FACT: 2 OUT 5 MALAYSIA ARE OBESE!

NO, YOU’RE NO LOSER!
YOU JUST NEED TO LOSE IT

OBESITY KILLS.

If you have any queries with regards to drugs / health,
feel free to contact us at:

Pharmacy Resources & Information Center (PRIC), Pharmacy Department HRPZ II
09-7452000 Ext: 2478 (Office hours)
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What is Obesity?

Obesity is a complex, multifactorial condition characterized by excess body fat. It must be viewed as a chronic disorder that essentially requires perpetual care, support and follow-up. Obesity is associated with many other diseases, and it warrants recognition by health-care providers. Generally, men with >25% body fat and women with >35% body fat are considered obese.

Energy Balance in the Development of Obesity

Obesity can result from a minor energy imbalance, which lead to a gradual but persistent weight gain over a considerable period. Some researchers have hypothesized that energy imbalance is the result of inherited metabolic characteristics whereas others believe it is caused by poor eating and lifestyle habits, that is “gluttony and sloth”.

Positive energy balance occurs when energy intake is greater than energy expenditure and promotes weight gain.

Dietary Intake

The association between energy intake and body weight relies on the ease with which excess macronutrients can be deposited as adipose tissue. The energy cost of nutrient storage is not identical for all macronutrients. The cost of fat storage from dietary fat is the lowest, followed by carbohydrate and protein. Macronutrients with a low storage capacity such as protein and carbohydrate will be preferentially oxidized when intakes exceeded requirements. Hence, excess dietary fat is more likely to be stored in the body and this capacity is unlimited. The caloric content of fat is also more than twice that of protein or carbohydrate.

Culture

Culture certainly has a big influence on behaviours leading to weight gain. The concepts of personal well-being such health, affluence, beauty, strength and prosperity are modelled and learnt from society at large (Matsumoto 1994). As such, culture and society that accepts overweight as favourable, would lead to behaviours that reinforces weight gain. Behaviours that lead to weight gain are influenced at various social levels such as peer groups, parents, and communities.

Psychosocial Factors contributing to Obesity

Psychosocial factors take precedence in terms of contribution to obesity because genetic changes do not occur quick enough to warrant the increase of obesity cases around the world. Behaviour is governed by psychological aspects of human functioning, and is learnt through various experiences, including conditioning, reinforcements and modelling.

Calorie intake and use largely depend on behaviour, which are food-related and non-food related. The significance of behavioural factors in weight gain is that it can be modified more easily than genetics.

References:
RISKS AND SIDE EFFECTS OF OBESITY

by Fatin Atikah

Health effects of obesity

Adolescents who are obese can be associated with a range of medical and psychological complications, and can predispose individuals to serious health problems in their adult life, including type 2 diabetes, hypertension, dyslipidemia and non-alcoholic steatohepatitis.

Adapted from reference 2 (Lancet 2002; 360: 475), with permission from Elsevier.
OBESITY IN ADOLESCENTS

by Nursalihah Muhammad & Siti Farhain Amir

Body Mass Index (BMI)

In adults, the diagnosis of obesity is most commonly made using BMI levels. BMI is calculated as weight in kilograms (kg) divided by height in metres squared (m²). Ideal BMI is 18.5 to 24.9 kg/m². The following classification is advised by NICE:

- A BMI of 25-29.9 kg/m² is overweight.
- A BMI of 30-34.9 kg/m² is obese (Grade I).
- A BMI of 35-39.9 kg/m² is obese (Grade II).
- A BMI of ≥40 kg/m² is obese (Grade III) or morbidly obese, meaning that weight is a real and imminent threat to health.

More than 2 in 3 adults are considered to be overweight or obese.
More than 1 in 3 adults are considered to be obese.
More than 1 in 20 adults are considered to have extreme obesity.
About one-third of children and adolescents ages 6 to 19 are considered to be overweight or obese.
More than 1 in 6 children and adolescents ages 6 to 19 are considered

TIPS TO REDUCE WEIGHT

- Eats three meals a day, with healthy snacks.
- Increase intake of fiber such as oat and barley in the diet.
- Limit the intake of foods containing saturated fat, added salt and sugar.
- Drinks at least 8 cups of plain water per day. Try to avoid beverages with added sugar, such as soft drinks, sports drinks, and fruit juice drinks. Fruit juice can have high calorie thus whole fruit is always a better choice.
- Eat a balanced meals according to food pyramid.
- Try to bake or boil instead of fry when cooking.
- Eat fruit or vegetables for a snack instead of fast foods.
- Decrease use of butter and heavy gravies.
- Eat more chicken and fish. Limit red meat intake and choose lean cuts whenever possible.
- Consume a glass of milk (200ml), a matchbox sized (30g) piece of low-fat cheese and a pot of yogurt (200g) can help meet daily calcium requirement to increase bone mass density.

Ref: National Institute of Diabetes, Digestive and Kidney website
• Childhood obesity has more than doubled in children and quadrupled in adolescents in the past 30 years.
• The percentage of children aged 6–11 years in the United States who were obese increased from 7% in 1980 to nearly 18% in 2012. Similarly, the percentage of adolescents aged 12–19 years who were obese increased from 5% to nearly 21% over the same period.
• In 2012, more than one third of children and adolescents were overweight or obese.1
• Overweight is defined as having excess body weight for a particular height from fat, muscle, bone, water, or a combination of these factors.3 Obesity is defined as having excess body fat.
• Overweight and obesity are the result of “caloric imbalance”—too few calories expended for the amount of calories consumed—and are affected by various genetic, behavioral, and environmental factors.

HIGH RISK CHILDREN FOR OBESITY
• Consume food and drinks that are high in sugar and fat on a regular basis such as fast food, candy, baked goods, and ESPECIALLY pop and other sugar-sweetened beverages
• Are not physically active each day
• Watch a lot of TV and play a lot of video games, activities that don’t burn calories (sedentary time)
• Live in an environment where healthy eating and physical activity are not encouraged
• Eat to help deal with stress or social problems
• Come from a family of overweight people where genetics may be a factor, especially if healthy eating and physical activity are not a priority in the family
• Come from a low-income family who do not have the resources or time to make healthy eating and active living a priority
• Have a lack of information about sound approaches to nutrition
• Have a lack of access, availability and affordability to healthy foods have a genetic disease or hormone disorder such as Prader-Willi syndrome or Cushing’s syndrome

PREVALENCE OF CHILDHOOD OBESITY IN MALAYSIA
The World Health Organization (WHO) survey in 2010 ranked Malaysia as the 6th in Asia with the highest adult obesity rate.
Obesity statistics from the Malaysia National Health and Morbidity Survey in 2006 :-
⇒ 43% of Malaysia adults were obese or overweight.
⇒ 38% of child population is overweight Meanwhile
In Malaysia, childhood obesity rates also are climbing, from less than 10% a decade ago to nearly 14% in 2008, according to the most recent figures, saddling health systems with a new generation of diabetes, hypertension and other obesity-related illnesses.
⇒ An increase of obesity of 30% in the 6-12 years. It is showed that 500 children aged 6-12 years old in peninsular Malaysia has been found to fill 10% of that in the heavier category and 6% in the obese category.
⇒ Obesity among primary school children aged 6 to 12 years old increase from 9.7% in 2001 to 13.7% in 2007
⇒ Girls are more likely than boys to be obese in all age group.

References:
1. Centre for Disease Control & Prevention website
Management of Obesity

BY: MOO YANN TYNG

Non-Pharmacological Management

Lifestyle modification as an intervention for obese people to lose weight is often a successful treatment by combining dietary treatment with increase in physical activity and/or behavioural modification. The goal of lifestyle intervention is to create a negative energy balance by increasing total energy output, decreasing energy intake or combining both.

1) Dietary Management

The four main approaches for dietary therapy:
- low calorie diet
- lower fat diet
- very low calorie diet
- high protein low carbohydrate diet.

The pharmacist should assess patients’ condition and their preference before deciding the most suitable diet plan for them, followed by assistance in counselling on different diets. Besides that, pharmacists should refer them to a dietician if necessary and always follow up on patients’ progress in order to maintain successful long term weight losses.

2) Physical Activity

Increasing energy expenditure is another way to weight loss besides reducing energy intake. Physical activities have been shown to modestly reduce weight and abdominal fats in overweight individuals, while preserving fat-free mass. It is also proven that the volume of physical activity has a dose-response relationship with the amount of weight loss.

3) Surgical Management

Bariatric surgery may also be considered when non-surgical methods have failed or if the patient is at high risk for obesity-associated morbidity or mortality.\(^1\)\(^{10}\) This usually applies to morbidly obese patients with BMI ≥40 kg/m\(^2\) or between 35 and 40, with major weight related co-morbidities. In order to be eligible for bariatric surgery, the patient must be at least 18 years of age, proven fit to undergo surgery and should be committed enough for long-term follow up. Common surgeries in Malaysia include:
- Vertical gastric banding
- Roux-en-Y gastric bypass (RYGB)
- Laparoscopic adjustable gastric banding (LAGB)
- Biliopancreatic bypass procedure
Pharmacological Management

BY: SITI FAIRUZ BT LATIFF

Anti-obesity medications can be used as an adjunct to lifestyle changes. It may be considered if an individual has failed to achieve weight loss despite 6 months trial of non-pharmacological interventions and the following criteria:

- BMI ≥ 27.5 kg/m²
- BMI ≥ 25 kg/m² with co-morbidities
- Symptomatic complications of obesity

1) Orlistat
- MOA: Inhibit pancreatic and gastric lipase, thereby decreasing absorption of dietary fat.
- Dietary advice: Orlistat should ideally be taken with a fat-containing meal in order to facilitate its absorption. However, care must be taken to not ingest excessive fatty foods as the undigested fats will result in gastrointestinal side effects such as flatulence and oily anal leakage. Hence, pharmacists should advise all patients to maintain fat consumption at a minimal level, and wear sanitary pads in case of oily spotting.

2) Phentermine
- MOA: Phentermine is an amphetamine-derivative targeting the central nervous system (CNS) to decrease appetite. It is only indicated for short treatment duration (< 3 months) due to stimulant effects in the CNS such as insomnia, palpitations and increased blood pressure. It should be used with caution since long term effects have not been established yet.
- Dietary advice: Take phentermine - in the morning, at breakfast to avoid insomnia.

3) Other Drugs that Favour Weight Loss
There are several drugs that favour weight loss although they are not indicated for weight loss, such as:
- Metformin
- Fluoxetine
- Topiramate

REFERENCES:
2. Clinical practice guidelines for the management of overweight and obesity in adults. Australia: Commonwealth of Australia; 2003
AKTIVITI SEPANJANG JAN-JUN 2015

BY: NORUL ADILA BT. ZAKARIA

MESYUARAT AGUNG TABUNG PRIHATIN
7 FEBRUARY 2015

GOTONG ROYONG PERPINDAHAN FARMASI
27 MAC 2015
25 FEBRUARY 2015

CHINESE NEW YEAR CELEBRATION

24 APRIL 2015

PERTANDINGAN FUTSAL ANTARA JABATAN

17 MEI 2015

HARI ASMA SEDUNIA
Nama : Azmi bin Abas  
Jawatan : Ketua Peg. Farmasi U54  
Tarikh Lapor Diri : 26 Feb 2015

Pengalaman Kerja:
1) Hospital Kuala Krai, Kelantan (2010-2015)
2) Hospital Sultan Ismail, Johor Bharu (2009-2010)
5) Hospital Pasir Putih, Kelantan (1993-2000)
6) Hospital Tumpat, Kelantan (1986-1993)
7) Unit Penguatkuasa Farmasi Tawau, Sabah (1986-1986)
8) Hospital Angkatan Tentera Kem Terendak, Melaka (1985-1986)

Nama : Nik Azlean bt Nik Ismail  
Jawatan : Pegawai Farmasi U54  
Tarikh Lapor Diri : 8 Feb 2015

Pengalaman Kerja:
1) Hospital Tanah Merah, Kelantan (2013-2015)
2) Hospital Raja Perempuan Zainab II, Kelantan (2006-2013)
3) Hospital Pasir Mas, Kelantan (2004-2006)
4) Hospital Port Dickson (2000-2004)
5) Hospital Universiti Sains Malaysia (1999-2000)

Nama : Siti Nadiah bt Abdullah  
Jawatan : Pegawai Farmasi U41  
Grad : UKM  
Tarikh Lapor Diri : 2 Feb 2015

Pengalaman Kerja:
1) PRP Hospital Kuala Krai (2013-2015)

Nama : Low Hui Sin  
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Grad : UKM  
Tarikh Lapor Diri : 2 Feb 2015

Pengalaman Kerja:
1) PRP Hospital Raja Perempuan Zainab II 2013-2014
Nama : Amaal Farhana bt Mohamed
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Tarikh Lapor Diri : 21 April 2015
Grad : UIAM

Pengalaman Kerja :
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Nama : Muhammad Hafizullah bin Mamat
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Tarikh Lapor Diri : 2 april 2015

Pengalaman Kerja :
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2) PKD Pasir Puteh 2013-2015

Nama : Nur Thaqifah bt Md. Adnani
Jawatan : Pegawai Farmasi U41
Grad : USM
Tarikh Lapor Diri : 1 Jun 2015

Pengalaman Kerja :
1) PRP Hospital Tengku Ampuan Rahimah, Klang (2013-2015)

Nama : Mohd Nazman bin Che Razak
Jawatan : Pegawai Farmasi U41
Grad : UiTM
Tarikh Lapor Diri : 12 April 2015

Pengalaman Kerja:
1) PRP Hospital Raja Perempuan Zainab II (2013-2015)
2) PPF U29 Hospital Universiti Sains Malaysia (2008-2009)

Nama : Nurul Aida bt Md. Rosly
Jawatan : Pegawai Farmasi U44
Grad : UiTM
Tarikh Lapor Diri : 4 April 2015

Pengalaman Kerja:
1) Hospital Tengku Ampuan Afzan (Peg. Farmasi U41)
2) PRP Hospital Sultan Haji Ahmad Shah, Temerloh (PRP)

Nama : Nurul Syamimi bt. Hamat
Jawatan : Penolong Pegawai Farmasi U29
Tarikh Lapor Diri : 2 april 2015

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1) Hospital Kota Tinggi  2012-2013
2) PKD Pasir Puteh 2013-2015

Nama :   Muhammad Hafizullah bin Mamat
Jawatan : Penolong Pegawai Farmasi U29
Tarikh Lapor Diri : 2 april 2015

Pengalaman Kerja :
1) Hospital Kota Tinggi  2012-2013
2) PKD Pasir Puteh 2013-2015


SALAM
PERPISAHAN ..

Pn. Sudarwaty bt. Abd. Rajab
(Pegawai Farmasi DIS)
♦ Berpindah ke Bahagian Perkhidmatan Farmasi, Jabatan Kesihatan Negeri Kelantan
♦ Telah berkhidmat di Jabatan Farmasi HRPZII selama 11 tahun (2 tahun di Farmasi Pesakit Dalam, 5 tahun di Stor, 4 tahun di unit DIS).

Pn Huda Azmin
(Pegawai Farmasi Stor Perubatan)
♦ Telah berpindah ke KK Pengkalan Chepa
♦ Telah berkhidmat di Jabatan Farmasi HRPZII selama 7 tahun 6 bulan (5 tahun di farmasi satelit 1, 2 tahun 6 bulan di Stor Perubatan

Cik Siti Aishah Mohamad Nor
(Pegawai Farmasi Satelit 1)
♦ Berpindah ke KK Penambang
♦ Telah berkhidmat di Jabatan Farmasi HRPZII selama 2 tahun (8 bulan di farmasi satelit 3, 1 tahun 4 bulan di farmasi satelit 1).
**Pn Nur Nadila Alia Hamzah**
*(PF farmasi satelit 2)*

- Berpindah ke KKB Pasir Mas
- Telah berkhidmat di Jabatan Farmasi HRPZII selama 1 tahun 10 bulan (7 bulan di farmasi pesakit luar, 1 tahun 3 bulan di farmasi satelit 2).

**En. Mohd Nor b. Kassim**
*(PPF Farmasi Pesakit Luar)*

- Berpindah ke KK Pengkalan Chepa
- Telah berkhidmat di Jabatan Farmasi HRPZII selama 6 tahun (10 bulan di farmasi satelit 1, 1 tahun di farmasi pesakit luar, 1 tahun di unit CDR, 1 tahun di farmasi pesakit dalam, 2 tahun 2 bulan di farmasi pesakit luar).