

# The kidney-heart link

Overlooking the close connection between our kidneys and heart may have dire consequences.

By LIM WEY WEN  
starhealth@thestar.com.my

As human beings have a great aversion to discomfort, our need to be constantly reminded that taking care of our health is a good thing often baffles me. After all, we all know that saying: "All the money and success in the world means nothing if you are not fit enough to enjoy the fruits of your labour".

But human nature is sometimes illogical, and most of the time we do need to be convinced (again and again). That's where annual health awareness campaigns like the World Kidney Day come in.

With kidneys, we have a good case for taking care of them as they perform a variety of vital functions. Their main function – to keep nutrients in, and remove toxins and excess water from the blood – nourishes us, and prevents harmful substances from collecting in our body.

And besides filtering up to 200 litres of blood every day to do that, our kidneys also produce hormones that regulate our blood pressure, keep our bones strong, and stimulate our bone marrow to produce red blood cells.

However, if you are still not con-



Dr Zaki ... The best way to detect kidney disease is to have your blood pressure and urine checked.

vinced, here's another reason the National Kidney Foundation (NKF) wishes to highlight this year: by caring for our kidneys, we can also care for our heart.

Adopting the international theme, "Protect your kidneys, save your heart", the foundation is set to roll out a series of activities on the next two Sundays (March 13 and 20) to spread the message and raise



Exercise will make your heart, kidneys, and waistline happy. – AP

funds in the process.

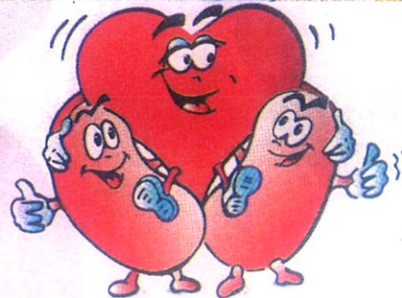
## Bilateral ties

It is an old message that dates back to the days when NKF chairman and consultant nephrologist Datuk Dr Zaki Morad Mohd Zaher was still training doctors in the discipline of nephrology. "We always say that the kidneys are closer to the heart than you think," he says, as he points to a model with a brain, eye, heart, and kidney hanging from it.

"The thing is, whenever you have kidney disease, you are quite likely to get heart disease as well. And the worse the kidney disease, the higher the risk of getting heart disease," he says. "The opposite is also true. If you've got heart disease, it will also affect the kidney."

Theoretically (and simplistically), it is a chain reaction that is linked together by our blood vessels.

As our kidneys gradually lose their ability to function well, they



The heart and the kidneys are closely linked. That is why loving your kidneys means loving your heart too.

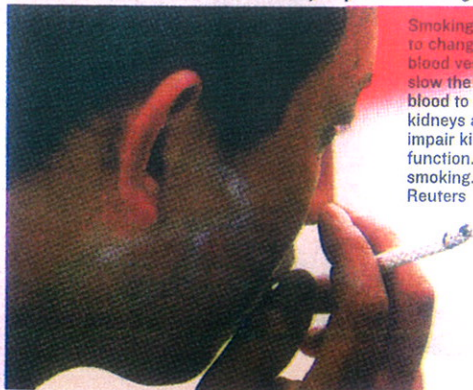
lose their capacity to remove excess water and minerals, like sodium, from our blood. This, in turn, will raise our blood pressure and damage the heart in the long run. Worse still, the increased blood pressure may also cause damage to blood vessels in our kidneys as they struggle to accommodate the added volume of blood they have to filter at any one time.

"It is a vicious cycle, really," says Dr Zaki.

Available statistics, so far, back up both observations. In Malaysia, the

National Renal Registry had registered cardiovascular disease as the leading cause of death (25 to 34%) among dialysis patients in nine out of 10 years (2000 to 2009). This is followed by death at home – possibly secondary to cardiovascular events (22 to 28%), and infections (11 to 22%).

On the other hand, a year 2006 Yale University School of Medicine's review on renal (kidney) impairment in over 80,000 patients with heart failure found a total of 63% of patients had renal impairment, of



Smoking can lead to changes in the blood vessels that slow the flow of blood to the kidneys and impair kidney function. So, stop smoking. – Reuters

TO protect our kidneys, the World Kidney Day website ([www.worldkidneyday.org](http://www.worldkidneyday.org)) lists seven golden rules to live by:

### 1. Keep fit and active

Keeping fit and active will reduce the likelihood of developing risk factors for kidney disease, like high blood pressure, diabetes mellitus, and obesity.

While we don't have to go for intensive gym sessions, exercising for 30 minutes, three to four times a week can go a long way in keeping such lifestyle diseases at bay.

### 2. Keep regular control of your blood sugar level

According to the site, more than half of the people who have diabetes develop kidney damage.

Statistics from the National Renal Registry also show that since the year 2000, diabetes has been the leading cause for primary renal disease (kidney disease that starts in the kidney, not as a result of

## The seven golden rules

another disease).

People who have diabetes or a family history of diabetes, therefore, should keep tabs on their blood sugar and keep it under control.

This will help reduce the damage uncontrolled blood sugar levels can inflict on the kidneys.

### 3. Monitor your blood pressure

As high blood pressure may damage the kidneys if it is not controlled well, it is useful to monitor blood pressure regularly to make sure that it is within normal ranges.

However, if lifestyle measures are not enough to keep our blood pressure within the healthy range, doctors can help us get it under control with medications. For people with existing kidney disease,

drugs that could lower their blood pressure and protect the kidneys at the same time are recommended.

### 4. Eat healthy and keep your weight in check

When the kidneys are already damaged, eating too much salt and protein can put extra stress on them. This is because the kidneys need to excrete the excess sodium (in salt) we take and the protein waste products we produce. It is difficult to determine how much salt we take a day, but we can limit our intake of processed food and refrain from adding salt to our food.

Nephrologists also advise their patients to limit their protein intake to 0.6-0.8g per kg body weight. That means if you weigh 60kg, you are only supposed to

take about 36 to 48g of protein daily.

### 5. Do not smoke

Smoking can lead to changes in the blood vessels that slow the flow of blood to the kidneys. According to the website, when less blood reaches the kidneys, it impairs their ability to function properly. Smoking also increases the risk of kidney cancer by about 50%.

### 6. Do not take over-the-counter pills on a regular basis

There are some drugs and herbs that are documented to be harmful to the kidneys (see *Kidney alert*). However, if our kidneys are relatively healthy, they might not pose significant danger, unless they are used long-term. Some medications, like some painkillers and certain

types of antibiotics, can damage the kidney, says Datuk Dr Zaki Morad Mohd Zaher.

"So, someone who has mild kidney disease has to be very careful when he takes painkillers. For instance, if he must take painkillers that may harm the kidney, he has to take it only for a short duration."

### 7. Check your kidney function if you have one or more of the 'high risk' factors

Most people will start going for annual medical checkups by the time they hit 40, but it is also a good practice to have annual medical checkups once one reaches adulthood, says Dr Zaki.

People who are obese, have diabetes or hypertension, or have a family history of these diseases, are advised to start keeping tabs on their health regularly (with medical checkups and laboratory tests, not just the weighing scale) earlier in their lives.