

David Burgess, left, visits with CRMC electrophysiologist Dr. Mark Wathen a year after his successful catheter ablation surgery.

Some describe it as a trembling that feels like a bag of worms in the chest. Others experience chest tightness and discomfort as their hearts race uncontrollably. Some simply feel weakness and fatigue with no chest sensation, and still others feel nothing at all. Surprisingly, all four situations are possible ways that atrial fibrillation can present itself.

David Burgess of Monterey describes his symptoms this way:

"It was a tightness that just didn't feel right, and it became more pronounced as time went on. Then I'd feel pounding, and I could sense my heartbeat. At times, it felt like it would skip a beat, although, in fact, it was doubling up a beat."

"I don't think about it anymore. It's gone, so I just don't worry about it."

Atrial fibrillation ("AFib" for short) is the single most common heart rhythm problem people experience, affecting around 5 million Americans, although experts say that many cases of AFib are never seen or detected. AFib occurs when the electrical impulses of the heart cells become confused or disrupted.

"Every single heart cell can change function to become a 'pacemaker' cell, firing electrically to lead to the next heartbeat, and with just a little bit of disruption, the heart can develop whole areas of these very rapidly pacing cells," said Dr. Mark Wathen, head of the electrophysiology lab at Cookeville Regional.

Wathen and fellow researchers have uncovered a genetic link that might cause some people to be more prone to the disorder, and lifestyle issues like caffeine consumption, lack of sleep, stress, irritation and anxiety can exacerbate the problem. Researchers have also found high blood pressure, prior heart attacks and leaky heart valves to be causative factors.

Beyond the discomfort, AFib can cause some serious health repercussions. During an episode, the atria, or upper chambers of the heart, begin to quiver and stop pumping blood properly. These periods of low blood flow can allow blood clots to form in the heart's recesses, causing stroke, heart attack, blood clots in the legs, or kidney damage. The diminished blood flow can also eventually lead to congestive heart failure, and patients with AFib have a higher risk of early death.

The first line of therapy for AFib is medication. Patients are typically given a blood thinner to try to prevent clots from forming, as well as medicines to suppress the arrhythmia. For patients who are not helped by medication alone, the treatment of choice is catheter ablation, a procedure Dr. Wathen helped to develop.

"For catheter ablation, we place an electrical catheter into a vessel that leads to the heart. It measures electrical activity, so we can use it to detect the heart cells that are causing the heart rhythm problem," said Dr. Wathen. "Then we use the tip of the catheter to burn or freeze these cells to get rid of the arrhythmia."

The procedure is considered successful when the patient does not experience a single arrhythmia event for one year afterward. If AFib is caught and treated early enough, the procedure's success rate is around 75 percent. Those who need to have the procedure done a second time have a 90 percent success rate. For the 8 percent of people who don't seem to benefit at all from catheter ablation, a pacemaker might be an option for getting rid of AFib symptoms.

Burgess, who endured the symptoms of paroxysmal AFib for nearly 20 years before he sought treatment, underwent catheter ablation a year ago. He says that he has not had a single arrhythmia event since his procedure, and he's enjoying life much more now.

"The AFib was just part of a routine that was more and more undesirable," said Burgess. "Now that it's not even a consideration, I don't think about it anymore. It's gone, so I just don't worry about it."