

OBESITY

What is this?

Overweight and obesity are the result of an ongoing excess of energy intake (food and beverage consumption) over energy expenditure (physical activity).¹ Although some people are more genetically susceptible to weight gain than others, the rapid increase in the prevalence of obesity in recent years has occurred too quickly to be explained by genetic changes and most experts believe it is due to living in an increasingly 'obesogenic' environment – an environment that promotes over-consumption of food and drinks and limits opportunities for physical activity.



Overweight and obesity is usually measured by calculating body mass index (BMI). Weight in kilograms is divided by height in metres squared (kg/m^2). According to World Health Organisation recommendations, people with a BMI between 25 and 29 kg/m^2 are considered overweight, and those with a BMI greater than 30 kg/m^2 are considered to be obese.

Why is it important?

A healthy body size is increasingly recognised as important for good health and wellbeing. Obesity in adults is associated with a long list of adult health conditions, including cardiovascular disease, some cancers, type 2 diabetes, kidney disease, fatty liver disease, osteoarthritis, pulmonary embolism, deep vein thrombosis, polycystic ovarian syndrome, gout, gallstones, sleep apnoea, complications in pregnancy, complications in surgery, impaired fertility, and psychological and social problems.

Overweight and obese children are likely to be obese into adulthood. Childhood obesity may increase early mortality in adult life from endocrine, nutritional, and metabolic diseases and diseases of the circulatory system. Overweight and obesity in childhood have also been associated with impaired glucose tolerance, type 2 diabetes, cardiovascular risk factors, sleep apnoea, and musculoskeletal disorders.²

Data

Since the late 1980s the prevalence of adult obesity has increased in New Zealand adults, rising from 10% in 1989 to 28% in 2011-12.³ In the most recent Adult Nutrition Survey women were more likely than men to have a BMI in the normal range. In the New Zealand Health Survey most children had a BMI in the normal range (67.9%) but one in five (21%) were overweight, and 10% obese. A small number of adults and children were underweight (1.3% and 2.9% respectively)⁴.

¹ Information in this and the following section is taken from the Ministry of Health website information on obesity <http://www.health.govt.nz/our-work/diseases-and-conditions/obesity/obesity-questions-and-answers> Accessed 30.8.12.

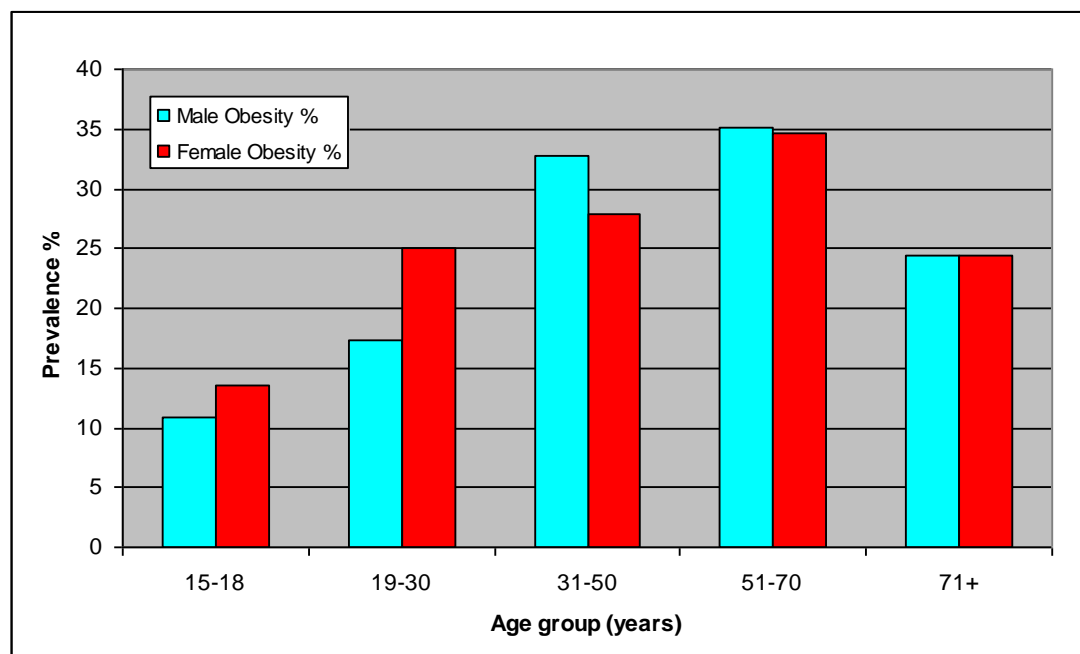
² Ministry of Health and Clinical Trials Research Unit. 2009. Clinical guidelines for weight management in New Zealand children and young people New Zealand. Wellington: Ministry of Health. Available from: http://www.health.govt.nz/system/files/documents/publications/weight-management-children-guidelines_0.pdf Accessed 30.8.12.

³ Data in this section is taken from the Ministry of Health. 2012. The Health of New Zealand Children: Key findings of the New Zealand Health Survey 2011/12. Wellington: Ministry of Health Available from <http://www.health.govt.nz/publication/health-new-zealand-children-2011-12#hb>. Access 17.12.12.

⁴ Data in this section and the next is taken from Ministry of Health. 2008. Body size. In: A portrait of health: key results of the 2006/07 New Zealand Health Survey. Wellington, Ministry of Health, p.104-118. <http://www.health.govt.nz/system/files/documents/publications/chapter2.pdf> Accessed 30.08.12.

Since 2006 the prevalence of obesity in children and young people has increased; adult obesity overall has continued to increase although the rate of increase has slowed somewhat.

Figure 1 Prevalence of obesity, by age group and sex 2008/09⁵



Impact on inequalities

Overweight and obesity disproportionately affect Māori and Pacific children and young people. In 2006/07, 25% of Māori children and young people were overweight and 13% obese compared with 20% and 8% of children and young people overall. Amongst Pacific children and young people, 31% were overweight and 26% obese. Māori and Pacific adults are also disproportionately affected – 48.1% of female and 40.7% of male Māori adults and 59.5% of adult Pacific females and 56.2% of adult Pacific males were obese in 2008/9 compared with 23.7% of female and 24.8% of male European and Other adults.

Both children and adults living in the most deprived neighbourhoods (NZDep2006 quintile 5) were also more likely to be obese than people living in all other areas. Affordability of food is a major concern for those in deprived neighbourhoods and healthier food options are often more expensive than energy rich foods which tend to be high in fat and sugar.

Obesity is one of the most common physical health care problems among those with severe and persistent mental illness. A combination of unhealthy lifestyle, as well as the effects of psychotropic medications, such as second generation antipsychotics, can contribute to the development of this problem. Children, adolescents, and first-episode patients are at higher risk for weight gain.⁶

⁵ Ministry of Health. 2011. Nutrition-related health outcomes. In: A focus on nutrition: key findings from the 2008/09 NZ Adult Nutrition Survey. <http://www.health.govt.nz/system/files/documents/publications/a-focus-on-nutrition-v2.pdf> Accessed 30.08.12.

⁶ Citromea, L., Vreeland, B. 2009. Obesity and mental illness. In: Thakore, J., Leonard, B.E. (eds.) Metabolic effects of psychotropic drugs. Modern trends in Psychopharmacology 26, 25-46.

Solutions

The Clinical Guidelines (see reference 2 above) recommend a combination of interventions to manage overweight and obesity.^{7,8} The interventions focus on a coordinated approach using changes to food/diet, increasing physical activity, and incorporating behavioural strategies to alter people's lifestyles. The family/whanau's culture, beliefs and values are important considerations for children and young people as their parents/caregivers may need to be the agents of change and encouragement for their children. Key interventions are:

- a focus on a healthy diet with a reduction in energy-dense foods,
- a reduction in sedentary activities and building up exercise gradually,
- goal setting and monitoring behaviour change rather than weight loss
- ongoing support and encouragement.

Weight loss drugs should be used in children only if the child is extremely obese and other approaches have failed. Surgery in young people is also a last resort and used only in exceptional circumstances.

In adults, the same approaches are recommended. Weight loss drugs and surgery, however, are considered when obesity is accompanied by significant co-morbidities such as diabetes and sleep apnoea, though these also need to be used in conjunction with lifestyle and dietary change.

The Green Prescription⁹ is another approach that is used in Christchurch to help individual people achieve and maintain an adequate level of physical activity. Also used is the Appetite for Life programme run through Partnership Health.¹⁰

Primary prevention of overweight and obesity is not covered by the Clinical Guidelines mentioned above. Community level interventions that operate in Christchurch include health promoting schools,¹¹ free gyms, community gardens and seasonal cooking classes.¹² Initiatives such as the Healthy Eating Active Living (HEAL) project within the CDHB aimed to develop awareness and initiatives in the hospital environment by supporting healthy eating for both staff and patients.¹³

Connections with other issue papers

Work Life Balance, Activity Levels and Exercise, Active Transport, Green Prescription, Diabetes, Mental Illness, Cancer, Income, Education, Employment, Food Security, Open and Green Spaces.

⁷ Ministry of Health and Clinical Trials Research Unit. 2009. Clinical guidelines for weight management in New Zealand. Wellington: Ministry of Health. <http://www.health.govt.nz/system/files/documents/publications/weight-management-adults-guidelines.pdf> Accessed 30.08.12.

⁸ Ministry of Health and Clinical Trials Research Unit. 2009. Clinical guidelines for weight management in New Zealand children and young people New Zealand. Wellington: Ministry of Health. http://www.health.govt.nz/system/files/documents/publications/weight-management-children-guidelines_0.pdf Accessed 30.08.12.

⁹ Green prescription (GRx) in Canterbury is run by Sport Canterbury, see website at <http://keepsportalive.org.nz/2012/04/sport-canterbury-and-green-prescription/> Accessed 30.08.12

¹⁰ <http://www.appetiteforlife.org.nz/> Accessed 30.08.12.

¹¹ <http://healthylifestyles.tki.org.nz/> Accessed 30.08.12

¹² <http://www.heartfoundation.org.nz/> Accessed 30.08.12

¹³ Gourdie, D. 2009. Healthy Eating Active Living: Process Evaluation Report. Christchurch: Canterbury District Health Board. [internal document]

Data limitations

The data does not consider the combination of multiple factors, such as ethnicity, socioeconomic status and the presence of mental illness.

BMI has some limitations, particularly in people who are highly muscular or from ethnic groups with a smaller body size, and is sometimes supplemented with waist circumference measurement to provide additional information in people without a high BMI in whom excess intra-abdominal fat is suspected.¹⁴

Impact of earthquakes

As at November 2012

As months progress, more sport facilities and community facilities have reopened giving people more options for physical activity.

As at August 2011

The stress caused by the aftermath of the earthquake would have likely affected people's motivation to exercise and eat well.¹⁵

Facilities designed for the express purpose of doing physical activity such as gymnasiums, athletics tracks and swimming pools have been temporarily or permanently closed due to the earthquake. Gymnasium staff have responded by offering (often free) circuit training sessions in whatever green spaces were available. There have also been free dance lessons, yoga and Tai Chi sessions around the city.

The poor state of green spaces such as football fields has caused cancellation of some team sports. Waterways have been contaminated, affecting people's access to water sports such as kayaking. Sporting events such as cycling, running and multisport races have had to be cancelled or rescheduled.

The poor state of the roads has deterred some people from walking and cycling however congestion, lack of parking facilities, and road blockages and detours may have offset this because others have increased walking or cycling as it has been the easiest and most convenient way to get around.

The temporary or permanent closure of supermarkets and other food retail outlets affected people's ability to access to fresh food for a short period.

Prepared by Community and Public Health.

¹⁴ Ministry of Health and Clinical Trials Research Unit. 2009. Clinical guidelines for weight management in New Zealand. Wellington: Ministry of Health. <http://www.health.govt.nz/system/files/documents/publications/weight-management-adults-guidelines.pdf> Accessed 30.08.12.

¹⁵ <http://www.health.govt.nz/yourhealth-topics/emergency-management/managing-stress-emergency>