

HOUSE OF REPRESENTATIVES
Standing Committee on Health and Ageing

JE 15/05/08

Enquiry into Obesity in Australia

Response of the Australian and New Zealand Obesity Society

Terms of Reference

The Committee will inquire into and report on the increasing prevalence of obesity in the Australian population, focusing on future implications for Australia's health system. The Committee will recommend what governments, industry, individuals and the broader community can do to prevent and manage the obesity epidemic in children, youth and adults.

The Australia and New Zealand Obesity Society

The Australian and New Zealand Obesity Society (ANZOS) is a scientific organisation composed of obesity researchers, medical practitioners, dietitians, psychologists, scientists and other health care and educational professionals interested in improving our understanding of the problem and the prevention and management of obesity in Australasia. The Society has some 550 members throughout Australia and New Zealand and is the only national organization with a sole focus on obesity in Australia.

The Obesity Society is a full member of the International Association for the Study of Obesity (IASO), which gives a combined representation to over 11000 professionals in 50 national obesity associations throughout the world.

Summary of Response

The Obesity Society welcomes the Standing Committee on Health and Ageing "Enquiry into Obesity" and believes that the terms of reference indicate an acceptance of the seriousness of this public health problem and the need for urgent action.

Obesity has become one of the major (if not the major) public health problems in Australia and the rates of overweight and obesity have risen at alarming rates throughout the whole community. There are some disparities in the burden of obesity with those who are, socially disadvantaged, isolated, indigenous Australians or from certain ethnic groups experiencing higher levels of obesity.

Our members deal with the negative social, financial and health consequences of the growing problem of obesity every day and are convinced that unless a concerted effort is made to address this problem now then our health system risk being swamped with dealing with the resultant ill health and our social and economic well being will be threatened.

The Obesity Society feels that it is important to establish a system for regular and ongoing monitoring and surveillance of nutrition, physical activity, weight status and weight related health outcomes in Australia. However we do not believe there is benefit in investing significant time and resources focussing on determining every detail of the epidemiology of obesity and its likely health impact. These resources are better directed at finding solutions.

The Obesity Society believes that a well funded and coordinated program of action to address obesity and related chronic disease in Australia must include:

1. the provision of cost-effective primary and specialised care services to those Australians who are already dealing with the health consequences of a weight problem;
2. the up-skilling of the existing health workforce and the education of new professionals with the competencies necessary to effectively treat people with weight problems;
3. support for the implementation and evaluation of promising community-based programs aimed at preventing weight gain;
4. A commitment to structural (environmental, fiscal and regulatory) change that supports rather than inhibits the necessary changes in dietary and physical activity behaviours required to bring the population back into energy balance and prevent weight gain.
5. support for a targeted program of research and regular monitoring and surveillance to better understand the key drivers of the obesity problem and the identification and evaluation of more effective prevention and management approaches;

The obesity society believes that addressing the problem of obesity will require a whole of community approach with the involvement of all sectors of society. However any response needs clear and strong leadership from government.

Most of the above elements have been raised in a number of elegantly structured strategy documents prepared for governments of all jurisdictions in Australia. However, they have not been addressed as a total package in one coherent strategy and there has not been a firm commitment from governments and other agencies to funding the effective implementation and sustainability of individual components.

The increasing prevalence of obesity in the Australian population, focusing on future implications for Australia's health system.

What is obesity and how is it measured?

There is no simple way to accurately define obesity in an individual and the condition we term obesity (like cancer) can have many different causes and manifestations in different individuals. However, at the physiological level, obesity is usually characterised by the 'abnormal or excessive accumulation of fat in adipose tissue to the extent that health may be impaired'. More recently it has also been discovered that many of the consequences of obesity are a result of "ectopic" fat deposition in tissues that do not usually store fat. However, it is difficult to measure body fat directly and so surrogate measures such as the Body Mass Index (BMI) are commonly used to indicate overweight and obesity in adults. Additional tools are available for identification of individuals with increased health risks due to 'central' fat distribution, and for the more detailed characterisation of excess fat in special clinical situations and research.

Measuring general obesity

The Body Mass Index (BMI) provides the most useful and practical population-level indicator of overweight and obesity in adults. It is calculated by dividing body-weight in kilograms by height in metres squared ($BMI = kg/m^2$). Both height and weight are routinely collected in clinical and population health surveys.

In the new graded classification system developed by the World Health Organization (WHO), a BMI of $30kg/m^2$ or above denotes obesity (Table 1). There is a high likelihood that individuals with a BMI at or above this level will have excessive body fat. However, the health risks associated with overweight and obesity appear to rise progressively with increasing BMI from a value below $25 kg/m^2$, and it has been demonstrated that there are benefits to having a measurement nearer $20-22 kg/m^2$, at least within industrialised countries. To highlight the health risks that can exist at BMI values below the level of obesity, and to raise awareness of the need to prevent further weight gain beyond this level, the first category of overweight included in the new WHO classification system is termed 'pre-obese' or overweight ($BMI 25-29.9 kg/m^2$).

Table 1.
Classification of overweight and obesity in adults according to BMI

Classification	BMI (kg/m^2)
Underweight	< 18.5
Normal range	18.5 - 24.9
Overweight	≥ 25
Pre-obese	25.0 - 29.9
Obese class I	30.0 - 34.9
Obese class II	35 - 39.9
Obese class III	≥ 40

Source: WHO, 2000

Caution is required when interpreting BMI measurements in certain individuals and ethnic groups. The relationship between BMI and body fat content varies according to body build and body proportion, and a given BMI may not correspond to the same

degree of fatness across all populations. Within Australia it has been shown that those of Asian or Aboriginal descent have a higher body fat mass than Caucasians and those of Pacific Island descent have lower levels of fat at the same BMI.

Although BMI has a number of limitations, particularly at an individual level, it remains a useful tool for measuring weight status by health professionals and researchers. It does require some calculation but height and weight are easily measured accurately using readily available equipment. However, it is less useful as an education tool for the community and this is why weight change is the recommended focus of any community-based obesity prevention programs. This is discussed later.

Measuring central obesity

For a comprehensive estimate of weight-related health risk it is also desirable to assess the extent of intra-abdominal or 'central' fat accumulation. This can be done by simple and convenient measures such as the waist circumference or waist-hip ratio. Changes in these measures tend to reflect changes in risk factors for cardiovascular disease and other forms of chronic illness. Some experts believe that a health risk classification based on waist circumference alone is more suitable as a health promotion tool than either BMI or waist:hip ratio, alone or in combination (Seidell, 1998). Recent work from the Netherlands has indicated that a waist circumference greater than 102 cm in men, and greater than 88 cm in women, is associated with a substantially increased risk of obesity-related metabolic complications (Table 2). The level of health risk associated with a particular waist circumference or waist-hip ratio may vary across populations.

Table 2.

Sex-specific waist circumference measurements for identification of individuals at increased health risk due to intra-abdominal fat accumulation

	Risk of metabolic complications	Waist circumference (cm)	
		Men	Women
Alerting Zone	Increased	94	80
Action Zone	Substantially increased	102	88

Adapted from WHO, 1998

Similar concerns have been raised about the applicability of these waist cut- points to different non- Caucasian ethnic groups within Australia. This is an area that is subject to research by members of the Obesity Society but one that warrants much more attention.

Defining Obesity in Children.

This has been a vexed area with many different ways of reporting overweight and obesity and so it has been difficult to both know true obesity rates and to be able to make comparisons over time. Many older reports have made use of growth charts, such as the international reference population developed by the US National Centre for Health Statistics. More recently BMI-for-age reference charts have been developed and used and in 2000 Cole et al. (2000) published an "international standard" BMI for age chart. Its is now the most commonly used standard to define childhood weight status in Australian epidemiological studies and enables meaningful comparisons to be made.

Prevalence of Obesity In Australia

It is perplexing that in a country as well resourced as Australia that has such well developed data collection systems and agencies that we do not collect data on dietary intake, physical activity and measured weight status on a regular basis. Our last national nutrition survey was in 1995 and the last time weight and height were measured on a national sample of Australians was in 2000. This compares extremely poorly with the data collection systems of our less economically advanced Asian neighbours such as the Philippines and Thailand who have had a regular national survey of these factors for many years now.

Despite the weakness of our national data collection systems, there is sufficient information from a variety of sources to indicate that the problem of overweight and obesity is serious and worsening rapidly with time. A number of agencies have produced excellent analyses of the weight status of Australia and its social, health and economic costs. It is not our intention to repeat these here but rather to summarise many of the findings. The committee should also refer to the excellent series on the epidemiology of obesity produced by the Australian Institute of Health and Welfare.

The key issues from these analyses include:

- The 1999/2000 AUSDiab study indicated that 19.1 % of men and 20.1% of women are now obese (Dunstan et al, 2000). In addition, over half of all adult females and 60% of all adult males are now classified as overweight.
- The level of overweight and obesity tends to be higher in more remote areas and lower in the more affluent metropolitan areas. It is also more common among people born in Southern Europe and the Middle East, socially disadvantaged women and indigenous peoples.
- Surveys of Australian schoolchildren indicated that around 25% are overweight or obese.
- The level of overweight and obesity is rising rapidly. Adult obesity rates rose from 7.2% in men in 1980 to 17.1% in 2000. For women the rise has been even greater, moving from 7.0% obesity rates in 1980 to 18.9% in 2000 (see table 3). The greatest rate of weight gain occurred in young adults (Allman-Faranelli et al, 2007).
- In children the rates of overweight have doubled and the level of obesity tripled in the last 15 years.
- Over half of all Australian adults could be classified as abdominal overweight or obesity. Although young women had lower rates of abdominal overweight, by the age of 45 years women had reach a rate equivalent to males. The highest rates of abdominal overweight were found in post-menopausal women (see table 4)

Table 1. Trends in age-standardised prevalence (%) of obesity, 1980-2000

Gender	1980	1989	1995	2000
Males	7.2	9.3	17.6	17.1
Females	7.0	11.1	16.1	18.9

Source: AusDiab Study report, 2001

Table 2 Age specific prevalence (%) of abdominal overweight as defined by excess waist circumference.

	25-34	35-44	45-54	55-64	65-74	75+	total
Males	40.1	51.3	58.3	66.6	71.2	64.8	55.2
Females	36.6	46.9	59.1	72.7	79.7	67.5	56.5
Persons	38.4	49.1	58.7	69.6	75.9	66.3	55.9

Waist circumference males >94cm; females >80cm

Source: AusDiab Study Report, 2001

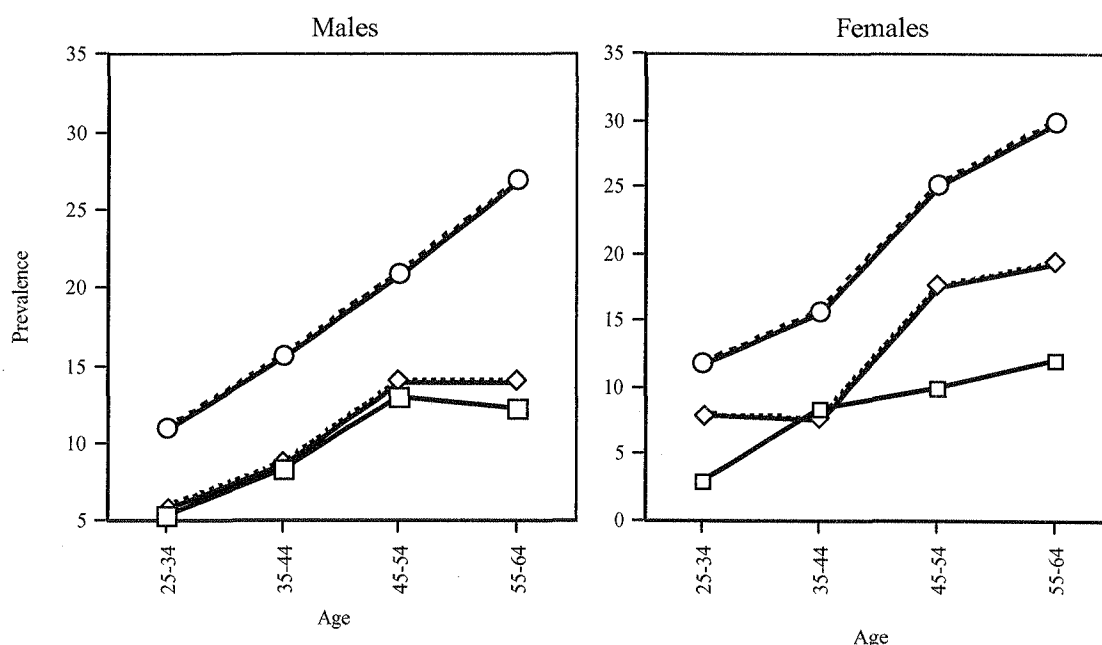


Figure 1. Age related prevalence of obesity in Australia. Three surveys are shown 1980 (squares), 1989 (diamonds), 2000 (circle). Obesity is more prevalent in older age groups in both genders and there has been an increase in prevalence particularly during the '90s.

COSTS OF OBESITY

Health costs

Obesity is a health and well-being issue and not a cosmetic concern. There is now a wealth of evidence to show that the relationship between excess weight and risk of ill health is strong and consistent and begins at relatively low levels of BMI. Numerous health consequences of obesity have now been identified, ranging from an increased risk of premature death, the development of serious chronic conditions such as diabetes, hypertension, cardiovascular disease (CVD) and certain cancers as well as several non-

fatal but disabling complaints that reduce quality of life. In addition, the accumulation of excess fat around the abdomen has been found to further increase many of the risks to health (see Table 5) (WHO 2000).

Table 5. Relative risk of health problems associated with obesity

Greatly Increased (Relative Risk >3)	Moderately increased (Relative Risk 2-3)	Slightly increased (Relative risk 1-2)
<ul style="list-style-type: none"> • NIDDM • Hypertension • Sleep apnoea • Insulin resistance • Breathlessness 	<ul style="list-style-type: none"> • Coronary heart disease • Gallbladder disease • Osteoarthritis (knees) • Hyperuricaemia and gout • Dyslipidaemia • Endometrial cancer 	<ul style="list-style-type: none"> • Certain cancers (post-menopausal breast cancer, colon cancer) • Reproductive hormone abnormalities • Polycystic ovary syndrome • Impaired fertility • Low back pain due to obesity • Increased anaesthetic risk • Foetal defects associated with maternal obesity

Source: adapted from WHO 2000

Economic costs

Obesity also places enormous financial burdens on governments and individuals and accounts for up to 6% of total healthcare expenditure in some developed countries (Wolf and Colditz, 1998). In 2005, a report by Access Economics estimates that the total economic burden of obesity on the Australian society was around \$21 billion (Access 2005). The figure was composed of \$3.767 billion in direct and indirect financial costs of obesity : Of this, productivity costs were estimated as \$1.7 billion (45%); health system costs were \$873 million (23%); carer costs were 804 million (21%); and taxation foregone and other indirect costs 398 million (11%). In addition another 17.2 billion was estimated as the intangible costs of loss of life and wellbeing.

In Australia, more than 10% of the 2000 – 2001 health budget (approximately \$6.3 billion) was spent cardiovascular diseases and diabetes, much of which can be directly related to obesity (Australian Institute of Health and Welfare 2005). Overweight and obesity was considered to cause an estimated 7.5 % of the total burden of disease and injury in Australia in 2003 (Begg et al. 2007).

With over 60% of the burden of diabetes attributed to obesity and physical activity, the consequences of increasing obesity will be further magnified by reductions in case-fatality from cardiovascular disease — the major cause of mortality in people with diabetes — through successful tobacco control and cholesterol and blood pressure lowering strategies (Begg et al. 2007). This increased survival will mean an increase in the risk of developing other largely non-fatal but disabling consequences of diabetes such as renal failure, retinopathy, neuropathy and peripheral vascular disease. Thus a reduction in soft drinks consumption can contribute to reducing this burden. Obesity is fast approaching cigarette smoking as the major preventable cause of mortality in the US (Mokdad et al 2004).

CLAIMS THAT THE OBESITY PROBLEM IS EXAGGERATED.

There have always been a few relatively small but committed groups who have advanced an argument that obesity is not a serious health concern and that the recent focus on controlling weight is primarily driven by aesthetics. In recent times there have been a growing number of commentaries, articles, editorials and even whole books that have taken up various hypotheses which they believe demonstrates a conspiracy to medicalise and exaggerate the issue of obesity. Some of these have been written by those who have a vested interest in turning the spotlight away from effective action to address obesity whilst others have been written by misguided or misinformed social advocates and a few by those seeking a cause. But there has also been a growing number of commentaries by researchers who feel that enthusiasm for promoting the health consequences of obesity have overtaken the facts.

A few years ago, the USA Centre for Disease Control and Prevention attracted academic debate and criticism for its calculations of the number of deaths that could be attributed to obesity in the USA particularly when an alternative calculation resulted in many fewer deaths (Flegal et al, 2005). Although the debate was largely about the assumptions used in the modelling, the CDC was accused of deliberately inflating the mortality associated with weight and generating unnecessary concern about obesity. Of course, mortality is probably the least important health consequence of obesity but the findings continue to be used as a justification for reducing the focus on overweight and obesity as a health problem. Many academics have pointed out the flaws in such logic and the Obesity Society would suggest that the Standing Committee should not be swayed by those who present this argument.

Identifying the determinants of overweight and obesity

Many analyses have attempted to define the key determinants of obesity and there remains a degree of controversy over which factors have made the greatest contribution to the recent rise in the rates of obesity in Australia today. The most comprehensive assessment of the situation has been undertaken by the World Health Organisation in the *'Expert Report on Diet, Nutrition and the Prevention of Chronic Disease'* (WHO 2003). This report examined the current literature and identified a range of key factors which either increase or decrease the risk of weight gain and the development of obesity (see Table 5).

Current dietary and physical activity behaviours are likely to be contributing to the problem of obesity in Australia. Over the past two decades, adults and children have increased their energy intake from food despite the fact that physical activity levels appear to be decreasing. Sedentary pastimes have replaced more active pursuits during leisure time. In addition, the physical and structural environment of most Australian communities inhibits improved physical activity and opposes appropriate food selection. Analysis of dietary and physical activity patterns reveals (Centre for Public Health Nutrition 2003):

- Adults and children in Australia consume excessive fat, particularly from non-core foods and have a high consumption of take-away foods and soft drink.

- Levels of physical activity continue to decline and television watching, computer games and other sedentary pursuits are now much more popular than active pursuits such as bike riding. Children watch an average of around 2.5 hours of TV while adults watch around 3.5 hours. A total of 15% of the adult population are effectively inactive most of the time.
- Australia has one of the highest rates of car ownership in the world and three quarters of all trips to work are now completed by car. Easy access to cheap fat-foods and constant exposure to inappropriate advertising messages make it difficult to choose an appropriate lifestyle to control weight

Table 5. Summary of the strengths of evidence on factors that might promote or protect against weight gain and obesity

Evidence	Decreases risk	Increases risk
Convincing	Regular physical activity High dietary fibre intake	High intake of energy-dense foods* Sedentary lifestyles
Probable	Home and school environment that supports health food choices for children Promoting linear growth	Heavy marketing of energy dense foods and fast foods outlets Adverse social and economic conditions in developed countries (especially for women) Sugar-sweetened soft drinks and juices
Possible	Low glycaemic index foods Breastfeeding	Large portion sizes High proportion of food prepared outside of homes Rigid restraint/periodic disinhibition eating patterns
Insufficient	Increased eating frequency	Alcohol

* energy dense foods are high in fat/sugar and energy dilute foods are high in fibre and water such as vegetables, fruits, legumes and whole grain cereals

Source: Adapted from WHO 2003

What governments, industry, individuals and the broader community can do to prevent and manage the obesity epidemic in children, youth and adults.

The obesity Society believes that the Enquiry into Obesity should focus much of the time and effort on the issues of more effective prevention and management approaches rather than exhaust more time re-examining data on the current and project weight status of Australians.

The Obesity Society believes the effective improvement of prevention and management of obesity in Australia will require the involvement of all sectors of society but it must have strong leadership from government. Governments must agree to lead and resource a ***coherent and coordinated*** program of action which is sustained for a period sufficient to achieve an effect.

This program of action must address the following areas and recognise:

a. The need for improved monitoring and surveillance systems

- Data on the weight status, health, diet and physical activity habits needs to be collected regularly to informed better planning of programs and to facilitate research and evaluation of outcomes of any interventions

b. The need for improved services and support for those with an existing weight problem

- Those with an existing weight problem need access to appropriate primary care and specialist services to assist them in managing their weight problem effectively and to prevent them from developing weight-related chronic disease.
- That the capacity of existing specialist weight services is extremely limited and poorly resources
- Australians with a severe weight problem should have access to the widest range of effective therapies available including lifestyle counselling, pharmacotherapy and surgery where appropriate. There is good scientific evidence the efficacy of these therapies where they are provided by trained staff and targeted appropriately.
- Some private weight loss services are based on sound science and appropriately marketed and targeted. However, many are expensive, have no scientific basis and have no evidence of efficacy. There needs to be a better way to accredit those appropriate services.
- Privately provided weight loss services which are accredited as appropriate could work together with public services but such an arrangement would need to monitored closely and any rebate paid to private providers be contingent on regular evaluation.
- Most OTC weight loss preparations lack evidence of efficacy and are promoted in a manner contrary to the TGA code of marketing. Ways to bring many products not currently controlled by the TGA under the jurisdiction and codes of marketing should be explored

- Many primary care staff do not have the confidence or competence to effectively address the problems of an obese patient. A system for up-skilling them should be developed.

c. A focus on weight gain prevention in adulthood

There are a number of other important reasons why a focus on weight gain prevention should be central to all strategies to tackle the obesity problem (Gill et al, 2005)

- Weight gain in adulthood carries an independent risk of ill health
- Risk for chronic disease begins to increase from low BMI levels and significant weight gain can occur within normal limits
- Extended periods of weight gain are difficult to reverse
- Weight gain in adulthood is mostly fat gain
- The relationship between absolute BMI and health risk varies with age and ethnicity but no such variations occur in the relationship between weight gain and ill health
- A focus on weight gain prevention avoids exacerbation of inappropriate dieting behaviours
- The message is equally relevant to all sections of the adult population
- It avoids further stigmatisation of people with an existing weight problem
- It avoids reference to poorly understood terms such as "healthy weight"

In addition, weight maintenance can also serve as an appropriate goal of weight control programs in individuals with an existing weight problem. Shifting the focus away from weight loss to weight maintenance also avoids exacerbating inappropriate dieting behaviours which have been reported in teenage girls and young women.

d. A strong commitment to community-based obesity prevention programs

- Overweight and obesity are public health problems of relevance to the whole community. Strategies are needed that focus on population-wide change rather than attempting to address individuals or very small groups in isolation from the community in which they live.
- Children should be a major focus of any obesity prevention strategy. A primary reason is that a high proportion of overweight or obese children will become obese adults. Furthermore, studies have shown that childhood obesity persisting into adulthood results in a more severe form of obesity, with a higher level of morbidity and early mortality, than adults whose obesity begins later in life. Also, childhood obesity has immediate negative effects on health; conditions such as diabetes are increasingly prevalent in children today. Lastly, childhood (particularly young childhood) is a period where prevention efforts have a higher chance of success as children grow rapidly and increase the level of lean body mass as they age, and so reducing or keeping fat mass constant allows the normalisation of weight over time.

- Because children have little direct control over the environment in which they live, and decisions concerning food availability and opportunities for activity are mostly controlled by parents and other caregivers, a family focus is an appropriate avenue for influencing their behaviour. In addition, the behaviours of parents and other siblings have a profound effect upon the diet and physical activity behaviours of children. For this reason, it is preferable to focus childhood obesity prevention efforts on the family and childcare/school environments, rather than directly on children as individuals.
- Adults should not be neglected- both young and old. The group with the fastest growing weight problem is young adults but they are often not targeted by traditional obesity programs. In addition preventing weight gain older adults bring many health gains and helps maintain functional capacity.

e. The need for Structural change

- The problems of inappropriate nutrition, lack of physical activity and weight gain are common risk factors for the development of many chronic diseases in Australia. Whilst it is true that individuals must take responsibility for improving these behaviours to reduce the risk of disease, it is clear that powerful societal and environmental forces are often mitigate against appropriate change.
- A range of environmental factors such as the availability of open space, access to public transport, design of suburbs, access to buildings, the perceived level of safety, provision of lighting and many other factors that influence our capacity and desire to be more physically active in our daily lives.
- Food prices advertising pressures, access to appropriate food choices, school food policies, nutrition information and labelling all potentially influence food selection.
- In Australian society today there is also a large commercial drive to promote products that contribute to obesity-promoting behaviours (cars and food are the two most advertised products on television).
- Trying to motivate people to make healthy choices, when the external environment does not readily provide them, is unlikely to succeed. The approach most likely to succeed is to create the easy environment and then promote the healthy choices within it.

Addressing the policy and system change and the facility development necessary to change the environment from one that inhibits health behaviour choices to one that promotes appropriate behaviour is difficult. Action will need to be initiated across all sections and levels of government and non-government and commercial organisations will need to be engaged as well. This may be best addressed by a cross-sectoral group within the Office of Prime Minister & Cabinet, and supported by an external Advisory Committee in a manner similar to the National Council on Nutrition and Physical Activity in Norway.

f. Targeted program of research and evaluation

- Although we have sufficient understanding of the epidemiology and mechanisms of weight gain to allow us to act now, the chance of developing and implementing successful programs depends on having an ongoing program of research which helps identify where and how to improve current actions.
- Community-based prevention programs and clinical services also need close (and sometimes independent) evaluation to ensure that they are delivering improvements in weight status and health and to help identify way of improving their outcomes.
- Governments need to allocate sufficient resources to enable a ongoing program of research which specifically targets improved efficacy of obesity prevention and management programs.

Conclusion

The need for a coherent and coordinated program of action have been a common theme in many excellent reports on strategies to improve the prevention and management of obesity in Australia which have been produced for government agencies or non-government organisations in the recent past. Many of these reports have set out well developed and structured frameworks of action to address the problem of overweight and obesity but there has been no commitment from governments to address these recommendations in a coherent fashion. To many of our members they appear to have been ignored or overlooked in the limited response that governments have made to address this problem in Australia.

The Obesity Society recommends that the Standing Committee on Health and Ageing collect and review these documents and the starting point for the Enquiry and assess how the strategies they recommended should be implemented and sustained. We would be happy to assist the committee identify and source such reports.

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