



**DR. TIRONE DAVID**

## A legend in the operating room

*In his 40-year career, Dr. Tirone David has performed thousands of surgeries, developed pioneering surgical procedures and saved countless lives. He's one of the most influential cardiac surgeons in the world – and he's not done yet*

**Chris Atchison**

Imagine holding a person's broken heart in your hand, then being forced to improvise an unprecedented technique for its repair. For most cardiac surgeons, this would be a non-starter. For Dr. Tirone David, overcoming seemingly impossible surgical hurdles became his clinical calling card.

"I find the challenge never dies," the renowned cardiac surgeon says from behind the desk of his office at the Peter Munk Cardiac Centre at Toronto General Hospital. "I'm fighting a disease that never dies. I'm trying to resolve a problem."

Over the course of a more than 40-year career, Dr. David, who holds the Melanie Munk Chair in Cardiovascular Surgery, has contributed more to the resolution of deadly heart conditions than almost any other cardiac surgeon in the world. By his own estimate, he has performed open-heart surgeries on more than 15,000 patients, with a success rate of close to 100 per cent. Dr. David has

published more than 350 scientific papers and when pressed, humbly allows that he has developed approximately 16 or 17 life-saving surgical procedures to treat heart disease – some perfected from other surgeon's innovations, but mostly his own.

Of his earliest days in the operating room, the 73-year-old says, "The passion was incredible. I could do an operation much faster than my peers."

Instead of doing two surgeries in a single day, as would be standard for most surgeons, Dr. David was able to perform four or five. In his prime, he says he was able to manage about 500 patient cases per year, or about double his current workload.

"He's had probably the biggest influence in cardiac surgery around the world for the last 30 years," explains Dr. Michael Berger, Director of Cardiac Surgery at the Leipzig Heart Center in Leipzig, Germany. Dr. Berger studied and worked under Dr. David in Toronto at the start of his career, and credits that time with helping to advance his own understanding of complex surgical procedures.

Dr. Berger points to procedures such as the pioneering David Operation – also known as aortic valve-sparing operation – as an example of Dr. David's surgical prowess at work. The procedure was developed to overcome challenges stemming from aortic root aneurysms that are common in younger patients with genetic ailments, such as Marfan syndrome, but without the use of artificial aortic valves.

"Basically, through Dr. David's operation, you can get these people back on a life expectancy comparable to other people their own age without worrying about the long-term consequences of an artificial valve," Dr. Berger says. "He

has directly or indirectly helped tens of thousands of patients around the world with this one operation.”

Indeed, crowning Dr. Tirone David a legend in his field would still understate his achievements. His operating room innovations, teaching and research have advanced the field of cardiac surgery in countless ways – and his work is far from over. He mentions that the next day alone he will see some 28 patients during his clinic hours. His staff is continually fielding requests for his services from around the world, as well as countless calls to speak at conferences and events.

And to think Canada came close to losing this remarkable talent to deeper-pocketed hospitals south of the border.

#### THE RELUCTANT SURGEON

Born in Ribeirão Claro, Brazil, in 1944, Dr. David graduated from Universidade Federal do Paraná in 1968. His father, a Syrian Jew, and his Italian mother moved to Brazil during the Great Depression and would go on to launch a successful construction supply company. His youngest brother would eventually take over the family business, while another brother pursued a law career. The elder David had different plans for young Tirone.

“When my time came, he said I was going to be a doctor,” Dr. David recalls. “I was reluctant, but I was 18, and in those days we had to decide either to go into mathematical sciences, biological sciences or the arts.” Unsure of his path, yet determined to succeed, he would quickly discover a lifelong passion for surgery.

Upon graduating with his MD in Brazil, Dr. David emigrated to the United States to further study medicine. But his socialist political leanings would soon steer his career northward.

Dr. David landed at King’s County Hospital Center in New York, where he mainly treated poor patients whose care was often dictated by the quality of their health insurance (or lack thereof). He came to resent the for-profit system, believing that there must be a better way to provide medical care to the masses. He worked for a time at the renowned Cleveland Clinic – which catered to the wealthiest of the country’s 1 per cent – where he met his wife, Jacqueline. Then he made his way to Toronto in 1975 to train in cardiac and thoracic surgery at Toronto General Hospital.

“I came to Canada as a student and they said, ‘We don’t worry about insurance. A patient comes in and we treat them.’ For a socialist kid in 1975, that was heaven. It was paradise for a doctor.”

As Dr. David’s reputation grew and word of his surgical prowess spread, offers poured in from across the U.S. In 1978, he was earning \$15,000 a year when he was presented with an opportunity to continue at Toronto General Hospital for triple the salary. The young doctor was elated with the pay raise. That was until a contact at the Cleveland Clinic offered him a salary of \$125,000 to move south. Yet another offer came from St. Vincent Mercy Medical Center in Toledo, Ohio, to partner with a top cardiac surgeon for a whopping annual paycheque



Dr. Tirone David (right) formed a strong friendship over the years with Peter Munk (left).

of \$500,000. In 1978, this was a staggering amount of money for any doctor.

Dr. David recalls being so conflicted that he couldn’t sleep at night as he laboured over his next move. He called an old mentor in search of advice.

“He asked me how much I was earning, and I said \$15,000. He said, ‘Are you guys hungry? Can you live on that?’ I said, ‘Of course I can.’ He said that if I moved to Cleveland I’d become a money collector. He said, ‘Do what’s in your heart, do whatever you like, but forget about money.’ So, I stayed here.”

Others were not as impressed by his decision to practise in Canada and forego a life of wealth stateside.

“My father-in-law said to my wife jokingly, ‘You didn’t marry well; your husband is not very smart.’”

#### A CAREER OF CREATIVITY

A defining characteristic of Dr. David’s approach to surgery was – and still is – his willingness to take on cases that seem impossible, all while prioritizing his patients’ quality of life. That focus earned him a reputation as a risk-taker and operating room maverick, but he notes that there was often little choice. “For all the things I developed, the alternative was [the patient’s] death,” he says.

A willingness to try new methods when others failed often put the surgeon in operating room situations where he was literally forced to develop new techniques in real time.

“The first time he did [aortic valve-sparing] surgery, you’re talking about a real technical challenge with nobody to guide you through it,” says Dr. Borger. “At the end, if it didn’t work, there was a reasonable chance you’d have a young, dead patient on the operating table, compared to using the more established and better-known method of just replacing the valve.”

Dr. Borger points out that Dr. David took the risks he did in order to get the best long-term outcome for the patient.

“Not only is he a technical genius, but he was also one of the first people I ever heard talk about what the long-term consequences are of what you do in the operating room, and not just thinking about the short-term consequences to get the patient out of the hospital alive,” he says.

Other Dr. David-developed procedures include the first patch reconstruction of a damaged mitral annulus – a problem common in patients with compromised kidney function – and the use of the first stentless aortic valve

during an aortic valve replacement. According to Dr. Borger, Dr. David also perfected the use of Gore-Tex sutures in mitral valve reconstruction, a technique he says is used by cardiac surgeons virtually every day around the world.

“We’re talking for sure more than 100,000 people worldwide,” he says of the number of patients who have benefited from that innovation alone.

#### PETER MUNK: SUPPORTER AND FRIEND

It takes the right research and academic environment to foster the kind of creativity that Dr. David has continued to display throughout his career. Enter the late entrepreneur Peter Munk and his wife, Melanie, who gave the first of many gifts in 1993 to help establish the Peter Munk Cardiac Centre.

As it turns out, the inspiration for that donation came during an earlier meeting between Dr. David and Mr. Munk. In 1988, the renowned surgeon presented ideas to Mr. Munk to bolster Toronto General Hospital’s cardiac program and solidify its position as a global leader in the field. The idea excited the visionary business magnate, and it was there that the foundation for a transformative philanthropic legacy – not to mention a lifelong friendship – was laid.

“He allowed us to compete academically,” Dr. David says when asked to reflect on Peter Munk’s commitment to advancing cardiac research in Canada.

“He allowed us to develop a collaborative practice model where cardiologists, surgeons and other cardiovascular specialists worked together and developed several academic programs focused on innovation and research. If you look at our contribution to academic medicine, it’s as good as any large U.S. university, if not better.”

The Munk family’s gifts to Toronto General & Western Hospital Foundation – now topping \$177-million – have also helped to keep leading surgeons such as Dr. David (who in 1989 briefly contemplated returning to the U.S.) working in Canada.

“He was one of the reasons I didn’t [move back],” Dr. David recalls.

“Although he was a billionaire and I was a heart surgeon, we had a lot of things in common. He supported me tremendously throughout my career and treated me as a friend over the years. That was a man who came from nothing. He became a billionaire, but never changed. He loved the simple things of life.”

That relationship carries on with the strong friendship that Dr. David and his family maintain with Mrs. Munk. When Mr. Munk passed away last March, the Munk family arranged a private funeral for invited guests only. Dr. David and his wife were two of them.

#### THE SEARCH FOR BALANCE

As any specialist physician in this country can attest, the demand on a clinician’s time is daunting. Dr. David reflects on his tenure at Toronto Western Hospital early in his career. Hospital administrators custom-built a bedroom for him in the building’s atrium where he lived six days a week, so he could tend to patients around the clock. His wife would visit with his three daughters from time to time, and he would return home on Sundays for a partial day off.

He would maintain a similarly exhausting pace throughout his career.

“It was a massive workload. I worked a lot,” says Susan Peters, Dr. David’s long-time clinical administrative assistant, who recently retired from the practice. Ms. Peters was the one tasked with managing Dr. David’s schedule, booking clinics and patient surgeries, as well as liaising with patients or visiting physicians from around the globe.

“Sometimes you had to collaborate with no notice, switch cases and know what’s

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Dr. Tirone David on Peter Munk

going to work in the operating room right now. But I think once you learned your craft as an employee, [Dr. David] was really great at letting you run with it. He needed you to [run with it].”

Dr. Borger – who spent countless hours watching and learning from his mentor in the operating room – says the two now enjoy a strong, “father-son” relationship. But it wasn’t always so. Dr. David was demanding of his colleagues and didn’t suffer fools lightly.

“He’s a challenging guy to work for. Somebody who can perform at that level also has expectations that are difficult to live up to,” Dr. Borger says.

“We get along great now, but at the time I was like a teenager. And you’re not always happy with your father’s decisions, or what your father wants you to do, when you’re a teenager.”

A commitment to perfection and innovation meant sacrifice for Dr. David away from the hospital. When asked how he maintained work-life balance throughout his career, Dr. David admits it was an area where he fell short. How, for example, did he manage to spend time with his daughters?

At this, his eyes drop.

“They don’t know me,” he says softly. “Luckily, my wife quit her career and became a full-time mother, so the girls are all good people, good citizens, thanks to my wife.”

He recalls a time when he came home one Sunday morning, and his two-year-old daughter was in the window. He walked in and began speaking with her, and she replied, “My mom told me not to speak to strangers.” She had no idea who he was.

“Hard,” he says, his voice cracking with emotion. “It’s a choice you make. They are three wonderful women, but they don’t know me, which is sad.”

When it’s suggested that his daughters must understand the immense impact of his work, he allows that they admire his dedication, but resent the fact that they grew up mostly without a father. Dr. David now spends at least one afternoon a week with his two young grandsons. The eldest, at three years old, enjoys demonstrating his cycling prowess for his grandpa.

“I don’t know why I did this with such conviction and passion,” says Dr. David. “I don’t know if it’s personality, addiction, because surgery is addictive. If I could do it differently, I’d try to balance it more. And I’m not the only one.”

#### A LEGACY OF COMPASSION

Having devoted his life to the care of others, Dr. David acknowledges that the time will come when he will retire.

“I know one day I’ll begin to fail, but nobody else will know but me. I’ll walk away,” he says.

Such talk begs the question of his legacy. How best to encapsulate the career of one of Canada’s pre-eminent cardiac surgeons, an officer of the Order of Canada and a literal saviour to hundreds of thousands of people? The answer can be found in an anecdote he shares about hiring his new assistant when Ms. Peters retired.

“I interviewed about 20 people. What I tried to impress upon them is that the most important things in a doctor’s office are kindness, sympathy and caring. When the telephone rings, don’t ignore it. The reason I chose my new person is that she came across as very sympathetic,” he says.

“When I see patients, I try to be reassuring. Not to paint a rosy picture, but show the positive side and serve them in the best way I can.”

And with that, Dr. David rises from behind his desk and excuses himself as he sets out to prepare for yet another long day of patient appointments. ■