



National
Cancer
Society
Malaysia

Giving Hope Celebrating Life



BRINGING EDUCATION AND UNDERSTANDING TO YOU



REDUCING YOUR *Cancer Risk*

Bringing Education And Understanding To You

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CONTENTS


01

What is cancer?

02

What increases my risk of cancer?

03

What can I do to reduce my risk of cancer?

04

How do I maintain a healthy weight?

05

How do I be more physically active?

06

How do I eat more fruits and vegetables?

07

How do I eat more whole grains?

08

How do I eat less red meat and processed meat?

09

How do I eat less processed foods and drink less sugar-sweetened drinks?

10

How do I quit smoking?

11

How do I drink less alcohol?

12

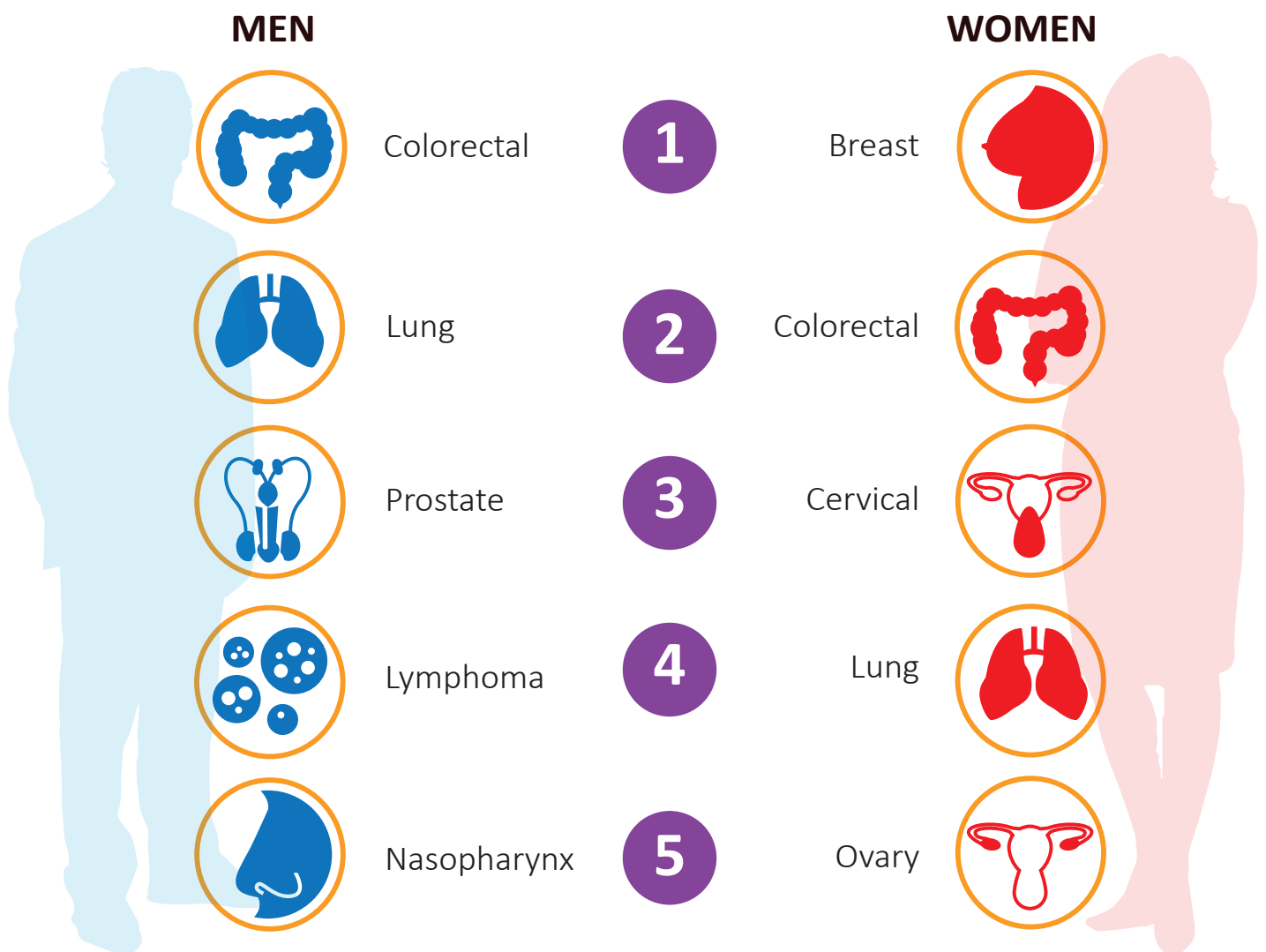
What vaccines should I get?

13

How do I stay safe in the sun?

I What is cancer?

- Cancer is a disease in which the cells in the body grow out of control in an abnormal way, and spread and destroy the 'normal' tissues.
- Based on the National Cancer Registry (2012-2016), here are the top 5 cancers among the Malaysian population¹:



References:

1. Azizah A, Hashimah B, Nirmal K, Siti Zubaidah A, Puteri N, Nabihah A et al. Malaysia National Cancer Registry Report (MNCR) 2012-2016. Putrajaya, Malaysia: Ministry of Health Malaysia; 2019.

I What increases my risk of cancer?

- The likelihood of someone developing or having cancer depends on many risk factors which are divided into modifiable and non-modifiable factors.



Although not all types of cancers are preventable, limiting your exposure to risk factors that you can change helps to lower your cancer risk.

References:

2. National Cancer Institute . Risk factors for cancer [Internet]. 2015 Dec 23 [cited on 2022 Nov 22]. Available from: <https://www.cancer.gov/about-cancer/causes-prevention/risk>

I What can I do to reduce my risk of cancer?

- About 30-50% of all cancer cases can be prevented through these ways³:



Maintain a healthy weight^{3,4,5}
(refer to page 4)



Be physically active^{3,4,5}
(refer to page 5)



Increase your intake of fruits and vegetables^{3,4,5}
(refer to page 6)



Increase your intake of whole grains^{3,4,5}
(refer to page 7)



Limit your intake of red meat and processed meat^{3,4,5}
(refer to page 8)



Limit your intake of processed food and avoid sugar-sweetened drinks^{3,4,5}
(refer to page 9)



Don't smoke^{3,4}
(refer to page 10)



Avoid alcohol^{3,4,5}
(refer to page 11)



Get vaccinated²
(refer to page 12)



Use sun protection⁴
(refer to page 13)

References:

3. World Cancer Research Fund/American Institute for Cancer Research. Diet, Nutrition, Physical Activity and Cancer: a Global Perspective. Continuous Update Project Expert Report. 2018. London (UK); [cited on 2022 Jan 01]. Available from: <https://www.wcrf.org/wp-content/uploads/2021/02/Summary-of-Third-Expert-Report-2018.pdf>

4. Centers for Disease Control and Prevention. Healthy choices [Internet]. 2022 May 19 [cited on 2022 Nov 22]. Available from: <https://www.cdc.gov/cancer/dcpc/prevention/other.htm>

5. Cancer Research UK. Does eating a healthy diet reduce my risk of cancer? [Internet]. 2022 May 05 [cited on 2022 Nov 22]. Available from: <https://www.cancerresearchuk.org/about-cancer/causes-of-cancer/diet-and-cancer/does-eating-a-healthy-diet-reduce-my-risk-of-cancer?>

I **How** do I maintain a healthy weight?

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



Body mass index (BMI)⁶

BMI is used to classify whether an adult is overweight or obese.

It is calculated by dividing your weight in kilograms by your height, squared in metres (kg/m²).

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



Waist Circumference⁶

Waist circumference indicates the level of visceral fats in the body which surrounds your internal organs such as heart, liver, pancreases, kidneys and digestive organs. It is used to identify abdominal obesity.

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

Recommendations^{6,7}:

Maintain a BMI of 18.5-22.9 kg/m²

Keep your waist circumference below: 90cm (men) and 80cm (women)

Tips to maintain a healthy weight⁶:

1. Limit food with a high-fat (e.g. fried food, food prepared with coconut milk) or high-sugar content (e.g. dessert, sugar-sweetened beverages) as they provide excess calories.
2. Increase fibre-rich food such as whole grains, fruits and vegetables, as they make you feel full longer.
3. Control your food portions.
4. Be physically active.
5. Limit time spent doing sedentary activities such as watching a screen in a sitting position.

References:

6. 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)

7. Alberti G, Zimmet P, Shaw J, Grundy SM. The IDF consensus worldwide definition of the metabolic syndrome. International Diabetes Foundation; 2006.

I How do I be more physically active?

- Moving more and sitting less have tremendous benefits for everyone.

Recommendations



150 Minutes

Moderate-intensity* aerobic activity per week⁸

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

or



75 Minutes

Vigorous-intensity** aerobic activity per week⁸

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

and



At least 2 days

of muscle strengthening activities per week⁸

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. Your breath is harder, you start to sweat, and you will talk more slowly than you do normally.⁹

**Vigorous-intensity exercise

High effort required. You are puffing, sweating, and can only talk with pauses.⁹

Tip #1:

- Reduce sitting time, increase time of moving.¹⁰

Example #1:

- Walk before or after dinner.

Tip #2:

- Start with activities, in locations you enjoy.¹⁰

Example #2:

- Morning walks in your neighbourhood.

Tip #3:

- Carry out activities with other people to keep yourself motivated.¹⁰

Example #3:

- Exercise with your family.

Tip #4:

- Find fun activities near you.¹⁰

Example #4:

- Google search "walking groups near me", or "dance classes near me".

References:

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

9. 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>

10. Centers for Disease Control and Prevention. Physical activity for a healthy weight [Internet]. 2022 Jun 16 [cited 2022 Nov 22]. Available from: https://www.cdc.gov/healthyweight/physical_activity/index.html

I **How** do I eat more fruits and vegetables?

- Eating enough fruits and vegetables can lower your risk of cancer, especially cancers of the digestive tract.
- It also helps you maintain a healthy body weight.¹¹

Recommendation¹²:

At least 3 servings of vegetables and 2 servings of fruits daily

- Example of **1 serving of fruits and vegetables**:



1 medium-sized banana



1 medium-sized apple



1 medium-sized orange



½ cup of cooked 'sawi'/'bayam'



1 slice of watermelon



½ cup of cooked broccoli



8 grapes



1 cup of leafy salad

Tips to increase fruits and vegetables intake^{11,12,13}:

1. Have at least 1 serving of vegetables or fruits at each meal.
2. Add vegetables such as onions, spinach, tomatoes, or mushrooms to your protein dishes such as eggs or meat.
3. Add vegetables to dishes such as fried rice, fried noodles, soup or sandwiches.
4. Add fruits to your morning cereals or cooked oats.
5. Snack on fruits in between meals or when you're hungry.
6. Enjoy homemade blended fruits as one of your beverage choice, as opposed to store-bought fruit juices.

References:

11. Turati F, Rossi M, Pelucchi C, Levi F, La Vecchia C. Fruit and vegetables and cancer risk: a review of southern European studies. *British Journal of Nutrition*. 2015;113(S2):S102-S110.

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

13. Portneuf Medical Center. Increasing Fruit and Vegetable Consumption [Internet]. 2018 [cited on 2022 Nov 22]. Available from: <https://www.portneuf.org/increasing-fruit-and-vegetable-consumption>

I **How** do I eat more whole grains?

- Replacing refined grains with whole grains can reduce your risk of major diseases such as colorectal cancer, heart diseases and diabetes.¹⁴

Recommendation¹²:

At least 2 servings of whole grains daily

- **Example of 1 serving of whole grains:**



2 slices of wholemeal bread



1 cup of cooked oats



1 cup of cooked brown rice or wholegrain noodles



4 pieces of whole-wheat biscuits

Tips to increase whole grain intake¹⁵:

1. Replace refined grain products with whole grains (e.g. choose brown rice instead of white rice, wholemeal bread instead of white bread).
2. Ensure that at least 1 of your meals in a day consists of whole grains. For example, include 2 slices of wholemeal bread or 1 cup of cooked oats in your breakfast.

References:

14. Yang W, Ma Y, Liu Y, Smith-Warner S, Simon T, Chong D et al. Association of Intake of Whole Grains and Dietary Fiber With Risk of Hepatocellular Carcinoma in US Adults. JAMA Oncology. 2019;5(6):879.
15. World Cancer Research Fund. Wholegrains, vegetables & fruit [Internet]. 2020 [cited on 2022 Mar 6]. Available from: <https://www.wcrf.org/dietandcancer/exposures/wholegrains-veg-fruit>

I **How** do I eat less red meat and processed meat?

- Overconsumption of red meat and processed meat increases your risk of colorectal (bowel) and stomach cancer.¹⁶

Recommended weekly intake¹⁶:

Red meat: Less than 500g; Processed meat: Avoid completely

- **Examples of red meat:**

- Beef
- Lamb and mutton
- Pork



1 serving of red meat = 1 palm size
(approximately 100-150g)

- **Examples of processed meat:**

- Sausages
- Burger patties
- Bacon
- Ham
- Nuggets
- Pepperoni and salami
- Canned meat
- Luncheon meat

Tips to reduce red meat and processed meat intake¹⁷:

1. Substitute red meat and processed meat with other protein, such as chicken, fish, or plant-based protein such as tofu or tempeh.
2. Limit red meat consumption to fewer than 3 servings per week.
3. Set 1 meat-free day weekly.
4. Try to prepare homemade burger patties and nuggets instead of using store-bought burger patties and nuggets.

References:

16. World Cancer Research Fund, American Institute for Cancer Research. Food, nutrition, physical activity, and the prevention of cancer: a global perspective. Washington DC: AICR; 2007.

17. Position statement - Meat and cancer prevention - National Cancer Control Policy [Internet]. Wiki.cancer.org.au. 2020 [cited on 2022 Mar 6]. Available from: https://wiki.cancer.org.au/policy/Position_statement_-_Meat_and_cancer_prevention

I **How** do I eat less processed foods and drink less sugar-sweetened drinks?

- Processed foods are generally high in fat, high in sugar and low in fibre. Eating and drinking processed foods and sugar-sweetened drinks regularly can lead to weight gain and obesity. This can increase a person's risk of cancer.¹⁸

Recommendation:

Limit your intake of processed foods;
Avoid sugar-sweetened drinks



Meat products (e.g. bacon, sausages, ham)



Condiments (e.g. butter, syrup, honey, mayonnaise)



Snacks (e.g. potato chips, cakes, biscuits, candies)



Sugary breakfast cereals



Sugar-sweetened drinks (e.g. soft drinks, syrup drinks)

Tips to reduce processed foods and sugar-sweetened drinks intake¹⁸:

1. Choose whole and fresh food (e.g. eggs, meat, fish, legumes, fruits and vegetables).
2. Choose alternative snacks (e.g. homemade popcorn, roasted nuts or air-fried chips).
3. Make your own salad dressings or condiments.
4. Limit your consumption of fast food such as burgers, fries, nuggets, and soft drinks.
5. Read the nutrition facts labels on packaged food and choose those that are minimally-processed and have a lower sugar, lower fat and higher fibre content.
6. Replace sugar-sweetened drinks with plain water, plain coffee, plain tea, or homemade fruit-infused water.

References:

18. American Institute for Cancer Research. Limit Consumption of "Fast Foods" and Other Processed Foods That are High In Fat, Starches, or Sugars [Internet]. [cited on 2022 Dec 17]. Available from: <https://www.aicr.org/cancer-prevention/recommendations/limit-consumption-of-fast-foods-and-other-processed-foods-that-are-high-in-fat-starches-or-sugars/#what-the-science-says>

I How do I quit smoking?

- Scientific studies prove that smoking cigarettes increases your risk of more than 16 types of cancers.¹⁹

Tips to quit smoking²⁰:



- **Look for motivation**

List your reasons to quit smoking (e.g. to protect your loved ones from being exposed to secondhand smoke, reduce your risk of health issues, or to save money).



- **Stay away from triggers**

Identify your smoking triggers (e.g. stressful situations, surrounded by smokers, drinking alcohol). Keep yourself distracted to avoid these triggers.



- **Keep yourself distracted**

Keep your hands and mouth occupied or keep yourself busy when you have a craving (e.g. chewing sugar-free gum, eating mints, or exercise).



- **Use quit smoking aids²¹**

- **Nicotine replacement therapy (NRT)**, such as nicotine patches, gums or lozenges, helps to reduce the uncomfortable feelings when you stop getting nicotine from cigarettes.¹⁹ NRT works by releasing small doses of nicotine into your body without the harmful chemicals related to smoking.¹⁹ NRT has proven to increase quitting rate.²¹

- **Non-nicotine medication** helps to reduce your craving for smoking by releasing the 'happy hormone' called dopamine without using nicotine.



- **Ask for professional help**

Obtain smoking cessation services from any mQuit clinic at any Klinik Kesihatan or private clinics.

References:

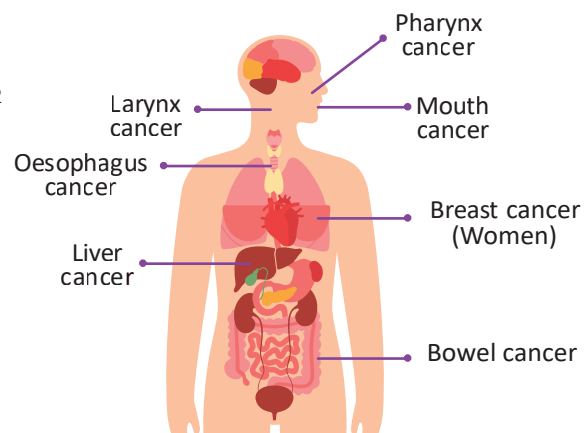
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20. NHS. Quit Smoking - Better Health [Internet]. nhs.uk. 2020. [cited on 2022 Dec 18]. Available from: <https://www.nhs.uk/better-health/quit-smoking/>

21. Centers for Disease Control and Prevention. How Quit Smoking Medicines Work [Internet]. 2021 [cited on 2022 Dec 18]. Available from: <https://www.cdc.gov/tobacco/campaign/tips/quit-smoking/quit-smoking-medications/how-quit-smoking-medicines-work/index.html>

I How do I drink less alcohol?

- Drinking alcohol has been proven to increase your risk for 7 types of cancers.²²
- Alcohol can damage cells, change your hormones as well as cells in your mouth and throat.²² This increases your risk of developing cancer.



Recommendation for cancer prevention²³: Avoid alcohol completely

The less you drink, the lower your risk of cancer

Tips to cut down on alcohol²³:



Learn to
refuse drinks



If you do drink,
use smaller glasses
and sip slowly



Dilute
alcoholic drinks



Choose non-alcoholic
alternatives



Pass time with other activities
(if you are out at a party, play games,
or dance instead of drinking)



Do not keep
alcohol in the house

References:

22. Cancer Research UK. Does alcohol cause cancer? [Internet]. 2018 [cited on 2022 Dec 18]. Available from:

<https://www.cancerresearchuk.org/about-cancer/causes-of-cancer/alcohol-and-cancer/does-alcohol-cause-cancer>

23. World Cancer Research Fund . It's best to avoid alcohol altogether [Internet]. [cited on 2022 Dec 18]. Available from:

<https://www.wcrf-uk.org/preventing-cancer/our-cancer-prevention-recommendations/limit-alcohol-consumption/>

I **What** vaccines should I get?

- Human Papillomavirus (HPV) vaccines protect against HPV-related cancers, such as cervical, vaginal, vulvar, penile, anal, oropharyngeal, and nasopharyngeal cancers.
- Hepatitis B vaccines can prevent the development of liver cancer.

Recommendations:

HPV vaccine (HPV-related Cancers)²⁴

- *9 to 45 years old*
- *Seek a doctor's advice to find out whether you should get vaccinated*

Hepatitis B vaccine (Liver Cancer)²⁵

- *This vaccine should have been given to all individuals born after 1989 through the national immunisation programme.*
- *For those who were born before 1989, you are encouraged to receive this vaccination to protect yourself against liver cancer.*

References:

24. Centers for Disease Control and Prevention. HPV Vaccination Recommendations [Internet]. [cited on 2022 Dec 18]. Available from: <https://www.cdc.gov/vaccines/vpd/hpv/hcp/recommendations.html>

25. Raihan R. Hepatitis in Malaysia: Past, Present, and Future. Euroasian J Hepatogastroenterol. 2016 Jan-Jun;6(1):52-55. doi: 10.5005/jp-journals-10018-1167. Epub 2016 Jul 9. PMID: 29201726; PMCID: PMC5578560.

I **How** do I stay safe in the sun?

- Being exposed to the sun increases your risk of developing skin cancer.²⁶
- This is because an excessive exposure of ultraviolet (UV) radiation from the sun can damage the DNA in our skin cells.²⁶

Tips to reduce UV exposure²⁶:



Seek shade

Use umbrellas or covered walkways when outdoors.



Wear protective clothing

Wear long sleeves, long pants, a wide brim hat, and cover your neck with a scarf while in the sun.



Use sunscreen

Choose sunscreen with sun protection factor (SPF) 30 or higher. Remember to re-apply every 2 to 3 hours for adequate protection.

References:

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