS NUTRITION IMPORTANT?

The importance of nutrition in disease has been firmly established in several recent reviews (NRC, 1989). Nutrition plays an important role in the causes of coronary heart disease, cerebrovascular disease, diabetes, overweight, some neoplasms, dental caries, hypertension, osteoporosis and gallbladder disease. Crowley et. al. (1992) estimated the total costs to Australia of disease attributable to diet at $2.3 billion per year, and direct costs to the health system at $1.5 billion per year. The direct costs are the maximum "savings" that health promoters can hope to make through interventions. Of course, the costs go beyond the financial burden to include other intangibles such as quality of life, pain and suffering etc.

The focus of this information circular is on overweight and obesity. Overweight and obesity are usually classified on the basis of a body mass index (BMI: weight in kg divided by height in metres squared). Overweight refers to a BMI of 25.0 - 30.0, and obesity refers to a BMI of > 30.0. Subsequently in this publication, where overweight is used alone, it refers to both overweight and obesity.

OVERWEIGHT

Overweight is a major public health problem for three reasons. It is independently associated with morbidity and mortality, it is highly prevalent, and this prevalence is increasing.

Good evidence from large prospective studies indicates that increasing body mass index is associated with increasing mortality, independent of other risk factors (NRC, 1989).

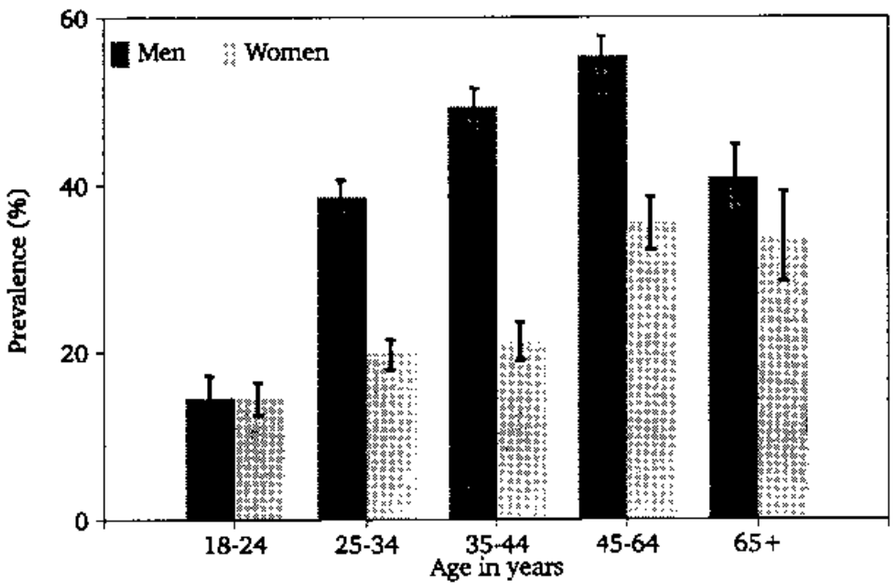
Obesity is the most powerful risk factor for non-insulin dependent diabetes mellitus (NIDDM). It induces glucose intolerance (hyperglycaemia) in genetically susceptible individuals — abdominal obesity in particular posing the greatest risk (Wahlqvist and Kouris-Blazos, 1991). At least 80% of individuals with NIDDM are overweight or obese at the time of diagnosis (NHMRC, 1992).

Overweight is the most prevalent nutritional disorder in Australia. Almost 50% of men and 34% of women aged 25-64 surveyed in capital cities in 1989 by the National Heart Foundation were classified as overweight or obese (BMI > 25.0)

(NHF 1990). In the Queensland Health and Diet Survey of 1989, 42% of men and 33% of women were classified as overweight or obese. Since the Queensland survey was based on self-reports of weight and height, these figures probably underestimate the true prevalence.

Figure 1 shows how overweight increases with age in both sexes, with a striking increase in prevalence in men aged 25-34 years.

Figure 1: Prevalence of overweight and obesity (BMI > 25.0) by age and sex from four Queensland cities, 1989

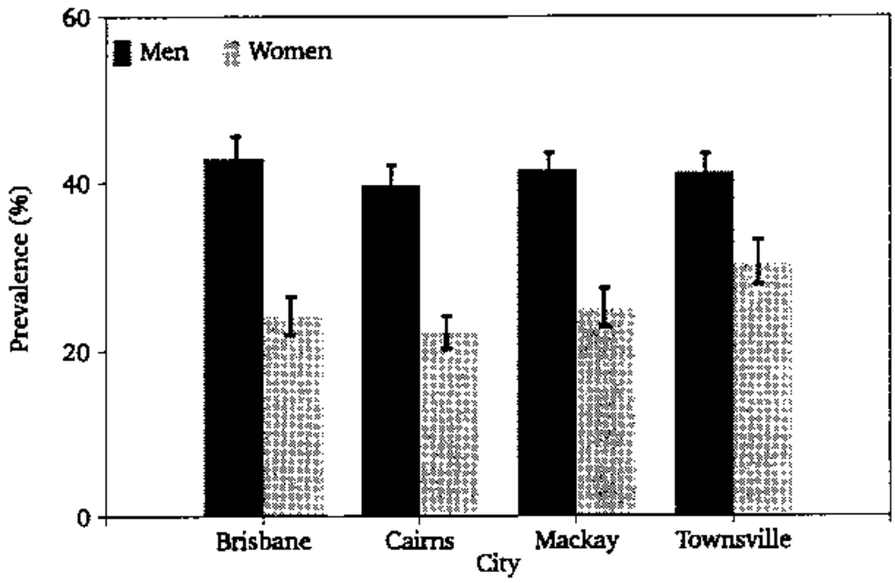


Source: Balram, 1992

Figure 2 shows a comparison of prevalence of overweight in four Queensland cities: Brisbane, Cairns, Mackay and Townsville. While there were no differences in the prevalence for males, this survey found that a significantly higher proportion of females in Townsville were overweight than in the other cities.

Overweight is a greater problem for men than for women. Men are not only more likely to be overweight than women but they also tend to have an unfavourable fat distribution, known as hypertrophic obesity — fat located mainly on the abdomen giving rise to the 'apple' shape as opposed to the 'pear' shape for women. Preliminary data from the 1993 Regional Health Surveys suggest

Figure 2: Age standardised prevalence of overweight and obesity (BMI > 25.0) by sex in adults in four Queensland cities, 1989



Source: Balram, 1992

that more than 40% of men report they have a "pot belly". Recent evidence suggests that the health risk associated with fat distributed around the waist is greater than that for fat distributed elsewhere.

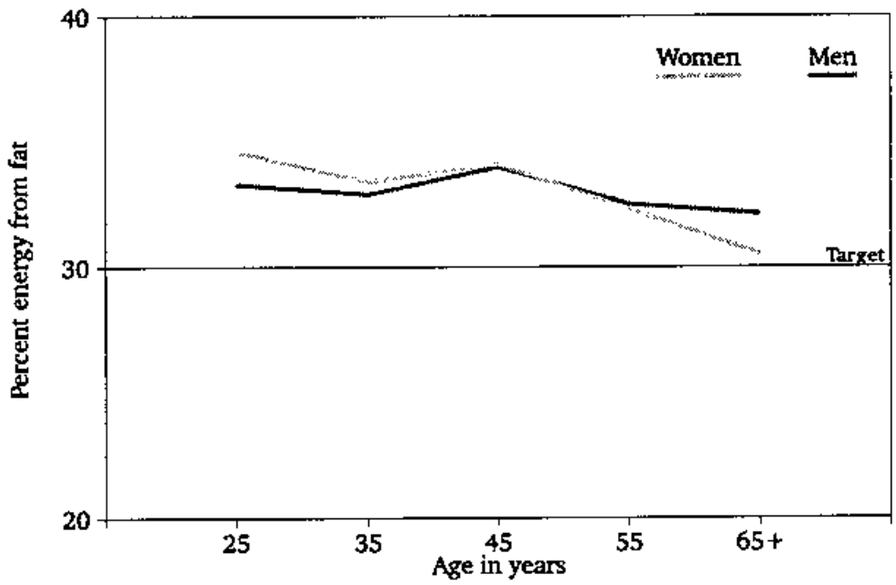
The third reason that overweight is important is that the prevalence is increasing in Australia and other western countries. The increase in Australia has been particularly striking in those classified as obese.

THE QUEENSLAND DIET

The most recent description of the overall diet of Queenslanders comes from the Queensland Health and Diet survey of 1989. Findings from this survey suggest that women had "better" diets than men, and that older people had "better" diets than younger people, with lower percent contributions to energy from fat, higher fibre intakes and lower sodium and alcohol intakes. There were few differences in dietary intakes among residents of the four cities, with men in Brisbane reporting lower intakes of alcohol than others, and women in Cairns reporting higher alcohol intakes than others.

Figure 3 shows that the proportion of energy derived from fat decreases with age in both sexes. The target is for the population mean to be 30% of energy from fat.

Figure 3: Mean percent contribution of fat to total energy intake by age and sex in four Queensland cities, 1989



Source: Paterson, 1992

Preliminary data from the 1993 Regional Health Surveys show that more than 20% of respondents still do not trim fat from meat either before or after cooking.

Between 20-30% of residents surveyed in the 1993 surveys reported eating out or having a takeaway on the day before the survey. The increasing use of the food service industry has important implications for diet, and offers excellent opportunities for cooperation between government and industry.

EXERCISE

Thirty-seven percent of Queensland adults reported that they did no exercise in the two week period preceding interview at the 1989-90 National Health Survey (Australian Bureau of Statistics, 1992). Given that this figure represents people's own perceptions of what constitutes exercise, it may well substantially

underestimate the true proportion. The problem of overweight is certainly multi-factorial in nature, with the impact of genetics being very important, however, the balance of energy expenditure and energy intake is central. Many weight control programs underestimate the importance of energy expenditure.

POPULATION SUBGROUPS AT RISK

The health status of the Aboriginal and Torres Strait Islander (ATSI) population is the poorest of any population group in the State. Nutrition is a major cause of this poor health status. This is particularly so for morbidity associated with diabetes, heart disease, overweight, dental caries, anaemia and growth retardation.

Estimates of the prevalence of diabetes in ATSI populations range from 7.8% (coastal NSW) to 40% (some islands in the Torres Strait). These estimates compare with 3.4% in the non-aboriginal population. In addition, maturity onset diabetes is developing at younger ages (20-30 years) than in the non-aboriginal population (40-60 years) (NAHS Working Party, 1989).

Data from 1990 hospital separations indicate that for endocrine, nutritional and metabolic diseases, Separation rates for ATSI populations were four times greater than the Queensland average. This differential was more than twice that for total separations. Accepting the limitations of these data, this is a further indicator of the importance of nutritional factors for the health of the ATSI population.

The situation is very complex with recommendations for changing nutrition for adult groups usually involving reduction of energy intake and recommendations for children often involving increasing energy intake. Additional issues of access to healthy food are also important.

The news on ATSI nutrition, at least in children, is not all bad. A recent survey of Maternal & Child Health records on three islands of the Torres Strait showed that the growth of young children was very similar to international standards. There was no evidence at all of growth retardation (Vlack S, et. al.). Determining the factors responsible for the good growth of children in these communities where environmental conditions are not ideal may be useful in planning interventions in communities where growth retardation has been identified.

Other groups requiring special attention are those suffering socioeconomic disadvantage, the elderly and some groups from non-english speaking backgrounds. Little nutrition data are currently available specifically for these groups.

We know enough to know that there are major issues to be addressed, and there is a clear need to develop useful strategies to do something about it. So what is currently happening?

a) Policy development

National Policy - In September 1992, a National Food and Nutrition Policy was launched. The fundamental aim of this policy is to make "healthy choices the easy choices". There are four key objectives of this policy:

1. to improve knowledge and skills necessary for Australians to choose a healthy diet;
2. to incorporate food and nutrition objectives into a broad range of policy areas and sectors;
3. to support community based initiatives towards improving the diet of people with special needs; and,
4. to regularly monitor the food and nutrition system.

A set of dietary guidelines was proposed in the late 1970's and this was revised in 1992. The revised guidelines are shown in Table 1.

TABLE 1: DIETARY GUIDELINES FOR AUSTRALIANS

1	ENJOY A WIDE VARIETY OF NUTRITIOUS FOODS.
2	EAT PLENTY OF BREADS AND CEREALS (PREFERABLY WHOLEGRAIN), VEGETABLES (INCLUDING LEGUMES) AND FRUITS.
3	EAT A DIET LOW IN FAT AND, IN PARTICULAR, LOW IN SATURATED FAT.
4	MAINTAIN A HEALTHY BODY WEIGHT BY BALANCING PHYSICAL ACTIVITY AND FOOD INTAKE.
5	IF YOU DRINK ALCOHOL, LIMIT YOUR INTAKE.
6	EAT ONLY A MODERATE AMOUNT OF SUGARS AND FOODS CONTAINING ADDED SUGARS.
7	CHOOSE LOW SALT FOODS AND USE SALT SPARINGLY.
8	ENCOURAGE AND SUPPORT BREASTFEEDING.
	GUIDELINES ON SPECIFIC NUTRIENTS
1	EAT FOODS CONTAINING CALCIUM. THIS IS PARTICULARLY IMPORTANT FOR GIRLS AND WOMEN.
2	EAT FOODS CONTAINING IRON. THIS APPLIES PARTICULARLY TO GIRLS, WOMEN, VEGETARIANS AND ATHLETES.

Source: NHMRC, 1992

Contrary to popular opinion, particularly as presented in the press, dietary guidelines have changed very little. The revisions were largely a matter of rephrasing the guidelines in more positive terms and did not dramatically alter the fundamental advice. Specific guidelines were added concerning calcium and iron for certain population groups.

While the national policy, by nature, provides general directions, it provides a valuable framework for action at the state, regional and local levels. Activity at these levels provides much of the most valuable work required for progress towards improved health outcomes, and is essential to complement national activity. Thus, work has commenced on the development of a Queensland Food and Nutrition Strategy to identify priorities for action across the broad range of sectors that impact on food and nutrition, and ultimately health outcomes for Queenslanders. This strategy will have a whole of government focus and guide the development of programs and the allocation of resources to this important area.

Work to date has focussed on identifying the current state of play and key issues at the state level. The next phase will look at mechanisms to achieve meaningful input from key stakeholders ranging from regional health authorities, service providers and professional associations to food industry and consumer organisations.

b) Projects

Other projects currently funded at the state level focus on the areas of overweight and obesity, disadvantaged groups (currently Aboriginal and Torres Strait Islander people and disadvantaged youth), and schools.

Lighten Up is a project which aims to address the issue of overweight and obesity. This project was developed and trialed successfully in Dalby and is currently being piloted at a regional level in nine communities within the Wide Bay Region. Regional implementation has been supported by extensive resources and training for coordinators together with materials for participants. The program involves health screenings, workshops, and 3- and 6-month follow-ups. During the initial 10-week phase, participants are encouraged to take increasing control by developing their own priorities and directions. This may include formation of self-help groups for personal support and/or for working together to achieve broader community change.

c) Goals and Targets

A national goal has been set to reduce the prevalence of overweight and obesity amongst adults. Targets for the year 2000 have been specified for age and gender population groups. These are shown in Table 2.

TABLE 2: TARGETS FOR PREVALENCE OF OVERWEIGHT AND OBESITY*

POPULATION GROUP		BASELINE**	YEAR 2000
MEN	20-39 YRS	42.5%	30%
	40-59 YRS	59.0%	45%
	60-69 YRS	60.6%	46%
WOMEN	20-39 YRS	25.3%	17%
	40-59 YRS	41.5%	33%
	60-69 YRS	54.7%	44%

* NUTBEAM ET AL, 1993.

** NHF, 1990

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