

**“The staff was great. The nurses were excellent, and my doctor was excellent. I knew I was in good hands.” – Susan Cobb, pacemaker patient**

**Susan Cobb’s dizzy spells** started out as a once a month incident. But over time they grew more frequent, occurring once a week and then daily. There was a flutter in her chest, and she would grab hold of a counter or rail to keep from falling down.

A recent nursing school graduate, Cobb knew better than to dismiss her dizzy spells. She made an appointment with her primary care doctor. When blood tests eliminated a number of conditions, she went to a cardiologist for further evaluation.

Wearing a Holter monitor helped doctors diagnose the problem. The external device continuously recorded her heart activity for 24 hours. By wearing the device over time and during daily activities, physicians can get a better sense of what causes a patient’s dizziness, irregular heart beats and black outs. Turns out, Cobb had an electrical blockage interrupting the rhythm of her heart. At the end of her 24-hour test, she had experienced 16 episodes of dizziness and heart palpitations, some of which she didn’t even feel.

Heart block is rated on a scale of one to three, with one being the least severe and three being the most severe. Most of Cobb’s blockages were second degree. Sometimes her heart contracted normally. But other times, the electrical signals were blocked and her heart skipped a beat. Without treatment, Cobb could be a danger to herself and those around her. She could pass out while driving or experience a permanent heart block, where her heart skips a beat and doesn’t restart at all.

At age 42, Cobb needed a pacemaker. While it’s not unheard of for someone her age, it is uncommon. More than 85 percent of pacemaker implants in the United States are received by people 65 and older.

One of Cobb’s first thoughts was, “What if I ever need an MRI?” In the past, patients with implanted pacemakers couldn’t have MRI procedures because of possible complications, such as interference with the pacemaker’s operation, damage to the system’s components, or pacemaker dislodgement. With a long history of cancer on both sides of her family, this was a real concern.

Cobb was the perfect candidate for a new MRI-safe pacemaker produced by Medtronic. The device is designed to reduce or eliminate several of the hazards related to MRI. For example, traditional pacemakers can misinterpret the MRI’s electrical noise and withhold pacing therapy or deliver unnecessary pacing therapy. This new pacemaker’s technology prevents interference.

Dr. Joseph Manfredi of Arrhythmia Consultants in Anderson said Cobb’s age, the type of heart rhythm disturbance she was experiencing and her likelihood of needing an MRI all factored in the decision to use this device.

“Every patient is different,” Dr. Manfredi said. “Susan is young. Younger patients carry higher likelihood of needing an MRI in the future. Susan also carried a diagnosis of migraine headaches and had never had an MRI.”

Although there are still some restrictions – the device is only safe for



**Susan Cobb (center) with son, Austin, and daughter, Jennifer, following her graduation from nursing school.**

MRIs above the shoulders and below the diaphragm – Medtronic’s MRI-safe device offers an option never before available for the 1.5 million Americans with pacemakers. Between 50 and 75 percent of pacemaker patients will need an MRI during their lifetime, but some 200,000 a year have to forgo the procedure because of the risks.

“It is a nice option to have nowadays. MRIs help with diagnoses such as cancer, stroke, neurovascular diseases and orthopaedic conditions,” Dr. Manfredi said. “Because MRIs pose a hazard, patients with pacemakers will often have a CAT scan instead. For some diseases that’s OK, and for some it’s suboptimal.”

When he implanted Cobb’s pacemaker, she became the first patient in South Carolina with this device. Cobb said there was no other place she’d rather have the surgery. At AnMed Health, she knew she was in good hands. It was the caring staff at AnMed Health that inspired her to go back to school for nursing.

“You’re not a number here,” she said. “They really take care of you.”

Today, Cobb’s dizzy spells are over. She’s no longer afraid to drive or stay home alone with her kids. And, despite popular myths, she can use a microwave.

She still has to take some precautions. Her device needs to be checked once a year in person, and she has to phone in readings twice a year. She’ll need a new battery for the device every seven years.

“The pacemaker is my back-up generator,” Cobb said. “It’s my angel that watches over me and keeps me going.”

## How to know which device is right for you

MRI-safe pacemakers are a major medical advancement, but this device may not be suitable for everyone. Some factors you and your doctor might consider include:

- **Your diagnosis.** Devices are specially-designed to help certain rhythm disturbances. For example, if you’re experiencing rapid heartbeats, your doctor will likely suggest a defibrillator, and there isn’t an MRI-safe defibrillator.
- **Your age and co-morbidities.** An older patient with no complicating health conditions is less likely to need an MRI in the future, and therefore, might not need an MRI-safe device.



**Medtronic’s Revo MRI Pacing System will allow Susan to undergo an MRI if she ever needs one.**