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The Sunday Times used to run a column called Foodie Confidential in which people were asked what they'd like their last meal to be.

Mum's comfort food from childhood popped up a lot, as did plain Teochew porridge and just about anything from McDonald's.

I know what my last meal would be: Youtiao.

Sticks of these dough fritters straight from a vat of bubbling oil, light and crispy on the outside and almost hollow inside.

I love crunchy, deep-fried food. Youtiao tops the list, just ahead of keropok, goreng pisang, vadai, mantou, samosas, curry puffs, spring rolls and French fries.

They are all bad for my health, of course – especially my heart – which is why I was comforted to learn that at least one cardiologist shares my cravings.

"I enjoy youtiao too," admits Adjunct Associate Professor Low Ting Ting from the National University Heart Centre, Singapore (NUHCS).

"Just had mine last weekend at a cafe but made a conscientious effort to pair it with soya bean curd – with less syrup – instead of pairing it with dipping curry," says Prof Low, who is director of the women's heart health programme at NUHCS.

Deep-fried food is high in unhealthy fats – saturated fat and trans fat – and packed with calories. Over time, consuming too much of it can lead to weight gain and the build-up of plaque in the coronary arteries, she says.

"It's clearly a double whammy for the development of obesity, heart attacks and stroke," she warns.

Her advice: "Take deep-fried food in moderation and be deliberate in making food choices such as replacing fatty, unhealthy deep-fried food with a nutritious alternative."

To better understand heart health, I got answers from Prof Low and three of her NUHCS colleagues: Associate Professor Chai Ping, head and senior consultant in the department of cardiology; Professor Ronald Lee, senior consultant in the department of cardiology; and Assistant Professor Winn Maung Maung Aye, consultant in the division of congenital heart surgery.

1 THE CHANGING HEART

Like every part of the body, the heart changes as its ages.

"It is ever evolving since conception till the last day of life," says Prof Maung.

One key age-related change is the hardening and gradual build-up of cholesterol in the coronary arteries, says Prof Lee.

Cholesterol is a fat-like substance produced by the liver and absorbed from certain foods. While essential in small amounts, excess cholesterol can lead to permanent plaque build-up in the arteries, a condition known as atherosclerosis.

"The risk of getting a heart attack is in direct proportion to the amount of cholesterol deposit in the heart arteries," says Prof Lee.

Though this build-up can't be reversed, a healthy lifestyle – regular exercise, balanced diet and good control of blood pressure and cholesterol – can slow the heart's ageing process. And while genetics play a role in heart health, "we cannot change our genes, but we can choose to adopt a healthy lifestyle", he says.

2 COMMON HEART AILMENTS

Heart disease isn't just one condition but a range of disorders affecting the heart in different ways.

The most common, for both men and women, is coronary artery disease, caused by a build-up of fatty deposits in the arteries that supply blood to the heart. This can narrow or block the arteries, leading to chest pain or heart attacks.

Other conditions include:

- Degenerative valve disease. This is where the heart valves become stiff or leaky with age, disrupting blood flow through the heart.
- Arrhythmias (heart rhythm disorders). These include atrial

fibrillation (irregular heartbeat), sick sinus syndrome (slow heart rate due to malfunction of the heart's natural pacemaker), and conduction blocks (interrupted electrical signals in the heart resulting in irregular or slow heartbeat).

- Cardiomyopathy, a disease that causes weakening of the heart muscle, making it harder for the heart to pump blood.
- Heart failure, where the heart can't pump blood effectively, often due to the conditions above.

3 TRACKING HEART HEALTH

The following are the key indicators of heart health, and they are equally important, says Prof Low.

- Blood pressure. This refers to the pressure of circulating blood against the walls of blood vessels in the body. The pressure is mainly generated by the force of a pumping heart.

Prof Low says one should worry when readings are persistently above 130mmHg systolic and/or above 85mmHg diastolic, in more than two settings and when taken in a comfortable, relaxed manner.

- Heart rate. This refers to how many times the heart pumps in a minute.

Prof Chai says that, in general, the normal resting heart rate for healthy individuals can range from 60 to 100 beats per minute (bpm), though 40 to 60 bpm is considered normal for those such as athletes.

Heart rates above 100 bpm occur during normal physical activities and times of emotional stress.

Persistently fast resting rates of above 100 bpm can indicate many conditions, including heart rhythm disorder, hyperthyroidism, anaemia and infections, he says.

Slow resting heart rate of less than 50 bpm could be due to medications and conditions such as hypothyroidism.

- Cholesterol levels. These refer to the amount of fat circulating in the blood.

The cholesterol reading to note is that for low density lipoprotein (LDL), says Prof Chai. In general, healthy individuals with no evidence of atherosclerosis and who are deemed to be at low risk for cardiovascular disease should target an LDL cholesterol level

that is less than 3.4 mmol/L.

4 MEN'S V WOMEN'S HEART

Common risk factors for coronary artery disease that affect both men and women include diabetes, hypertension, high cholesterol, obesity and lack of physical activity.

But there are notable differences in how men and women experience heart disease, says Prof Low.

Men develop coronary artery disease earlier in life as they do not have the protective effects of the hormone oestrogen. "Men are also more likely to smoke than women, which is a significant high risk factor for coronary artery disease," she says.

Women have smaller hearts and arteries and are more prone to conditions such as microvascular disease, which affects the small vessels of the heart rather than the large arteries.

Prof Low notes that oestrogen keeps blood vessels healthy by promoting dilatation, reducing plaque build-up and regulating cholesterol and blood pressure levels.

Oestrogen levels drop at perimenopause and menopause, so women experience increased cholesterol, rising blood pressure and a shift of fat storage to the abdomen.

Women tend to develop heart disease later in life, but since they generally live longer, they are also more likely to accumulate multiple chronic conditions, and so carry a larger lifetime burden of heart disease, she adds.

5 WHAT WOMEN SHOULD KNOW

Many women don't realise that cardiovascular disease is the No. 1 cause of death in women in Singapore, and is actually preventable 80 per cent of the time with lifestyle changes, says Prof Low.

"Women tend to associate their lady parts with women's health," she notes. "They are aware of screening for breast cancer with mammograms and pap smear for cervical cancer. The heart is on the inside and often forgotten. Maybe it is also because women generally live longer than men, so heart health is taken for granted."

Several risk factors are unique to women.

Early menopause (before age 40), pregnancy complications like gestational diabetes or pre-eclampsia, autoimmune

disorders – which men can get but less commonly – and polycystic ovarian syndrome all increase the risk of premature heart disease.

Pregnancy itself stresses the heart, says Prof Low. During pregnancy, the heart rate increases by 30 per cent, blood volume rises by 50 per cent and cardiac workload can surge by up to 1.7 times. Labour and the immediate postnatal period place the heart under even greater strain.

Later in life, perimenopause and menopause raise a woman's risk of heart disease due to changes in hormones and metabolic changes.

Some heart conditions affect women exclusively or more frequently.

- Pregnancy-related cardiomyopathy, which occurs during or after pregnancy.
- Stress-related cardiomyopathy (or broken heart syndrome), which is often triggered by emotional shock.
- Stiff heart syndrome (heart failure with preserved ejection fraction, which is basically when the heart can't fill up properly with blood between beats), especially common after menopause.

Women are also more likely to develop pulmonary arterial hypertension – a rare but serious type of high blood pressure – and often have worse outcomes from the same heart conditions, says Prof Low. For instance, young diabetic women who have heart attacks are twice as likely to die as men in the same age groups.

More bad news: Recovery rates for women undergoing treatments like angioplasty and bypass are lower than for men, she says. Both procedures are used to treat blocked or narrowed coronary arteries.

This is because women tend to have smaller arteries, smaller body size, higher inflammation levels and more coexisting conditions like diabetes or autoimmune disease, she says.

Women are also more vulnerable to post-surgical stress, depression and anxiety, which can affect recovery.

6 WHAT ABOUT HRT?

Is hormone replacement therapy (HRT), where a woman restores declining hormone levels, primarily oestrogen, safe for heart health?

Prof Chai says there is no evidence that HRT protects

against heart disease.

Prof Low adds that HRT is essentially reserved for women with menopause-related symptoms such as hot flashes, night sweats, mood swings and vaginal dryness, and is generally beneficial for improving quality of life and bone health.

"It is currently not used primarily to protect against heart disease, but it's safe for those who are indicated to receive HRT, especially also for those who experience premature menopause," she says. Starting HRT should be a decision made with an experienced doctor.

7 WHAT ABOUT MALE MENOPAUSE AND THE HEART?

The impact of male menopause, or andropause, on heart health is not well understood, says Prof Low. "Unlike menopause, there isn't a clear period where there is sharp decline in testosterone levels," she says.

However, the gradual decline in testosterone can also indirectly affect a man's risk of heart disease, given the likelihood of factors such as increased abdominal obesity and decreased muscle mass.

Prof Chai says older men, like younger ones, should get regular health checks, stay active, eat healthily, avoid smoking, and manage risks like high blood pressure, diabetes and high cholesterol.

For the record, cancer is the No. 1 cause of death of men in Singapore, followed by cardiovascular disease.

8 EARLY WARNING SIGNS

Men and women should watch out for these early warning symptoms of an ailing heart, say cardiologists:

- Chest pain or discomfort
- Shortness of breath on exertion
- Heart palpitations
- Dizziness or lightheadedness
- Fatigue from minimal effort, such as doing simple household chores or climbing stairs
- Swollen legs

Symptoms that may indicate a heart attack would be sudden, severe chest pain or discomfort, shortness of breath, profuse sweating and fainting spells, says Prof Chai.

"Men and women experience similar symptoms, just that women often downplay their symptoms," he adds.

Prof Low says women are more

likely to have subtler symptoms, or are more likely to experience other accompanying symptoms beyond chest pain.

9 HOW TO PROTECT YOUR HEART

Exercise, especially aerobic activities like swimming or jogging, is vital, say doctors.

The Health Promotion Board recommends moderate-intensity aerobic activity of between 150 and 300 minutes a week, and activities to strengthen muscles at least two days a week.

Prof Lee notes that aerobic activities strengthen the heart more effectively than weight training.

As for food, he doesn't believe in superfoods, but says of his own diet: "I prefer boiled vegetables, steamed fish, skinless chicken, salad, and bean curd. I try to stay away from deep-fried food, preserved food, any food that is too sweet or too salty. I limit my rice intake to a quarter-bowl of rice for dinner."

Sleep is crucial. "Sleeping for less than six hours a day for a prolonged period is linked with higher risk of death and heart attack," says Prof Lee. Obstructive sleep apnoea, a common sleep disorder, occurs in one in three Singapore residents, and is frequently associated with heart attack, stroke and heart failure, he adds.

Mental health plays a role too. "Intense emotional stress or bereavement can lead to heart attack, but it is uncommon," Prof Lee says.

As to the effectiveness of supplements such as Omega-3, CoQ10 and magnesium, he says: "To the best of my knowledge, the supplements you mentioned do not have strong scientific evidence proving benefits for heart health. I have never taken them myself and do not recommend them to my patients."

But he doesn't stop patients who prefer to take such supplements "as there is no strong evidence that they cause harm either."

10 IS 60 TOO LATE TO START CARING ABOUT YOUR HEART?

Prof Lee says anyone over the age of 40 should consider annual or biennial heart screening.

For healthy individuals, a simple blood test, blood pressure measurement, and electrocardiogram (ECG) may be sufficient, he says.

The blood test would include a full blood count and check on levels of cholesterol and triglyceride, high-sensitivity C reactive protein, blood sugar and kidney function.

An ECG checks your heart rate and heart rhythm, and can detect signs of a previous heart attack.

Prof Low says it's a good idea to have a home blood pressure machine to monitor your readings regularly.

If you are on medication, it can help you check that your blood pressure is well controlled. If you have not been diagnosed with high blood pressure, screen yourself every six to 12 months, especially from age 40 as risk increases with age.

Prof Lee says that those with risk factors for heart attacks, such as diabetes, high cholesterol or high blood pressure, may need more advanced investigations.

A treadmill test typically picks up severe heart artery blockage, and CT coronary artery angiograms are increasingly used for blood blockage screening as they can pick up mild or moderate blockages. "Sometimes the findings could influence if cholesterol-lowering medication is required."

Statins lower blood cholesterol levels by blocking the enzyme involved in cholesterol production in the liver.

Prof Low says that if your cholesterol levels are low, that means you are likely to have good heart health, but cautions: "Cholesterol is not the only contributing risk factor to heart health. There is also high blood pressure, diabetes, lack of exercise, smoking, obesity and so on."

So is it too late for someone in their 60s to start worrying about heart health?

Definitely not, says Prof Lee, and urges that one start with annual health screenings.

"Most risk factors for heart disease can be detected through simple blood tests or scans," he says. "Identifying and managing these risk factors can help keep your heart healthy for the next 20 to 30 years."

The last time I had an ECG was more than two years ago. Given how much I love deep-fried food, this will have to be the year I get my heart properly checked then.

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10 things about your ageing heart and why it can be more worrying for women

Pregnancy and menopause are two vulnerable phases for women, say doctors.

