



National
Cancer
Society
Malaysia

Giving Hope Celebrating Life



BRINGING EDUCATION AND UNDERSTANDING TO YOU



OBESITY

Bringing Education And Understanding To You

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I What is obesity?

- According to the World Health Organization (WHO), being overweight and obese are defined as having an abnormal or excessive amount of fat.¹

I How common is obesity?



According to the National Health and Morbidity Survey 2019,

1 in 2

Adults in Malaysia are **overweight** or **obese**²

1 in 2

Adults in Malaysia have **abdominal obesity**²

References:

1. World Health Organization. Obesity and overweight [Internet]. World Health Organization; [cited on 2022 Dec 8]. Available from: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
2. Institute for Public Health. National Institutes of Health (NIH). Ministry of Health Malaysia. National Health and Morbidity Survey (NHMS) 2019. Non-communicable diseases, healthcare demand, and health literacy: Key Findings [Internet]. 2020. [cited on 2022 Dec 8]. Available from: https://ipth.moh.gov.my/images/technical_report/2020/4_Infographic_Booklet_NHMS_2019_-_English.pdf

I Why is obesity bad for my health?

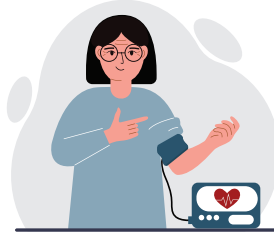
- Being overweight or obese increases your risk of getting major non-communicable diseases, including cancer.³



Cancer



Diabetes

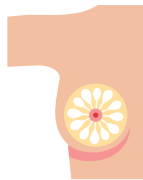


High blood pressure

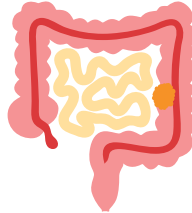


Heart disease

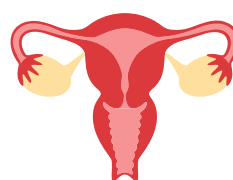
I Cancers linked with obesity



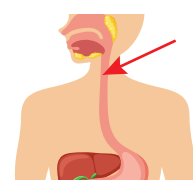
Breast



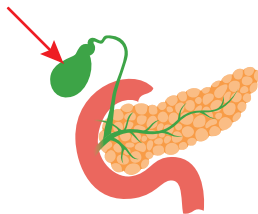
Colon and rectum



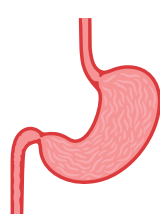
Uterus and ovaries



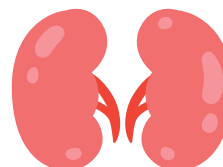
Adenocarcinoma of oesophagus



Gallbladder



Upper stomach



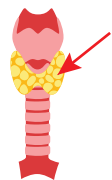
Kidneys



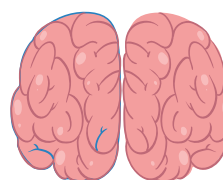
Liver



Pancreas



Thyroid



Meningioma



Multiple myeloma

Maintaining a healthy weight is one of the most effective ways to lower your risk of developing cancer and other major diseases.

References:

3. Centers for Disease Control and Prevention. Obesity and cancer [Internet]. 2022 [cited on 2022 Dec 15]. Available from: <https://www.cdc.gov/cancer/obesity/index.htm>

I How do I measure obesity?

Method 1: Body Mass Index (BMI)⁴

- BMI is used to identify whether a person is overweight or obese.

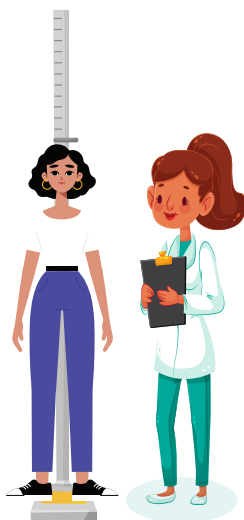
Overweight is defined as: **BMI 23.0 - 27.4**

Obese is defined as: **BMI more than 27.5**

How to calculate it?⁴



Step 1: Remove your shoes and empty your pockets, then stand on a weighing machine. Note the number on your weighing machine as your weight.



Step 2: Stand with your back straight and touching the wall to measure your height using a height scale. Look straight ahead. Note the number that aligns with the highest part of your head as your height.



Step 3: Calculate your BMI using the following formula:

$$\frac{\text{Weight (kg)}}{[\text{Height (m)}]^2}$$

References:

4. Ministry of Health, Malaysia. Clinical Practice Guidelines Management of Obesity [Internet]. Putrajaya, MY: Malaysia Health Technology Assessment Section (MaHTAS), Malaysia; 2023 [cited on 2023 Jun 26]. Available from: [https://www.moh.gov.my/moh/resources/Penerbitan/CPG/Endocrine/CPG_Management_of_Obesity_\(Second_Edition\)_2023.pdf](https://www.moh.gov.my/moh/resources/Penerbitan/CPG/Endocrine/CPG_Management_of_Obesity_(Second_Edition)_2023.pdf) Ministry of Health Malaysia 2023 MOH/P/PAK/504.22(GU)-e

I How do I measure obesity? (continued)

Method 2: Waist Circumference⁴

Waist circumference indicates the level of visceral fats in the body which surrounds your internal organs such as heart, liver, pancreas, kidneys and digestive organs.

It is used to identify **abdominal obesity**.

Abdominal obesity can increase the risk of high blood pressure, heart disease and stroke.

Abdominal obesity is defined as⁵:

- **90cm or more for men**
- **80cm or more for women**

How to measure it?⁴



Step 1: Bring the tape measure around your waist and level with your belly button.



Step 2: Ensure that it is not too tight. Do not suck in your stomach while measuring.



Step 3: Breathe out and note the number on the tape as your waist circumference.

References:

5. Alberti KG, Zimmet P, Shaw J. Metabolic syndrome-a new world-wide definition. A consensus statement from the International Diabetes Federation. Diabetic Medicine. 2006;23(5):469-80. doi:10.1111/j.1464-5491.2006.01858.x

I What can I do to prevent obesity?



Monitor your weight

Monitor your body mass index (BMI) and waist circumference.

Ensure you stay within the normal range with a balanced diet and an adequate amount of physical activities.^{1,6}



Be physically active

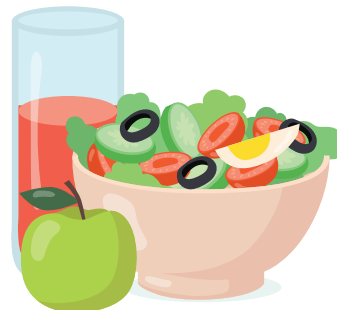
Moving more and sitting less have tremendous benefits for everyone.

The level of intensity you should have in your activity depends on your age.⁶



Control portion and avoid calorie-dense food and drinks

Watch your food portion and avoid high fat food (such as fried food, fast food) and sugary drinks as much as possible as they are high in calories. Excessive consumption of calories contributes to weight gain.⁶



Eat more fruits and vegetables

Fruits and vegetables are high in fibre, which can make you feel fuller and help to control your appetite.⁶

References:

6. Harvard T.H. Chan School of Public Health. Obesity Prevention Source. Obesity Prevention Strategies [Internet]. 2012 [cited on 2022 Dec 15]. Available from: <https://www.hsph.harvard.edu/obesity-prevention-source/obesity-prevention/>

I What can I do to prevent obesity? (continued)



Less TV/screen time

Spending more time moving rather than sitting in front of your screen can help lower your chances of being obese.⁶



Get optimal sleep

People who get less sleep or lower quality sleep are found to gain weight more easily than those who sleep well. An adult should have at least seven (7) hours of sleep every night.⁶



Avoid stress

Meditating or doing healthy activities (such as reading or listening to music) that can help you feel better. When stress is better managed, you are more motivated to eat healthy and exercise.⁶



Don't drink alcohol

Studies recommend that we avoid alcohol completely to reduce our cancer risk.⁶

I Getting started with physical activity

Be Active



150 Minutes

Moderate-intensity* aerobic activity per week⁷

Brisk walking, jogging, swimming, tennis (doubles), cycling, hiking, line dancing

or



75 Minutes

Vigorous-intensity** aerobic activity per week⁷

Running, swimming laps, tennis (singles), jumping rope, aerobic dance, kickboxing

and



At least 2 days

of muscle strengthening activities per week⁷

Use of exercise bands, weight machines, or hand-held weights; push-ups, pull-ups, planks, squats, lunges, some yoga postures and tai chi

How do you measure intensity?

Use the 'talk test'

*Moderate-intensity exercise	Moderate effort required. You breathe harder, you start to sweat, and you will talk more slowly than you do normally. ⁸
**Vigorous-intensity exercise	High effort required. You are puffing, sweating, and can only talk with pauses. ⁸

References:

7. World Health Organization. Physical Activity [Internet]. [cited on 2022 Nov 17]. Available from: <https://www.who.int/news-room/fact-sheets/detail/physical-activity>

8. Cancer Council Australia. "Exercise for people living with cancer"[Internet]. 2019. [cited on 2022 Nov 17]. Available from: <https://www.cancer.org.au/assets/pdf/exercise-for-people-living-with-cancer>

I Getting started with physical activity (continued)



How do I overcome obstacles to physical activity?⁹

Obstacle	Try this
I don't have time to be physically active	Start with a 30-minute slot per week for exercising
I feel tired after coming home from work	Schedule your exercise for some other time instead, such as in the morning
I have poor coordination	Choose activities that require less coordination, such as walking, instead of dancing
I don't have anyone to exercise with me	Find an exercise group near you

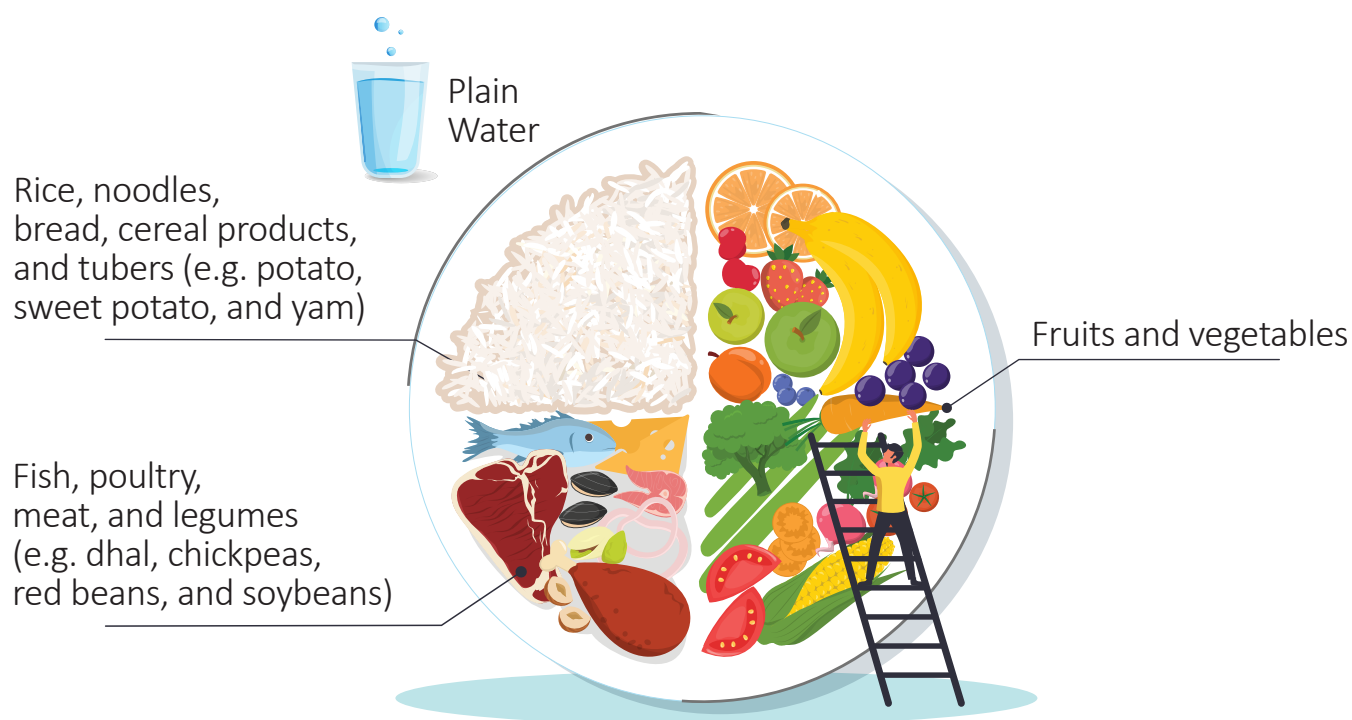
References:

9. Centers for Disease Control and Prevention. Overcoming barriers to physical activity [Internet]. 2022 [cited on 2022 Dec 15]. Available from: <https://www.cdc.gov/physicalactivity/basics/adding-pa/barriers.html>

I Healthy eating for a healthy weight

Eat Healthy

The diagram below shows the **Malaysian Healthy Plate with Quarter Quarter Half concept**.
Use this as a visual guide to healthy, balanced meals.¹⁰



Recommendation for the following food products:

	Red meat	Less than 500g/week = 3 palm sizes of meat in total ¹¹		2 servings of fruits and 3 servings of vegetables daily¹¹	E.g., eat 1 apple + 1 slice watermelon + 12 tablespoons of cooked leafy vegetables/day
	Processed meat	Avoid completely ¹¹		Sugar sweetened drinks	Avoid completely ¹¹
	More than 2 servings of wholegrain daily¹¹	E.g., eat at least 2 slices brown bread + 0.5 cup cooked brown rice/day		Processed foods	Less than once a week or avoid completely ¹¹

References:

10. Panduan Pinggan Sihat Malaysia. Putrajaya (MY). Ministry of Health Malaysia; 2016. 50 p. Report No.: 1.

11. World Cancer Research Fund/American Institute for Cancer Research. "Continuous Update Project Expert Report 2018. Recommendations and public health and policy implications." [Internet]. [cited on 2022 Nov 17]. Available from: dietandcancerreport.org

I Healthy eating for a healthy weight (continued)



Tips for portion control¹²

Scenario	Solution
Portion control when eating out	Share one portion with a friend, or wrap half of your meals into a “to-go” box to avoid eating more than necessary.
Portion control when eating in	Put all your food in one plate, rather than going for seconds.
Portion control when watching TV	Fix the portion by putting the food into bowls rather than straight out of the package.
Snacking	Snacking with fruits can prevent overeating in your next main meal.
‘Out of sight, out of mind’	Store unhealthy food out of sight at a high shelf. Move the healthier food to eye level.

References:

12. Centers for Disease Control and Prevention. How to Avoid Portion Size Pitfalls to help manage your weight [Internet]. 2022 [cited 2022 Dec 15]. Available from: [http s://www.cdc.gov/healthyweight/healthy_eating/portion_size.html](http://s://www.cdc.gov/healthyweight/healthy_eating/portion_size.html)

I Healthy eating for a healthy weight (continued)



Eat more, weigh less¹³

Foods that fill you up with fewer calories (Eat MORE of these!)	Foods that have more calories in each bite (Eat LESS of these!)
Fruits and vegetables <i>Sawi, kangkung, bayam</i> , broccoli, tomatoes, carrots, watermelons, apples, oranges, grapes	Fried and high-fat foods Fried eggs, fried chicken, food prepared with coconut milk, french fries, fried rice or noodles
Low-fat and fat-free milk products Low fat or skimmed milk, low or fat-free yogurt, reduced-fat cheese	Full-fat milk products Full-fat milk, full-fat cheese, full-fat ice cream
Broth-based soup Vegetable-based, chicken, fish or meat-based soup	Cream-based soup Cream of mushroom soup, creamy chicken soup, <i>tom yum</i> soup with coconut milk
Whole grains Brown rice, whole wheat bread, whole wheat noodles, popcorn	Higher-fat or higher-sugar foods Curry puffs, <i>pisang goreng</i> , croissants, doughnuts, cakes
Lean meat, poultry, fish Grilled chicken without skin, steamed fish, ground meat (lean)	Fatty cuts of meat Chicken with skin, bacon, briskets, ground meat
Legumes (soybean product, beans and peas) Tofu, tempeh, soybeans, dhal, green peas, edamame, red bean	Dry snack foods Potato chips, cookies, sugar-coated biscuits, cream biscuits, dried fruits

References:

13. Centers for Disease Control and Prevention. Eat more, weigh less? [Internet]. 2022 [cited 2022 Dec 15]. Available from: https://www.cdc.gov/healthyweight/healthy_eating/energy_density.html

I How can I get optimal sleep?

- People who get less sleep or lower quality sleep are found to gain weight more easily than those who sleep well.
- Adults (18-60 years) are recommended by the Centers for Disease Control and Prevention (CDC) to have **seven (7) or more hours** of sleep per night. How much sleep you need changes with your age.¹⁴



Tips for better sleep¹⁵

- Be consistent. Go to sleep at the same time every night and get up at the same time every morning (including weekends).
 - Make sure your bedroom is dark, quiet, and at a comfortable temperature (between 15.6°C to 19.4°C).¹⁶
 - Remove all electronic items, such as computers and smartphones, from the bedroom.
 - Avoid consuming large meals, alcohol or coffee 6 hours before bedtime.¹⁷
 - Get some exercise. Being physically active for at least 30 minutes in the day can help you fall asleep easier at night.¹⁸
- Normally, it takes **about 15 to 20 minutes** to fall asleep.¹⁹ If you have trouble falling asleep, you may try the following relaxation techniques on the next page.

References:

14. Centers for Disease Control and Prevention. Are you getting enough sleep? [Internet]. 2022 [cited on 2022 Dec 15]. Available from: <https://www.cdc.gov/sleep/features/getting-enough-sleep.html>

15. Centers for Disease Control and Prevention. Tips for better sleep [Internet]. 2022 [cited on 2022 Dec 15]. Available from: <https://www.cdc.gov/obesity/strategies/index.html>

16. Sleep Foundation. The Best Temperature for Sleep [Internet]. [cited on 2022 Dec 15]. Available from: <https://www.sleepfoundation.org/bedroom-environment/best-temperature-for-sleep>

17. Drake C, Roehrs T, Shambroom J, Roth T. Caffeine effects on sleep taken 0, 3, or 6 hours before going to bed. J Clin Sleep Med. 2013 Nov 15;9(11):1195-200. doi: 10.5664/jcsm.3170. PMID: 24235903; PMCID: PMC3805807.

18. Johns Hopkins Medicine. Exercising for Better Sleep. [Internet]. 2021. [cited on 2022 Dec 15]. Available from: <https://www.hopkinsmedicine.org/health/wellness-and-prevention/exercising-for-better-sleep>

19. Sleep Foundation. How Long Should It Take to Fall Asleep? [Internet] Nov 2022 [cited on 2022 Dec 15]. Available from:

I How can I cope with stress?

- When stress is better managed, you are more motivated to eat healthy and exercise.

Relaxation techniques²⁰:



Meditation

Focus on something such as a sound, image, or your own breath to increase awareness of the present, reduce stress, and promote relaxation exercise.



Progressive muscle relaxation

Focus on one muscle group at a time, starting from your head, then move down to your feet. Begin by tensing a specific muscle group for 5 seconds, then exhale as you relax. Focus on the difference between tension and relaxation.²¹



Relaxation breathing

Focus on your own breathing, and the rest of your body will relax itself. Breathe in through your nose for 5 seconds, then breathe out through your mouth for 5 seconds. Do this for at least 5 minutes.²²



Imagery

Close your eyes and imagine yourself in a peaceful situation.

References:

20. Centers for Disease Control and Prevention. Relaxation techniques [Internet]. 2020 [cited on 2022 Dec 15]. Available from: <https://www.cdc.gov/niosh/emres/longhourstraining/relax.html>

21. Centre for Clinical Interventions, Government of Western Australia. CCI Information Sheets: Panic - Progressive Muscle Relaxation [Internet]. [cited 2022 Dec 15]. Available from: <https://www.cci.health.wa.gov.au/-/media/CCI/Mental-Health-Professionals/Panic/Panic---Information-Sheets/Panic-Information-Sheet---05---Progressive-Muscle-Relaxation.pdf>

22. National Health Services (NHS UK). Breathing exercises for stress. [Internet]. [cited 2022 Dec 15]. Available from: <https://www.nhs.uk/mental-health/self-help/guides-tools-and-activities/breathing-exercises-for-stress/>

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