

Department of NUTRITION & DIETETICS Healthy Eating Tips for Managing Cholesterol



Blood Cholesterol

Cholesterol is a waxy, fat-like substance found in the blood. Your body needs cholesterol to build cells and make hormones. There are two distinct types of cholesterol that can be found in our body:

Low Density Lipoprotein (LDL) cholesterol, commonly known as the "bad" cholesterol, can stick to the walls of the arteries and cause a fatty build-up called plaque. Too much plaque leads to blockages that prevent blood from flowing properly to the heart and brain resulting in a heart attack or stroke, respectively.

High Density Lipoprotein (HDL) cholesterol, commonly known as the "good" cholesterol, removes excess cholesterol and may prevent cholesterol build-up in the arteries.

Triglycerides is another type of fat found in our blood. High levels of triglycerides can also increase your risk of heart disease.

Aims of Treatment

• Your cholesterol target will vary according to your risk for developing heart disease.

Lipid profile	Average adults (without known coronary risk factors)	Adults with heart disease / diabetes / other coronary risk factors	Your results
Total cholesterol	<5.2mmol/L	<4.1mmol/L	
LDL cholesterol	<2.6mmol/L	<1.8mmol/L	
HDL cholesterol	≥1.0mmol/L	≥1.0mmol/L	
Triglycerides	<1.7mmol/L	<1.7mmol/L	

Sources:

- 1. Ministry of Health Singapore. 2016. *Lipids MOH Clinical Practice Guidelines 2 / 2016*. https://www.moh.gov.sg/docs/librariesprovider4/guidelines/moh-lipids-cpg---booklet.pdf.
- American Diabetes Association. 2023. "Standards of Care in Diabetes 2023 Abridged for Primary Care Providers." *Clinical Diabetes* 41 (1): 4-31. <u>https://diabetesjournals.org/clinical/article/41/1/4/148029/Standards-of-Care-in-Diabetes-2023-Abridged-for</u> 2
- 3. HealthHub. 2023. Healthy Eating For Lowering Cholesterol. <u>https://www.healthhub.sg/live-healthy/healthy-eating-for-lowering-cholesterol</u>

• Maintain an ideal body weight (BMI 18.5-22.9kg/m²). Aim for weight reduction if your BMI is above 23kg/m². Losing excess weight can improve your lipid profile and reduce your risk of heart disease and stroke.

> Weight (kg) Body Mass Index (BMI) = $\frac{1}{\text{Height } (m) \times \text{Height } (m)}$

Healthy Eating Tips for Managing Cholesterol

- My Healthy Plate is a visual guide for balanced and healthy 1. meals. It shows you what to eat in the right amounts for each meal, so that you can plan your portions accordingly.
 - \checkmark Fill half your plate with fruit and vegetables.

 - Fill a quarter plate with wholegrains
 Fill a quarter plate with meat and





source: HealthHub

2. Dietary fat:

Include appropriate amounts of monounsaturated and polyunsaturated fat as this may help reduce LDL cholesterol and triglycerides in our body. meal, so that you can plan your portions accordingly.



Sources of healthy fats can be found in avocados, nuts and seeds, and healthy oils such as olive, canola, and sunflower oil.

Omega-3 fatty acids can be found in oily fish such as salmon, mackerel and sardines

Avoid intake of unhealthy fats (trans fats and saturated fats) as this will increase LDL cholesterol and reduce HDL cholesterol levels.



Sources of unhealthy fats includes fried and baked goods (e.g. pastries), fatty meat, full-fat dairy products, coconut oil/milk containing products and palm oil. 3

- 3. Limiting intake of trans and saturated fats. Fats are very high in energy, so too much can cause weight gain.
 - Fill Swap for healthier cooking oils containing monounsaturated \checkmark and polyunsaturated fats (e.g. soybean oil, rice bran oil, sunflower oil, canola oil, sesame oil, peanut oil and olive oil) and to use these oils sparingly.
 - Choose healthier cooking methods (e.g. steaming, stir-frying and \checkmark grilling).
 - Choose lean meat or remove visible fat and skin. \checkmark
 - Choose fat-free or low-fat products. \checkmark
 - When eating out, ask for no/less gravy, \checkmark choose soup instead of fried noodles and choose plain instead of flavoured rice (e.g. chicken rice and nasi lemak).
- 4. Aim for 2-3 servings of fish (particularly oily fish, which contain omega-3 fatty acids) per week. Besides having a favourable effect on your lipid profile, omega-3 fatty acids also have a positive impact on other aspects of heart health. Examples of oily fish include salmon, tuna, mackerel, herring and sardines.

1 serving of fish = \sim 100g cooked.



- 3. Increase fibre intake. Soluble fibre binds to cholesterol in the intestine and reduces absorption into your bloodstream.
 - \checkmark Aim for 2 servings of fruits and 2 servings of vegetables daily.
 - \checkmark Choose wholegrains (e.g. brown rice, oats and wholemeal bread).
 - ✓ Incorporate plant-based proteins (e.g. beans and lentils) in your cookina.
 - \checkmark Choose healthy snacks (e.g. nuts and seeds).
- 4. Limit alcohol consumption. Drinking alcohol raises blood triglyceride Also, too much alcohol can lead to weight gain. Drink in levels. moderation if you must. Women should drink no more than one standard drink a day, and men should drink no more than two standard drinks a day. 1 standard drink = 1 can (330ml) of beer, ½ glass (100ml) of wine or 1 nip (30ml) of spirit. Aim for two alcohol free days per week.

Where Can I Get More Information

To find a dietitian, please call 6357 8322 for an appointment. You will need to obtain a referral from your doctor for a dietitian consultation. 4

Clinic B2 TTSH Medical Centre, Level B2 Contact: 6357 7000 (Central Hotline)



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