

MIND
TO THE
BODY

LEA WEE

For years, researchers have noticed a disturbing pattern during the winter holidays in temperate

countries: There would be an increase in the number of deadly heart attacks.

It was initially thought that low temperatures, which constrict blood vessels and restrict blood flow and oxygen to the heart, were largely to blame for the spike.

But recent studies show that other factors related to the holiday season itself, such as overindulgence in food and alcohol, may also play a role.

While doctors in Singapore said they have not observed any spike in heart-related problems and deaths during the holidays, they said this does not mean people should not take care of their hearts, especially those with a history of heart problems.

Two patients told Mind Your Body that festive feasting could have triggered their heart attacks earlier this year during the Chinese New Year.

Mechanic supervisor Stanley Siow, 45, had a heart attack on Jan 23, the first day of the Chinese New Year.

He had been gorging on goodies, such as his favourite bak kwa (barbecued pork).

On New Year's Eve, he had gone out drinking with friends after a heavy reunion dinner with his parents and siblings, returning home at only 3am.

The next day, he went visiting as usual, but at about 4pm, while he was climbing a flight of stairs, he had sudden sharp chest pains and began sweating profusely.

A friend took him to hospital, where he had an emergency angioplasty. The procedure enlarges a narrowed blood vessel using a balloon-tipped catheter.

Another patient, who asked to be known as Mr Tan, had a heart attack on Feb 7. It happened an hour into a football game and after two to three weeks of rich and decadent buffets to celebrate Chinese New Year.

The 57-year-old, who works in research and development in the food and beverage industry and has a history of high blood pressure, felt a tightening in his chest and nausea. He, too, needed angioplasty in hospital.

TOO MUCH MERRY-MAKING

It was a landmark study published in the reputable journal *Circulation* in 2004 that punctured a hole in the notion that low temperatures were the main cause of cardiac-related heart attacks during the winter holidays.

The study examined 53 million American death certificates from 1973 to 2001 and found, on average, about 5 per cent more deaths than expected during the two weeks from Dec 25 to Jan 7.

The spike, which was also seen in non-cardiac cases and, in fact, all natural deaths (excluding, for instance, suicides, accidents and murders), was found across the country, even in balmy areas such as Los Angeles, where the winter weather tends to be mild.

This led researchers to conclude that there could be other reasons, such as poorer staffing levels during the festive season, behind the spike, which has been coined Merry Christmas Coronary or Happy New Year Heart Attack.



Partying may kill you

Festive feasting can take a toll on your body and lead to heart attacks, warn experts

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Another reason could be that ill people put off seeking treatment during the holiday season because they do not want to be party poopers. But that postponement leads to sicker patients, some of whom die when they are finally admitted.

There is also the increased emotional stress of having to deal with friends and relatives and the financial drain of gifts, travelling and entertainment.

Dr Peter Yan, medical director of the Parkway Heart and Vascular Centre, said acute stress can increase the level of hormones called catecholamines, which, in turn, can increase heart rate and blood pressure, stressing the heart.

People also tend to eat too much and drink alcohol in excess during the holidays.

Too much salt increases blood pressure, while too much alcohol can lead to an increase in the level of catecholamines, said Dr Yan.

Excessive alcohol has also been associated with holiday heart syndrome – irregular, fast heartbeats, such as atrial fibrillation, which can be potentially fatal.

The syndrome may be more common during the holiday season because of the wider availability of alcohol at parties and other celebratory events, said Dr Dinesh Nair, a senior consultant cardiologist at Parkway Heart and Vascular Centre.

THE SITUATION IN SINGAPORE

Doctors here said they have not observed any obvious spike in deadly heart attacks during any holidays.

Certain reasons used to explain the spike in the West, such as fewer medical professionals on duty during the festive season, may not apply here.

The absence of an obvious spike here could also be because the total number of fatal heart attacks here is too small for any incremental spike in a particular month to be obvious, said Dr Chin Chee Tang, a consultant at the department of cardiology at the National Heart Centre Singapore.

The National Registry of Diseases Office recorded 7,189 heart attacks or acute myocardial infarctions in 2010 and 1,257 deaths from heart attacks that year.

The study in *Circulation* had found the spike in winter holiday deaths only after analysing about 190,000 death certificates each year over 28 years.

Unlike in the United States, where the winter holidays can last about two weeks, in Singapore, there are multiple festivals, such as Lunar New Year, Hari Raya and Deepavali, for different ethnic groups spread out throughout the year, said Dr Chin.

Each festival lasts only a few days, probably not long enough for any behavioural modifications to impact hospital admissions or even survival rate, he said.

When researchers at the National University Heart Centre Singapore wanted to look at how sociocultural practices affected heart failure admissions, they chose to look at month-long events, such as the Muslim fasting month of Ramadan and the Chinese Hungry Ghost Festival.

The study found the opposite to be true: Fewer Malays and Chinese respectively are admitted to hospital for heart failure. This is possibly because of the greater compliance to dietary and fluid restriction and even medication during the fasting month for Muslims and maybe because the Chinese eat more healthily to avoid the bad luck of landing in hospital during the Hungry Ghost month.

SOME LOSE CONTROL ON HOLIDAY

People's behaviour during such religious occasions would differ somewhat from their behaviour during festive seasons such as Christmas and New Year, where they are likely to be in a more celebratory mood, said doctors here.

Like their counterparts in the West, they may also delay seeking treatment and overindulge in food and alcohol during festive seasons.

Dr Goh Ping Ping, a cardiologist in private practice and a board member of non-profit Singapore Heart Foundation, said it is not uncommon for people, especially the elderly, to put off treatment for as long as possible

during the holiday season. They become more ill as a result.

Patients who are admitted to the hospital before a holiday are impatient to be discharged before they are fully well. This can result in re-admissions with poorer outcomes, she said.

She said it is also common for people's blood pressure, blood glucose and cholesterol levels to spin out of control at such times, especially when travelling.

This is due to dietary changes, disruptions to regular exercise and sleep patterns, participation in adventurous activities and neglect in taking regular medications.

Dr Goh said: "I have seen patients return from holidays with very high blood pressure, complaining of symptoms such as headache and breathlessness and putting themselves at risk of heart attack and stroke."

After their near-death experiences, however, Mr Siow and Mr Tan have no intention of losing control in the upcoming festive season.

Both have embarked on healthy diet and exercise regimens. Mr Siow has lost about 3kg and Mr Tan, 6kg.

As Mr Siow put it: "I have learnt my lesson. I don't want to undergo another surgery again. It was an awful experience."

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Risk factors for heart disease?

Some triggers of heart diseases are well-established: smoking, obesity, high blood pressure and cholesterol levels.

But recent studies, including one in Singapore, have also looked at social and emotional risk factors for coronary heart diseases, said Dr Chin Chee Tang, a consultant at the department of cardiology at the National Heart Centre Singapore.

They include celebrating holidays such as Christmas and New Year and religious festivals such as Ramadan, watching football matches, monitoring the stock market and experiencing traumatic events such as earthquakes.

The jury is still out on how much these events influence heart attacks.

• Religious festivals

A study by the National University Heart Centre Singapore on 8,000 heart failure admissions at all major public hospitals here during Ramadan and the Hungry Ghost Festival from 2008 to 2010 found fewer admissions for heart failure for Malay and Chinese patients respectively during those periods, said Dr Low Ting Ting, a registrar at the centre.

During the Muslim fasting month of Ramadan, weekly admissions of Malays fell by 24 per cent, while weekly admissions of Chinese patients dropped by 9.6 per cent during the Hungry Ghost Festival.

The study also debunked any theory that patients might have waited until the two occasions were over to seek medical help.

Doctors did not observe a "rebound effect" at the end of either occasion, indicating that "whatever they are doing is really keeping them healthy", said Dr Low, the study's main author.

Another study from China also showed that the Hungry Ghost Festival was associated with a decrease in risky behaviour. But a study from Qatar that looked at the impact of Ramadan on heart failure did not find a significant difference in hospitalisation rates.

• Football matches

A study by the Munich University in Germany of the 2006 football World Cup in Germany found that the incidence of heart attacks increased 2.7 times during the 12 hours before and after the matches involving the German team. This sparked a debate on whether preventive measures were needed.

Since then, however, at least seven other studies have refuted this finding.

For instance, a study in the

International Journal Of Epidemiology in 2010 found no evidence of increased rates of hospital admissions among Italians for heart attacks associated with football matches played by the Italian national team in three international competitions held between 2002 and 2006.

• Stock exchange performances

A study published in the European Heart Journal last year found the volatility of financial markets may adversely affect heart health by causing substantial emotional and physical stress among investors.

The authors from China examined the relationship between daily changes in the Shanghai Stock Exchange Composite Index and 22,272 deaths from coronary heart disease between 2006 and 2008 in Shanghai, the financial capital of China.

They found that the number of deaths from heart disease fluctuated with the daily stock changes, suggesting that the latter might have had something to do with the deaths.

Both sharp rises and falls in the index were associated with more deaths from heart disease while little or no change in the index coincided with the fewest deaths.

The authors said their study is the only published study to examine stock performance in relation to heart health. But their findings need to be corroborated by more studies before they can be widely generalised, Dr Chin said.

• Earthquakes

Studies have shown that immediately after earthquakes, the incidence of heart conditions, such as heart attacks, increases.

A recent study by Japanese researchers at Tohoku University found that while the rapid increase in heart attacks was followed by a sharp decline after the tsunami in March 11 last year in Japan, the increase in heart failure cases remained steadily prolonged for more than six weeks after the tsunami struck.

The authors said this could be due to transport disruption following the tsunami. This may have interrupted the delivery of regular medication, which, in turn, may have contributed to the increased incidence of heart failure. There was also a rise in abnormal heart rhythms in patients with implantable cardiac defibrillators.

However, Dr Chin said it was difficult to evaluate the degree to which other factors, such as mental stress or grief, may have contributed to this increase in medical problems observed.

Take care of your heart

People tend to take festive seasons as once-a-year affairs and go overboard with food, thinking it does not matter, said Ms Lauren Ho, a dietitian and nutritionist from the Singapore Heart Foundation.

People should be mindful of what and how much they eat during festivities because many of the food options available are bad for the heart, said Ms Ho. They tend to be high in saturated fat, trans fat, dietary cholesterol, salt and sugar.

People also tend to take a break from their

exercise regimen during the holiday season.

But they should try and work out a little, as stopping and restarting an exercise regimen abruptly may lead to injuries, said Dr Chin Chee Tang, a consultant at the department of cardiology at the National Heart Centre Singapore.

He said: "Exercising helps to burn the extra calories consumed during the festive period."

Here are some tips on staying in shape while merry-making.

Lea Wee

DIETARY TIPS

1 Cut saturated fat

It raises the level of low-density lipoprotein (LDL) cholesterol, commonly called bad cholesterol, a risk factor for heart disease.

Found in: Fatty meat, poultry with skin, such as roast turkey and chicken, processed meat such as ham and bak kwa (barbecued pork, right), coconut milk, palm oil, butter, full cream milk and dairy products.

Tips:

- Trim off fat and skin from poultry.
- Go for fresh, lean meat, poultry without skin and fish.
- Reduce intake of processed meat and food cooked with coconut milk and palm oil.

2 Throw out trans fat

It has been dubbed "cholesterol double whammy", because it raises the level of bad cholesterol, as well as lowers the level of high-density lipoprotein cholesterol, or good cholesterol. It is worse than saturated fat, which raises bad cholesterol but does not affect good cholesterol. It further raises the risk of heart disease.

Found in: Festive goodies, such as cookies, cakes and pastries, of which most contain vegetable shortening to increase their shelf life and to improve their texture. Deep-fried food has trans fat as all types of oil can be converted to trans fat under high and prolonged heat.

Tips:

- Keep to small servings of cookies, cakes and pastries. Look for trans fat-free biscuits and margarine (eat them in moderation).



- Good substitutes for margarine and butter are thin spreads of avocado, 100 per cent peanut butter (no or low salt, if possible) and non-dairy spreads made from olive oil, for instance. They are high in monounsaturated fat, which lowers bad cholesterol levels.

3 Do not overeat

Excess calories can lead to weight gain, which is especially detrimental in people who are already overweight. Obesity is a known risk factor for heart disease. Watch out for food high in refined sugar, which is high in calories but low in nutrients.

Found in: Alcoholic beverages, soft drinks, sweetened drinks, deep-fried food, cakes, cookies, chocolates and ice cream.

Tips:

- To avoid overeating, focus on the quality of food. At a buffet or party, check out the spread and choose three to five dishes that are the most appealing. Take smaller portions of everything as they are likely to be more calorie-laden than the food you are used to. Portion control is the key to preventing overeating.
- Have bigger servings of fruit and vegetables, which tend to be overlooked during festivities.

Aim for two servings of fruit and two servings of vegetables every day. One serving of vegetables is $\frac{3}{4}$ mug of cooked vegetables. A serving of fruit may be a small apple or orange.

- Choose whole grains, such as brown rice and wholemeal bread, over refined grains, such as white flour and white bread. Whole grains have more vitamins, minerals, phytochemicals and fibre than refined grains. A diet rich in whole grains may protect against heart disease.



Overeating will result in excess calories, so focus on the quality of your food.

4 Avoid excess salt

Too much salt can lead to high blood pressure, a risk factor for heart disease.

Found in: Salted nuts and seeds, potato chips, processed meat such as bak kwa, festive dishes such as yusheng and steamboat.

Tips:

- Choose unsalted nuts and seeds.
- Add less salt and sauces to festive dishes or, if you are eating out, take smaller portions.

PHOTOS: ST FILE

EXERCISE TIPS

• If you do not want exercise to take time away from your friends and relatives during the festive season, you can invite them to try fun activities together.

Brisk walk to a dinner venue with your loved ones or friends. Or gather a group of friends and dance

the night away.

- To reap health benefits from the exercise session, it should be at least 10 minutes long.

The good news is these 10-minute sessions can be accumulated throughout the week to achieve 150 minutes of moderate-intensity exercise or 75 minutes of high-intensity exercise.

During moderate-intensity exercise, people can talk but not sing.



GET HELP

It can be difficult to tell if chest discomfort or pain is due to a heart attack or heartburn – an unpleasant burning sensation in a person's upper abdomen – from overeating.

Heartburn is likely to be triggered by the backflow (reflux) of the stomach acid into the food pipe (oesophagus).

If you have severe

chest discomfort or pain lasting more than a few minutes, you may wish to seek emergency help.

Sources: Ms Lauren Ho, a dietitian and nutritionist from the Singapore Heart Foundation; Dr Chin Chee Tang, a consultant at the department of cardiology at the National Heart Centre Singapore and the Health Promotion Board