

o'clock at night. On Saturdays, this Brabant native always took his Labrador, Brizo, to dog training.

It was the life Jan, husband to Ria (38) and father to Gert Jan (6), loved. At the end of the day's renovations, he sat down in his leather armchair and snacked on a bowl of peanuts, taking a moment to get his breath back.

He had only been sitting there for a few minutes when he started to feel unwell. The peanuts didn't go down well, thought this handyman, as he began to feel nauseous. He also felt pain in his chest. Ria got worried and called their GP.

When doctor Sikkema arrived

For the first couple of years it was indeed business as usual as Jan returned to his busy life. Everyone was relieved that he had survived the heart attack, and it slowly moved to the back of their minds. However, he did notice that he was getting tired more quickly.

Then in 2004, his mother died after a long illness. Together with Ria, he had cared for her until the end. At that stage, he was working only three days a week; and every evening, he'd check in at the retirement home until his mother's death. Increasingly, his heart was giving him trouble. Jan didn't want to complain, but he felt that his health was constantly getting worse. 'I am so

The minutes dragged by. Something should be happening now, the surgeon thought worried.

shortly afterwards, he concluded that it wasn't the peanuts. Everything pointed to Jan having had a heart attack. The doctor called an ambulance immediately. But Jan was not impressed, thought the whole thing was a storm in a teacup and refused to lay down on the gurney. 'What a fuss,' he grumbled. He was starting to get on Sikkema's nerves: 'Lad, you've had a heart attack. Try to take it a little bit more serious!'

At the hospital, the heart attack was confirmed. Three weeks later, Jan had percutaneous angioplasty, but he still refused to see the importance of it all. Percutaneous angioplasty, so what, he thought.

terribly tired ...' he confided to Ria.

When his symptoms became so serious in 2006 that it pointed to more than just stress, he had himself examined at the hospital. Tests soon confirmed his heart was suffering from dangerous arrhythmia. Medical staff was worried as it meant that Jan's heart could give up at any time. He looked wan: he had lost 10 kilos and his cheekes were hollow. Climbing stairs was an ordeal.

His doctors saw only one option: a heart transplant. It was not something Jan looked forward to. Caring for his mother had physically and emotion-

ally drained him. He was unsure if he still had the energy for this uphill struggle. Ria had to remind him that he wasn't on his own. Only after a long discussion, was she able to persuade him to undergo treatment. After tests at the Erasmus Medical Centre in Rotterdam, which would determine whether Jan should be put on the transplant waiting list, he was considered eligible in December.

Thursday 14 June 2007. The telephone rang. Jan looked at the alarm clock: it was a quarter to seven. Cardiologist Dr. Kadir Caliskan from Erasmus MC said: 'We've got a heart.' And that meant: action! The Sauv  family threw on their clothes, gobbled down some breakfast and fifteen minutes later sped away in a taxi to Rotterdam.

An hour and a half later Jan underwent several tests in preparation for the operation. In the meantime, one of the cardiac surgeons had personally gone to collect the heart (the donor's identity is not revealed to the recipient, and the donor's family do not know who the recipient is in the Netherlands). 'Before they decide to operate, doctors always want to assess the heart themselves,' says Dr. Lex Maat, the surgical team coordinator. 'We determine whether it looks healthy, whether it compresses well and whether we can see or feel any anomalies.'

Jan's donor heart seemed fine and the doctor rushed back to Erasmus MC. There was no time to waste as the heart should preferably be implanted within four hours from the



Jan surrounded by machines during his stay at Erasmus MC.

time that it is removed from the donor. The longer the donor heart is deprived from oxygen-rich blood, the greater the chance of damage to the heart muscle cells, which would make the donor heart unable to pump.

Around midday, Jan was taken into theatre and anaesthetized. An hour later, thoracic surgeon Dr. Charles Kik began the operation (a thoracic surgeon operates on heart and lungs). He opened Jan's chest and removed his sick heart, leaving the patient with a gaping red hole in the middle of his chest. His aorta was tied off so that no more blood could flow to the heart while the cardiopulmonary bypass kept his blood circulating. The minutes ticked by. All was calm in the room.

Then the doors swung open. The doctor who had collected the donor heart arrived with the organ. The team got to work quickly. 'I'm now going to implant the donor heart,' said Dr. Kik, after which he started to attach the new organ to the left atrium. After about an hour, the surgeon attached the pulmonary artery and the aorta to the donor heart. Now, for the critical

part. Would the heart start beating when the clip was removed from the aorta and filled with blood?

Since 1985, the team at Erasmus MC has carried out about six hundred heart transplants. The transplanted heart failed in less than 1 per cent of all cases.

Nervously, the surgeons waited for the heart to start beating. Normally a donor heart will start beating on its own accord when its temperature is raised and oxygen rich blood flows through it. However, even the surgeons still consider it a miracle when a heart does actually start beating.

The minutes dragged by. Something should be happening now, Dr. Kik thought worried. But the heart lay still. Jan's new heart refused to beat ...

Doctor Lex Maat got a call that he was needed urgently. He'd have to get the patient connected to a new type of cardiopulmonary bypass, the Levitronix, which takes over blood circulation as long as the heart is unable to. This new bypass allows the patient to stay connected for a much longer than with a standard bypass. It removes much of the risk of coagulation due to blood clots getting stuck in the machine.

Meanwhile, the surgeons were still hoping for the heart to start beating as it was a complete mystery to them why it refused to function.

After two hours, Dr. Maat had inserted two supporting bypasses. The bypass which supports the left atrium receives blood via an artery which enters the left atrium and then pumps it

to the aorta. The bypass which supports the right atrium removes blood from the right atrium and pumps it into the pulmonary artery. After inserting these, Maat closed the chest to prevent bleeding and infection.

Jan's condition was fairly stable while attached to this bypass, but it was still only a temporary solution. At about six o'clock Dr. Caliskan told Ria what had happened. 'Your husband needs a new heart if the donor heart still doesn't work in the next 24 hours.' Ria held her son tightly. Two hours later, Dr. Kik visited them. 'Neither side of the heart is working correctly,' he explained. 'We have installed two supporting bypasses to control the blood supply to the body.' If Jan shows improvement within 24 to 48 hours, the bypasses can be removed, he tried to reassure them. Until this time, Jan would have to remain anaesthetized.

'May we see my husband?' Ria asked. Dr. Kik nodded.

Jan looked dreadful. Ria and Gert Jan were shocked. Lying between tubes and all kinds of machines was a severely swollen man. Due to the operation, Jan's body had retained a lot of fluids making him some 20 kilos heavier. To reach him, his wife and son had to crawl underneath the large computer that monitored all the equipment. Ria held his hand even though her husband was unconscious, hovering between life and death.

Over the following days, Ria and Gert Jan were handed more bad news. Jan

Jan with his wife Ria and son Gert Jan can once again lead a normal life thanks to his second donor heart.



PHOTO: KEES TABAK

had to undergo an urgent operation due to a haemorrhage. The heart still wasn't working properly. On top of that, his kidneys were failing. This once strong man was wasting away in front of their eyes.

Jan was placed on the priority list for a new heart. 'If our patient wasn't connected to this new bypass, he would have been dead a long time ago,' doctor Lex Maat noted with concern. The machine gave the thoracic team valuable extra time in this race against the clock.

The doctors were at a crossroads. Should we carry on or should we stop?

Soon Jan was on top of Eurotransplant's donor list. Eurotransplant is an organization which determines who receives available donor organs in a number of European countries (including The Netherlands). However, Jan's condition was deteriorating quickly. Too quickly.

It was now a week since the first operation and the doctors were at a crossroads. Should we carry on or should we stop? There was a significant chance that Eurotransplant would remove Jan from the list because of his poor condition. This assessment was to be made based on blood samples which were sent by Erasmus MC. However, they arrived rather late, which literally saved Jan. A new heart became available just before Eurotransplant was able to analyze the medical data.

It was late evening and Ria was heading back to the nurses' residence where she and her son slept. Ria's phone rang. 'Mum! Hurry, pick up! Maybe it's good news!' Gert Jan yelled. Resigned, Ria answered the phone as she didn't think so. However, the elated voice of a doctor said, 'We have a heart!'

Dr. Maat, asleep in bed, was paged to come to the hospital as soon as possible. His colleague was already underway to fetch the new donor heart as Maat hurried to Erasmus MC. At

the same time, Jan was taken to the theatre where the thoracic team once again opened his chest. The clips were put in place, the arteries opened again. For the second time in a week, the surgeon lifted Jan's heart out of his chest.

The new heart arrived on ice and Dr. Maat got to work. Fortunately, the old heart had not yet fused with the surrounding tissue which could have made Maat's work more complicated. If this second donor heart didn't work either, the surgeon realised, he'd have to send the family his condolences. The prospects for any future transplants would then be very slim.

After the new donor heart was placed, Dr. Maat removed the clips and Jan's third heart filled with blood. The new heart started beating fairly quickly. The bypass was turned off.

The tension mounted. But the heart continued to pump without support.

A day later, Jan woke up.

'So, how did it go?' he asked, referring to the first operation.

'Sweetheart,' Ria answered. 'You've been asleep for nine days.'

Jan looked at her in disbelief.

'The first operation didn't work, you suffered a haemorrhage and the heart didn't start beating.'

'What?' replied Jan. 'But how can I be awake now?'

Ria replied 'You received a second donor heart. You're fine! Isn't it wonderful?' Jan shook his head in disbelief.

Jan had not only taken an emotional blow, his body had suffered enormously as well. 'In hindsight, we suspect that there was a stenosis in the coronary artery of the transplant heart,' explains Dr. Maat. 'You can't always see or feel something like that, and it isn't always possible to perform a heart catheterization (examination of the coronary arteries) on a donor heart. Jan Sauv  has experienced something truly unique. I've experienced this once before and things didn't end well on that occasion.'

Dr. Maat knows from experience

that transplant patients are not out of the woods after their operation. People who have undergone transplants need to take special medicines to prevent their body from rejecting the transplant. The immune system treats the donor organ as something alien and will try to get rid of it. By weakening the immune system, the chance of rejection is reduced but the risk of other physical problems increases. 'Infections, kidney problems and high blood pressure are some of the side effects. Unfortunately, there is not much we can do about this,' says Dr. Maat.

All in all, it has taken nearly a year for Jan to return to his old self. But he feels pretty well. 'Since March, I've been working 3 days a week again,' he proudly notes. 'Gosh, look at me. Last year, I could barely even look at a bicycle and now I'm pedalling across bridges with Ria.'

Sometimes, Jan thinks about the times he wondered whether he even wanted a donor heart. 'Now, I've had two. So I've had three hearts in total. No one knows how long I'll live with this one, but I don't dwell on it. I'm alive and that's the most important thing.'



Read more about Jan's operations at www.jansauve.nl

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