

WEIGHING IN ON CHOLESTEROL

A guide to keeping your cholesterol levels in check

HEALTH SERIES | ISSUE 03



CONTENTS

What exactly is Cholesterol?	2
Cholesterol 101	3
What affects cholesterol levels?	4
Cholesterol and your child	5
The importance of diet	6
The importance of exercise	9
Apps and facts	11

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WHAT EXACTLY IS CHOLESTEROL?

Don't be afraid of the word 'cholesterol'. In itself, cholesterol is not a bad thing. In fact, your body requires cholesterol to keep running smoothly. The problem arises when your body has to deal with too much 'bad' cholesterol.

High cholesterol levels are associated with a slew of health risks, such as heart diseases and strokes. However, according to the World Health Organization (WHO), most people who have high cholesterol levels are not even aware of it, much less addressing the issue head on. This is because there are often no symptoms when you have high levels of cholesterol, making it difficult for us to detect and take action. And, contrary to

popular belief, high cholesterol is not just a problem for the overweight – even the skinniest of us can have high cholesterol!

Thankfully, testing for raised cholesterol levels is relatively easy these days. A blood sample and a quick analysis at the laboratory is all it takes. Note that genetics play a part, so check your family's history to see if immediate relatives have had heart disease or strokes caused by high cholesterol. If they were affected before they were 55, you're at risk.

If you've already gone for the test and found out that your cholesterol levels are in the red, what can you do about it? A healthy lifestyle – one that combines regular exercise and a balanced diet – is a good way to counter and prevent many ailments. But where do we begin?



CHOLESTEROL 101

The common misconception is that any kind of cholesterol is bad.

The human body naturally produces around three-quarters of all the cholesterol found in it. The remaining cholesterol in your body comes from the animal products you consume. When the so-called 'bad' cholesterol is not kept in check, it can build up in the artery walls and clog them, which can potentially lead to heart diseases and strokes.

High cholesterol is a common problem, especially in developed countries, where people are leading increasingly sedentary lives, and their diet consists of more and more processed foods. A WHO report says that nearly 30% of adults in Southeast Asia have increased levels of cholesterol – in Singapore, WHO figures reveal that almost 60% of those over the age of 25 have raised cholesterol levels.

Although those numbers may look intimidating, the good news is that making minor adjustments to your diet and lifestyle can help manage bad cholesterol.

The good, the bad and the ugly

There are good cholesterols, and then there are bad cholesterols. Know the difference!

LDL: Also known as 'bad' cholesterol, too much of this in your blood will cause deposits to build up on the artery walls. This leads to clogging, which increases the risks of heart disease and stroke.

HDL: This is the 'good' cholesterol, which is believed to carry LDL away from the arteries, thus protecting against heart attacks.

Triglycerides: A harmful fat produced in the body, mainly due to a sedentary lifestyle and a diet high in carbohydrates. High levels of triglycerides are associated with high LDL and low HDL levels.

Lp(a): This is a genetic variation of LDL, which may contribute to the buildup of fatty deposits in the arteries.



Useful cholesterol

A certain amount of cholesterol is required by the body to make

- Cell membranes
- Hormones
- Vitamin D
- Outer covering of nerves

TIP

There's no cholesterol in plants, so you and your family should incorporate plenty of greens in your meals to ensure a low-cholesterol diet.

What affects cholesterol levels?

As mentioned, high cholesterol can affect everyone, not just overweight or older individuals. Outward appearance is one of the least accurate gauges of a person's cholesterol levels. To find out, you have to look deeper. Here are a list of attributes that can affect the cholesterol levels in your body.



High cholesterol: Associated factors

DIET By checking your diet, you can easily gauge if you have high cholesterol or not. For example, if you are constantly consuming saturated fats and trans-fats – commonly found in animal fats, dairy products, cooking oils and margarines – there's a good chance that your cholesterol may be running a little high.

WEIGHT Even though skinny people can have high cholesterol, weight can certainly contribute to your blood cholesterol levels. Being overweight also increases blood pressure, which can indirectly lead to heart diseases.

AGE Older adults tend to have higher levels of cholesterol compared to younger individuals. However, it is possible for children to have the same condition, too. And that is why early and regular check-ups are recommended.

GENDER According to the US National Heart, Lung and Blood Institute, statistically, men are generally more prone to heart diseases, while women are more likely to suffer strokes; both conditions are related to high cholesterol.

GENETICS Even if you watch what you eat and live a healthy lifestyle, your cholesterol level may still be high – genetics may be the culprit here. Take a look at your family history. Don't worry if there are relatives who had problems! This just means that you should get your cholesterol levels checked from time to time, just to make sure that you are in the clear.

MEDICAL CONDITIONS Ailments such as diabetes and high blood pressure are often associated with high cholesterol levels.



CHOLESTEROL AND YOUR CHILD



Children can also get high cholesterol levels. A healthy, balanced diet and an active lifestyle are needed to keep your child's cholesterol level in check, but the approach is different from an adult's.

- **Check your child's cholesterol levels.**

The American Heart Association's guidelines are: 'acceptable' (less than 170 mg/dL), 'borderline' (170-199 mg/dL) and 'high' (200 mg/dL or greater).

- **Read the labels.**

It is recommended to keep your child's cholesterol intake under 300mg a day (this equates to about 300g of beef, pork or poultry or one medium-sized egg).

- **Take note of your child's dietary needs.**

What constitutes a balanced diet is different for babies, older kids, teenagers and adults. Babies and small children grow at a very fast

rate, so ensure that they get enough fats. This should include animal fats rich in cholesterol, as these are essential for their development. A baby's recommended daily allowance for fats is around 40% of its caloric intake – far more than an adult's.

- **Have a smoke-free home.**

Exposure to secondhand smoke can lower the levels of HDL in your children. Stub out to increase the level of good cholesterol in every member of your family.

- **Exercise.**

Exercising is the best way to raise HDL level. So make sure your kids start early. Children are more likely to follow through if they do it with the family. Here are a few ideas:

Encourage your child to walk as much as possible, even when it may be more convenient for you to have them in a pram or in your arms.

At the park, rather than just walking or jogging, incorporate

fun activities such as tossing a frisbee or ball. That way, your kids will not view exercising as a chore.

Get older children to accompany you when you're walking around the city, running errands.

Besides chalking up exercise points, exploring a city on foot has educational value.

Limit TV/Internet/video game time to two hours or less

(depending on age) every day.



THE IMPORTANCE OF DIET

Meats

- Opt for leaner cuts of meats and poultry. Choose turkey or chicken instead of duck.
- Trim fat from meats and skin from poultry
- Mince meat yourself. Supermarket mince usually contains more fat
- Cut down your consumption of processed meats (add examples)
- Reduce your intake of liver and kidneys

Fish and seafood

- Stick with fish, such as salmon, mackerel and halibut, at least twice a week as they have high levels of omega-3 fatty acid
- Choose seafood as it has very low levels of saturated fat
- Avoid sauces, dips and toppings as they often are high in harmful fats

Dairy products

- Opt for low-fat types
- Choose soft cheeses over hard cheeses
- Go easy on the butter

Eggs

- Boil, poach or scramble (without butter) rather than fry
- Replace whole eggs with egg whites. Yolks contains cholesterol



Trans fats

- Limit your intake of margarine, cookies, crackers, chips and cakes

Oils

- Go with olive, corn and sunfloweroil as healthy substitutes for other fats

What to eat more of

- Increase your daily intake of fresh fruit and vegetable
- Include enough fibre, found in many types of grains and beans
- Go nuts – but not salted nor coated with sugar

Snacking

- Try small tomatoes, berries or a handful of nuts or dried fruits over sweets, cookies or chips.

Cholesterol and dining out

SALADS Choose these as great tasting and healthy starter or main, but do choose balsamic or rice vinegar dressing over cream- or cheese based ones.

STARTERS Go easy on bread, butter, dips and tempting fried goodies. Clear soups are generally better than creamy ones.

MAINS Choose fish over meat. Always include vegetables. Avoid fries and heavy curries.

DESSERTS Always include fruits. Try a light sorbet instead of ice cream.

DRINKS Avoid sugary drinks. Go for fresh orange, grapefruit or cranberry juices



Tasty replacements

Love sweets? Change from milk chocolate to dark chocolate. This has more cocoa powder which helps build good cholesterol.

Eggs for breakfast? Replace a whole-egg omelette with one made with egg white. Move from butter and margarine to olive, canola and corn oils. Powerful proteins. Tofu is a good alternative to meat. It's a source of healthy proteins and lowers bad cholesterol.

Decoding restaurant menus

Cooking methods affect the health level of dishes. When dining out go for:

- Roasted
- Broiled
- Sauteed
- Seasoned and spiced
- Baked (unless it's baked in cheese)

AVOID THESE:

- Au Gratin means that the dish is made with cream or whole milk, butter and cheese.
- Smothered means that the dish is covered in heavy sauce or gravy.
- Crispy means that the meat, fish or vegetables is deep fried.
- Crusted entrees often involve lots of butter, cheese or oil.
- Rich, velvety and gooey mean that the dish contains sky-high amounts of fat.

The Mediterranean Diet

People in the countries surrounding the Mediterranean Sea – especially Greece, Italy and Spain – tend to have lower cholesterol levels. It is believed that the locals' dietary habits contribute to this. The Mediterranean diet contains large quantities of whole grains, fruit and vegetables, fish and olive oil.

Try some Mediterranean recipes to add a tasty – and healthy – variety to your diet.



Chicken Souvlaki

The best way to adopt a healthy diet is to start with something tasty and relatively simple to prepare. This is a quintessential Mediterranean dish that tastes great and manages your cholesterol levels effectively.

Ingredients:

- 1/2 cup (2 ounces) crumbled feta cheese
- 1/2 cup plain Greek-style yogurt
- 1 tablespoon chopped fresh dill
- 1 tablespoon extra-virgin olive oil, divided
- 1 1/4 teaspoons bottled minced garlic, divided
- 1/2 teaspoon dried oregano
- 2 cups sliced roasted skinless, boneless chicken breast
- 4 (6-inch) pitas, cut in half
- 1 cup shredded iceberg lettuce
- 1/2 cup chopped peeled cucumber
- 1/2 cup chopped plum tomato
- 1/4 cup thinly sliced red onion

Preparation

1. Combine feta cheese, yogurt, dill, 1 teaspoon oil and 1/4 teaspoon garlic in a small bowl, stir well.
2. Heat remaining 2 teaspoons of olive oil in a large skillet over medium-high heat. Add remaining 1 teaspoon garlic and oregano to pan and sauté for 20 seconds. Add chicken, then cook for 2 minutes or until thoroughly heated. Place 1/4 cup chicken mixture in each pita half and top with 2 tablespoons yogurt mixture, 2 tablespoons shredded lettuce, 1 tablespoon cucumber, and 1 tablespoon tomato. Divide onion evenly among whole-wheat or multi grains pitas.



THE IMPORTANCE OF EXERCISE



The other crucial method to lower your cholesterol level is through exercise. Research results vary, but one thing is clear: even moderate but regular physical activity may lead to increases in HDL, the 'good' cholesterol. Also, losing weight (even just 5–10% of body weight) is associated with reduced cholesterol.

Aim for at least 30 minutes of moderately intense physical activity most days of the week. Yes, work and family commitments prevent many of us from exercising that frequently. Switching from a sedentary lifestyle to a 30-minute-a-day exercise routine can be rather jarring for most people.

Take it easy on yourself and build up your ideal exercise routine from the ground up. Start with light exercise – brisk walking in the neighborhood, during lunch break instead of after dinner, for example. Start with just 10 minutes a day, then take it from there once you get comfortable. The key is to get and stay active!

The power of walking

Your exercise routine does not necessarily need to involve a gym membership. The good news is that it can begin with something as basic as walking. But where do you start, exactly?

The easiest is just to go out and walk. Regular brisk walks are a great way to get in shape and, of course, deal with and prevent high cholesterol. Also, since it can be enjoyed by people of almost any age and fitness level, you can rope in your friends and family and turn your next workout into a social experience!

Make the most of your walking with these simple tips:

- Clothing: dress lightly. Opt for sweat-absorbent or quicky-drying sportswear
- Footwear: wear comfortable sports shoes with a good heel and arch support
- Sun protection: don't forget a hat, sunscreen and sunglasses
- Hydration: drink plenty of fluids before and after your walk; bring a bottle of water along for longer sessions
- Warm up: start walking at a slower pace, then some simple stretching exercises, focusing on leg muscles

When ready, you can intensify your walks in a number of ways:

- Vary the terrain; include inclines and even go up stairs and steps
- Simply increase speed and walk further
- Walk with hand weights

Note: If you are boxed up in your office cubicle for hours on end every day, briskwalking can be a great way to shake off that lethargy and start your day right. A quick walk in the morning can charge you up for the rest of the day, not to mention the fact that it is a great way to socialise with like-minded colleagues during lunch break!

The pleasures of walking

Walking is not only a great workout; it's a fabulous way to rediscover your local environment and also explore new places.

On top of that, walking is a social activity. You can talk a walk with your friends, family or significant other. And it need not always be confined to walking trails either! Visit museums, galleries, botanic gardens and enjoy your city's architectural heritage.

Where to walk in Singapore

- Singapore Botanic Gardens / Singapore Zoo. Yes, they're known by all, but when was the last time you really enjoyed a walk around these locations?
- National Parks. From the TreeTop Walk in the Central Catchment Nature Reserve to the Floral Walk at the Southern Ridges, Singapore has numerous both easy and beautiful walking trails.
- If you prefer not to go to far flung places for your walk, you can always stay in the city! Take a stroll around

the ever-changing Marina Bay, or check out some of Singapore's architectural heritage on foot. No matter what you choose, there are many walking opportunities close to the city centre.

Where to walk in Malaysia

- Kuala Lumpur. When was the last time you took a walk around Kuala Lumpur? Head down to the Lake

Gardens Park for the most scenic walk in the city!

- Heritage walks. Revisit Malaysia's architectural wonders by walking from George Town in Penang to Malacca.
- National Parks. These offer many walking and hiking experiences. Explore Malaysia's largest, Taman Negara, with its abundance of wildlife.



Beyond walking

Mix your regular walks with a range of other fun and beneficial fitness sessions:

- **SWIMMING** No matter if it's regular laps or aqua aerobics, the pool offers many ways to keep in shape. Not only does the water resistance help trim your muscles, the buoyancy will also help carry your weight, thus putting less strain on your back and joints. Cycling. You've hiked through the National Parks. Now try their scenic cycling routes. Start by cycling around your neighbourhood before venturing further. That way, you build your body's core strengths, allowing you to last longer on your bicycle.
- **DANCING** You don't have to be a professional dancer to transform a dance routine into a great workout. Be it salsa, zumba, swing or tango, as long as it gets your body moving, it's doing its job to keep your cholesterol level down. Besides, dancing classes are usually conducted in groups, making it an exciting social experience.

APPS AND FACTS



Managing your cholesterol on the go

For smartphones and tablets, there are many informative and interactive apps to help you ensure you are maintaining healthy cholesterol levels

Cholesterol Animated Pocket Dictionary

(Free; iOS and Android)

The Cholesterol Animated Pocket Dictionary app is a convenient way to learn everything about what cholesterol does to your body. Browse through more than 80 cholesterol-related medical terms with 3D animations, videos, audio

commentaries and written definitions. Besides being a handy guide for health professionals and med students, this app is a must-have for anyone interested in cholesterol management.

Cholesterol Manager

(SGD\$3.98, MYR\$2.99; iOS)

If you want an app that effectively monitors your dietary cholesterol and fat intake, Cholesterol Manager is it. With a few quick taps, you can create a dynamic log of your meals. Browse or use the fast search function to select foods from a database of more than 100,000 commonly eaten foods! Once logged, you

will get a daily summary of your meals, including a breakdown of cholesterol, saturated fat, polyunsaturated fat, monosaturated fat and calorie content. There is even a progress bar to give you a visual representation of how close (or far!) you are to your dietary goal.

Cholesterol Tracker

(SGD\$3.98, MYR\$2.99; iOS)

Aside from tracking your cholesterol and triglyceride levels, the Cholesterol Tracker app has another nifty trick up its sleeves: if you are already on cholesterol medication, the integrated medication reminder function will be a boon for you. This is especially useful for elderly users who are dealing with high cholesterol, and have difficulty remembering when to take their pills.

The TCM Perspective

The first line of solution for abnormal levels of cholesterol is usually to combine a healthy, balanced diet with regular physical activities. Medications are often prescribed for people suffering from high cholesterol. While they can be effective for the most part, the cholesterol levels tend to spike once these patients stop taking the medication.

Traditional Chinese Medicine (TCM), on the other hand, deals with cholesterol

differently. TCM believes that a person's inability to digest properly may affect how cholesterol is processed and stored in the body. Slower fluid circulation, for example, will encourage more or larger

deposits of cholesterol. Excretory system dysfunction is also a huge indicator, as the liver and bile production is critical to ensure cholesterol is eliminated efficiently when bile is released.

An effective, well-rounded TCM treatment begins with the diet. Here is a list of TCM-related foodstuffs that have been proven to be effective against high cholesterol levels.

GREEN TEA Green tea is prepared from unfermented leaves. Researchers believe that catechins, a type of antioxidant found in tea, are responsible for its cholesterol-lowering effects. The more fermented the tea leaves, the lesser the catechin content.

CHINESE PEARS Pears contain higher levels of pectin than apples, making them a miracle fruit when it comes to lowering cholesterol levels.

HAWTHORN FRUIT This lowers blood lipids and treats certain cardiovascular diseases.

RED YEAST RICE This contains natural statins to lower LDL cholesterol. It is also said to invigorate the body, aid digestion and revitalise the blood.

CASSIA SEEDS Promotes bowel movement, inhibits hyperlipidemic formation and reduces weight gain from nutritive obesity.

FINGER CITRON FRUIT Treats poor digestion, improves appetite and lowers blood cholesterol.

OYSTER MUSHROOMS Contains natural statins that reduces cholesterol.



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