



A stylized illustration on the left side of the page. It features a red kidney shape with a red tube extending downwards. The kidney is set against a light blue background that resembles a leaf or a drop. Below the kidney, there is a small white pill with a diagonal line. At the bottom of the page, there are several blue monstera leaves with white veins, growing upwards.

Outsmart **Kidney Disease**

*Symptoms are
elusive. Here's what
you need to know*

BY Zoë Meunier

While visiting the doctor about a nose bleed in 2017, Carey Penn, then 44, from Hamilton, New Zealand, mentioned he'd been feeling a bit tired lately, so his doctor ran some tests. Carey wasn't overly concerned – as a fit and active guy, he had put his fatigue down to his busy life as the managing director of an industrial electrical and automation services company and a father to young children.

"Two days later I got a message saying, 'You'd better come in on Monday, because you've got stage 4 renal failure,'" Carey recalls.

Like most of us would, Carey and his wife Gemma explored Google in the meantime to learn more. "Of course, you find all the worst stories online, and I remember sitting there with my wife with tears streaming down both our faces, thinking, '*what did I do to deserve this?*'"

Though many people don't realise they have it, kidney disease doesn't discriminate: it affects men and women of all ages and ethnicities. Last year, it became the tenth-ranked cause of death worldwide, according to the World Health Organization (WHO), rising from 13th place in 2019.

In Australia and New Zealand, one

in ten non-Indigenous people have evidence of chronic kidney disease, with the figure substantially higher in the Indigenous community.

Why is it so prevalent? Because the two most common causes of the disease are hypertension – high

blood pressure – and diabetes, and these have become more widespread, in tandem with the obesity epidemic. Less-common causes include infections and genetic conditions; kidney stones can also raise risk for chronic kidney

disease.

Kidney disease is defined by a couple of parameters, explains Dr Karen Dwyer, clinical director of Kidney Health Australia.

If kidney function drops below 60 per cent and that is present for at



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least three months, it's evidence of kidney dysfunction or chronic kidney disease. Other signs might be losing protein in the urine or blood in the urine.

Most people don't know how important their two kidneys are to overall health. When they're functioning properly, these organs filter waste and excess fluid out of the bloodstream, turning it into urine. But excess sugar in your blood as a result of diabetes damages your kidneys' filters over time.

"When you have diabetes and you get high blood sugar levels, blood vessels become very stiff and thick, so the kidney is not getting as much blood supply and therefore oxygen as it would normally," explains Dr Dwyer.

"And uncontrolled high blood pressure can eventually cause arteries around the kidneys to narrow, weaken or harden, making it difficult for them to deliver enough blood to kidney tissue."

There's also a significant link between chronic kidney disease and heart disease. Of people with chronic kidney disease, "more people will die of cardiovascular disease than actually progress to kidney failure, that's how strong the link is," says Dr Dwyer. "That's why early detection is so important; it's slowing the progression of kidney disease, protecting the heart, and protecting from premature death."



Stage 4 renal failure: Carey Penn

SCREENING

After age 50, the kidneys gradually become less efficient, and after age 60, a moderate loss of function can be normal, as long as there are no other signs of kidney disease.

Because chronic kidney disease is often asymptomatic and you can lose so much kidney function before you do get symptoms, Dr Dwyer says it's really important to be proactive about screening for kidney disease.

"If you can identify that someone has chronic kidney disease, there's data to show that we can slow its progression by up to 50 per cent by putting certain measures in place, which is really significant."

Fortunately, a kidney screening test is simple: it involves a blood test, urine test and blood pressure check. Dr Dwyer advises it for anyone at

risk, which for starters, is anyone over the age of 60.

"But at any age, if you have diabetes or high blood pressure, you definitely need to be screened," she says. Other risk factors include if you're a smoker, overweight, have known heart disease or have had an acute kidney injury in the past.

TREATMENT

Depending on the severity, people may simply need to monitor their condition and look at lifestyle factors, such as diet, physical activity, quitting smoking or limiting salt in the diet. If medications are required, they include ACE inhibitors and ARBs, two classes of blood-pressure-lowering medication that slow down or prevent further kidney damage.

A newer drug class, SGLT2 inhibitors, are prescribed for diabetes and limit the body's absorption of salt, which helps kidney function.

Even with these measures in place, however, kidney function can continue to decline and progress to 'kidney failure'. This is when kidney function is at around ten per cent, dependent on other factors.

"That's usually when we'll start to talk about things like dialysis or

transplantation," Dr Dwyer explains.

When Carey – whose kidney failure was brought about by IgA nephropathy – was first diagnosed, his kidney function was 24 per cent and at his regular check-ups, it continued to plummet.

"At 19 per cent I was still doing 50-kilometre cross country mountain bike events," he says, "then it dropped to 14 per cent in November 2019, then 9 per cent in December. My consultant explained that when your kidney is running at 20 per cent, that 20 per cent is doing 100 per cent of what a normal

kidney does, so it's like running a motor at full revs constantly, which means it's going to fail sooner." By February 2020, Carey's kidney function was at five per cent and he was instructed to start dialysis.

Dialysis does what kidneys should do: remove waste, salt and extra water to prevent them from

building up in the body; keep potassium and sodium at safe levels; and help control blood pressure.

There are two different kinds of dialysis, haemodialysis – in which blood is pumped out of your body to an artificial kidney machine and returned to your body by tubes that connect you to the machine – and



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peritoneal dialysis – in which the inside lining of your own belly acts as a natural filter. For this method, a catheter is surgically placed in your belly, through which a sterile cleansing fluid flows in and out.

For Carey, the choice was simple. “When I saw the size of the needles for haemo, there was no question, I’m was doing peritoneal dialysis!”

It was a bumpy ride for Carey though, who was already feeling very unwell by then. His body reacted against the first fluid used, and he had to have a second operation to insert a new catheter after experiencing something called ‘drain pain’. He then ended up in an emergency ward after fluid leaked from the tube site. But he eventually got into a routine, varying between doing a manual bag exchange and using a ‘cyclor’ machine, which cycles the litres out at night.

“While the cyclor was great because it meant you didn’t do any dialysis during the day, at night time you didn’t get a good sleep because you were hooked up to a machine that was pumping fluid in and out of you,” he says.

For Jenny Skentzos, 55, from Sydney, starting haemodialysis was quite overwhelming. While the outgoing executive assistant had lived with chronic kidney disease for over a decade, her kidney decline had been very slow and had had little impact on her life. Then in October 2019, she



Jenny Skentzos has lived with chronic kidney disease for over a decade

experienced symptoms such as “foggy brain, itchy skin, metallic taste in the mouth, body aches and pains”.

“I was so tired, I couldn’t remember anything and was having trouble stringing sentences together,” she recalls. “After always being really get-up-and-go, I would have to lie on a couch for two days straight. My whole life changed.”

Within two weeks, Jenny started on dialysis and says it was initially “just so much to deal with” that she got the nurses to do everything for her in hospital. But as she became more familiar with it, she received “very military, precise training” to teach her how to dialyse at home, which she has now become adept at. Even so, she admits it’s “a very big commitment”.

“I’m on the machine for five hours – it takes about one-and-a-half hours

to set up, and just under an hour to come off, so you're looking at seven-and-a-half hours minimum, every second to third day," says Jenny. "It's hard, you've just got to fit it into your lifestyle. If I've been invited out for dinner with the girls, I need to think, *Right, when am I going to dialyse?* because there's no way I'm giving up a night out!"

DONOR TRANSPLANT

Carey's life has come full circle after receiving a live donor transplant from his friend Peter in July 2021.

"He came around one night and said, 'I want to donate my kidney'," recalls Carey. "He said, 'I've been through all the stats, there's a 0.03 per cent chance of something going wrong. If something happens to my [remaining] kidney, my sister has offered to donate to me, and my partner and my daughter are on board."

Carey says he was amazed that somebody was willing to do "such a selfless act of going through major surgery and removing an organ from their body and giving it to somebody else. I just feel so lucky that someone would do that for me."

While the surgery also came with

its share of complications, both Peter and Carey have recovered and Carey continues to get stronger by the day.

For those who don't have any opportunities for a live donor, such as Jenny, a deceased donor is the only option.

"I'm on the list for a transplant, so I guess it's just a matter of waiting for one to come up," she says. "The hardest part is the wait. It's soul crushing."

"The average time to be on the waiting list does vary from year to year, depending on all sorts of factors,"

says Dr Dwyer, "but it's somewhere around 3.5 to four years, though it's not uncommon for people to wait seven or more years."

"You hear of some people who are waiting nine years, 13 years," says Jenny, "and you think, *I don't know how I'm going to do this.* But the alternative doesn't bear thinking about."



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REDUCE YOUR RISK

Fortunately, you can take steps to help lower your risk of kidney disease. Aside from controlling high blood pressure, avoiding diabetes and maintaining a healthy weight, see your doctor regularly.

And it's important for anyone, not

just kidney patients, to watch their salt intake. Excess salt raises blood pressure and makes kidneys work harder. Consuming fewer than five grams of salt a day could save 2.5 million lives annually.

Because most salt we consume is in prepackaged foods, WHO member states have agreed to help reduce their population's salt intake by 30 per cent by 2025, and have instituted policies to reduce salt in packaged foods and restaurant meals.

There are two more things of which to be aware. Firstly, ask your doctor if you should avoid NSAID (non-steroidal anti-inflammatory drugs) painkillers. One recent study found that 41 per cent of people with kidney disease took NSAIDs, not realising the damage they could cause.

Secondly, avoid smoking; it damages blood vessels and speeds up the deterioration of the kidneys. People who don't smoke are more likely to preserve kidney function. **R**

PAYING IT FORWARD

Carey Penn found being stuck in one location while doing a manual bag exchange very frustrating so with the help of his friends at Mitchell Race Extreme (MRX), he designed a mobile stand that gave him the freedom to move around at home or work. He went on to manufacture ten of these stands, which he donated to the renal unit at Waikato Hospital on New Zealand's North Island. The stands are loaned to other dialysis patients so they can also enjoy that freedom. "I really just wanted to do it to help people," he explains.

Above: Staff at the Renal Unit at Waikato Hospital. Right: Patients using the mobile stands

