

# Heart attack - not shark attack - almost brings surfer down

New imaging technology helps determine cause, treatment for heart symptoms

any surfers fear sharks. But not Mike Politowicz, 45, a seasoned surfer with 30 years of experience. "Surfing is a form of relaxation," he says.

Relaxation, that is, mixed with a little adrenalin and heart-pounding anticipation of a good ride. But on Aug. 7, 2010, as Politowicz paddled out for a wave on a Florida beach, his heart sensation was something else altogether.

He began feeling sick to his stomach. He tried to paddle through it but soon realized something was terribly wrong.

"It felt like someone was driving a hot spike through the middle of my chest," says Politowicz, of Longwood, Fla. He took the next wave in and trekked a half-mile up the beach to call 911. Physicians at a local hospital confirmed he had a heart attack caused by a blood clot.

Politowicz had been diagnosed with a heart blockage six years earlier by a cardiologist in the Orlando, Fla., area. After having several stents placed, he continued to lead an active lifestyle without issue. Later, he learned that a change in his medication may have caused the new clot.

At a follow-up visit with his cardiologist, Politowicz was told his overall heart health had taken a turn for the worse. But he was skeptical. "I thought they were crazy," he says. "Despite what happened, I felt like I was in the best shape of my life."

He opted for a second opinion and turned to Mayo Clinic cardiologist Brian P. Shapiro, M.D.

#### Cardiac MRI

Instead of relying on traditional diagnostic methods such as a stress test, echocardiogram and heart catheterization, Dr. Shapiro ordered a cardiac MRI (cMRI), a relatively new test designed to provide a more precise view of the heart.

"This technology takes the diagnosis and treatment process to a whole new level," Dr. Shapiro says. "We can clearly see the exact areas in the heart that have issues and quickly define the best therapeutic strategies for each patient."



Thanks to the clarity of the cMRI, physicians can assess the size and function of the heart's chambers, thickness and movement of the walls of the heart, the extent of damage caused by heart attack or heart disease, structural problems in the aorta such as aneurysms or dissections, and the buildup of plaques and blockages in the blood vessels.

An additional benefit of cMRI is helping patients understand their condition and the therapy they need, says Dr. Shapiro. "Showing a patient the images from their cardiac MRI allows them to see what they have only heard about before," he says. "It makes their condition more real."

### Help for heart damage

For Politowicz, it meant confirming the damage to the heart muscle was so severe, it was unlikely to be reversed.

Politowicz says that seeing the images from the cardiac MRI gave him a better understanding of what was happening since he could see the damage — what was pumping and what wasn't. And he admits he was shocked. "I'd never been anxious before, but now I could see it, and I was very worried," he says. "My dad died when I was 5, and I don't want to do that to my son."

Dr. Shapiro also discovered that Politowicz's arteries were again severely blocked and surgery would be needed.

"The imagery helped us see the extent of damage and then make the best decisions for Mr. Politowicz," says Dr. Shapiro.



Big waves are relaxing for Mike Politowicz, despite suffering a heart attack. Thanks to cardiac MRI imaging, the father can now take to the water with a renewed sense of health.

Due in part to the cost of the equipment and training requirements, the use of cMRI is generally limited to large facilities and academic medical centers. Dr. Shapiro says that although the use of cardiac MRI as a diagnostic method is not yet commonplace, he expects it will become a valued tool in the future.

"With this technology, we can evaluate and provide treatment for high-risk patients sooner and hopefully prevent heart attacks," says Dr. Shapiro.

In March 2011, Politowicz successfully underwent surgery to open blocked arteries. Doctors also

implanted a defibrillator due to the severity of his heart attack. Now, he's back riding the waves.

He still doesn't worry about sharks. He says he hits the water with a renewed spirit, an appreciation for his healthier heart and the knowledge that the heart pounding he feels is all about the ride.

"There is not much in life that a good surf can't put in the proper perspective," he says. "Jobs can't surf, bills can't swim, and my problems seem to end at the water's edge."



"This technology takes the diagnosis and treatment process to a whole new level."

- Brian P. Shapiro, M.D.

▼risti Coody had suffered migraine-like headaches for three months, but this time the pain was more intense. She lay down on the living room floor of her Orange City, Fla., home and let her girls play around her. Her husband

approximately 16 hours before it broke," Coody recalls. She started keeping a log of her headaches and realized the episodes had become more frequent, more intense and longer lasting than before. She talked to one of her doctors.

found her there when he came home from work that evening. "This headache was much different than before and lasted

"When I was going over it with him, I realized that I'd had nine severe migraines within 14 days," Coody says. She asked her doctor to order a CT scan "to see if something was going on."

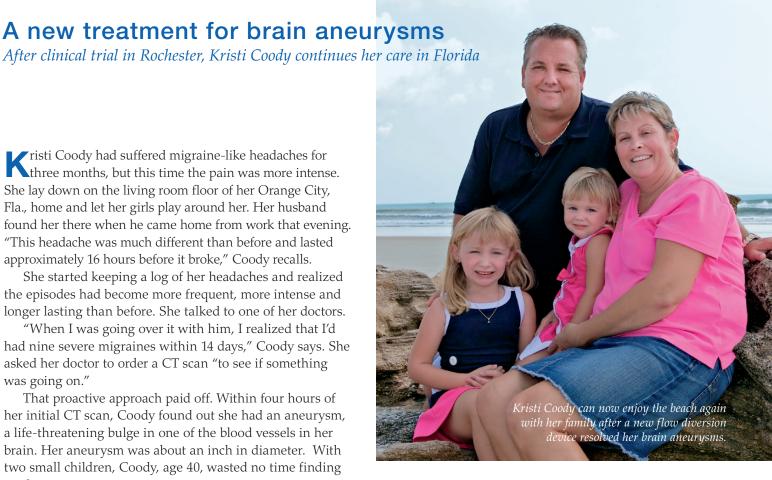
That proactive approach paid off. Within four hours of her initial CT scan, Coody found out she had an aneurysm, a life-threatening bulge in one of the blood vessels in her brain. Her aneurysm was about an inch in diameter. With two small children, Coody, age 40, wasted no time finding a solution.

Coody went online and researched medical centers with expertise in brain aneurysms. Mayo Clinic in Jacksonville, Fla., was at the top of her list and was a two hour drive away. Within a week, Coody met with Mayo Clinic neurosurgeon Ricardo Hanel, M.D., Ph.D., who told her about a new device being tested to divert the flow of blood from an aneurysm and stop the ballooning of blood vessels. The device — known as a flow diverter — was available to patients at Mayo Clinic's campus in Rochester, Minn., as part of a clinical study evaluating the new technology.

"It seemed like the right choice," Coody says.

In January 2011, Coody and her husband traveled to Rochester for the minimally invasive surgery. Dr. Hanel traveled to Rochester, too, to perform the surgery. He worked alongside Rochester colleagues, neurosurgeon Giuseppe Lanzino, M.D., and neuroradiologist David Kallmes, M.D.

"These new flow diverters have a tight mesh that covers about 35 percent of the aneurysm. When placed in the artery, the flow diverter forces the blood to flow around the aneurysm and helps it to dissolve into itself," explains Dr. Hanel.



The new technique reduces the recurrence of aneurysms as compared to other endovascular procedures. Recovery time is shorter, too, because the device is implanted through a vein in the groin, eliminating the need for open surgery. Long-term results are promising. "Six months later, the images are showing the aneurysm is completely gone," says Dr. Hanel.

"I had the procedure on a Monday, was released from the hospital on Tuesday and I flew home on Thursday," says Coody. Four months after the procedure, an image of her artery showed the aneurysm had disappeared. This "definitely met my expectations — that the flow diverter would reduce the aneurysm in three to six months. To learn at four months it was successful — I'm overjoyed," says Coody, who was the 27th patient enrolled in the clinical study and one of the youngest.

The new technique is recommended for people with difficult-to-treat brain aneurysms because of the size, location or previous failed treatments, says Dr. Lanzino. The treatment was approved by the U.S. Food and Drug Administration (FDA) in spring 2011.

"I had the procedure on a Monday, was released from the hospital on Tuesday and I flew home on Thursday." - Kristi Coody

In the course of Coody's treatment, doctors found three smaller aneurysms. "There was only a 1 percent chance that the smaller aneurysms could rupture, but my concern was that if any did rupture, the likelihood of survival is only 40 percent," says Coody.

Coody wasn't willing to take the chance. In June 2011, physicians at Mayo Clinic's campus in Jacksonville inserted two flow diverters and used platinum coils on the third aneurysm, customizing the treatment to each aneurysm. Mayo Clinic in Florida was one of the first facilities in the country to offer the flow diverter procedures after FDA approval.

"We suspect that in December, when my next imaging is scheduled, we will find the same results that we did from the larger one," Coody says. Although she still has headaches, Coody says they are manageable, and she has the support of a team of doctors who continue to care for her and monitor her healing process.

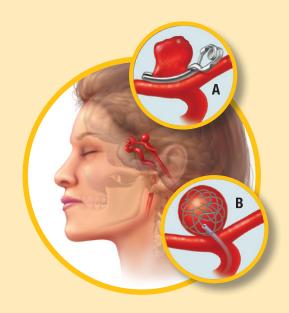
"Mayo Clinic has definitely changed our lives," she says. "When we came here they showed me all my pictures from CT scans and arteriograms and explained things in so much detail."

Dr. Lanzino says it's important for patients to consider all of their treatment options. Flow diverters have been used for five years around the world and studied at Mayo Clinic for two years. "We're still building evidence on long-term results," he says.





Ricardo Hanel, Ph.D., M.D., and Giuseppe Lanzino, M.D., were part of the surgical team who treated Kristi Coody.



### What is a brain aneurysm?

An aneurysm is a bulge on the wall of a blood vessel. It can occur in any part of the body. Ricardo Hanel, M.D., Ph.D., neurosurgeon at Mayo Clinic in Jacksonville, Fla., compares an aneurysm to a blister on a balloon when it's squeezed; the part that turns a lighter color represents an aneurysm.

"Aneurysms can come in any size," explains Dr. Hanel, from a tenth of an inch to as large as 1–2 inches. In the past, people would only find out about a brain aneurysm when a vessel wall broke and an aneurysm ruptured and caused bleeding (brain hemorrhage). "Now, with widespread use of CT scans or MRI to diagnose headaches, sinus infection and head trauma, we often see people seeking treatment to prevent rupture of newly discovered aneurysms," Dr. Hanel says.

If left untreated, a bulge in a blood vessel can leak or rupture, resulting in hemorrhage, which can be fatal.

There are choices for treatment. Options include surgical clipping (A), where a metal clip is placed on the neck of the aneurysm during surgery to stop blood flow to it. Less invasive is coiling (B), where the surgeon inserts a hollow plastic tube (catheter) into an artery, usually in the groin, and threads it through the body to the aneurysm. The wire coils up inside the aneurysm, disrupts the blood flow and causes blood to clot. This clotting seals off the aneurysm from the artery. Flow diverters are a variation on stenting.

"The expertise and the careful selection of the right procedure for each patient are very important factors," says Giuseppe Lanzino, M.D., neurosurgeon at Mayo Clinic's Rochester campus. "The people factor is just as important as the technology factor. The competence and good judgment of a team are very important in offering the best option for each person."

# Couple grateful for longtime care at Mayo Clinic

Karl and Eileen Rauschert of Bushnell, Ill., have been coming to Mayo Clinic in Florida for 23 years. Their experiences have been anything but routine.

A visit in 2009 is a perfect example. Just as Mrs. Rauschert was about to undergo a colonoscopy, her husband, who was along for moral support, experienced a racing heart beat.

"I mentioned it to a person at the front desk," recalls Mr. Rauschert. "About three seconds later, I was in cardiology, and they were taking care of me."

Mrs. Rauschert was kept abreast of what was happening to her husband. "Just before my exam, the nurse told me my husband was being seen by a cardiologist. When I woke up, they told me he was OK, and then wheeled me to him right away."

The Rauscherts say this scary experience shows the

incredible caring atmosphere they've found at Mayo Clinic in Florida. Over the years, they have sought care here for kidney disease, breast cancer, heart ailments and joint problems.

The couple traveled to Jacksonville for their first visit via a 42-foot sailboat, their winter home. They recall it was a bit of a challenge to schedule the initial visit. "I had to call several times just for that first appointment because weather impacts your travel plans so much," Mrs. Rauschert says.

The first visit impressed the Rauscherts. "When I walked in the



The Rauscherts relax with their dog, Tiger, who was named in honor of the Princeton University Tigers. Mr. Rauschert is a Princeton alumnus.

front door, a woman was waiting there for me," recalls Mrs. Rauschert. "It was the same woman that I'd been talking to on the phone about my appointment. She said, 'I just had to meet you because we had so many fun conversations.""

Though the practice and staff have grown tremendously,

the couple still marvels at the convenience of a multidisciplinary practice and the compassion of the staff. "I'll never forget the look on my doctor's face when he told me I had breast cancer," Mrs. Rauschert says. "He's more than my doctor. He's my friend. He was just grief stricken, but because of our relationship, it was easier to hear the news from him."

Looking back on their Mayo Clinic experiences gives the Rauscherts hope for whatever adventure is next. Says Mr. Rauschert, "We know we can rely on Mayo Clinic for anything in the years to come."

#### 25 years of caring

When Mayo Clinic in Florida opened in 1986, there were 30 physicians and 150 staff members working in one four-story building. Since then, Mayo Clinic's services, facilities and staff have grown significantly, always with the goal of providing the highest quality care for patients.

Thank you for letting Mayo Clinic care for you. Your trust in Mayo Clinic inspires us to provide patient-focused, quality care today and everyday — for the next 25 years!

## Mayo Clinic in Florida marks 25 years

2,700+ patients from 30 states and six countries make appointments before opening day, Oct. 13



\$15.5 million John H. and Jennie D. Birdsall Medical Research Building opens

Jacksonville's first liver transplant



- Kidney and pancreas transplant programs open
- John and Lillian Cannaday Building opens

1986 1993 1998 2000



# Mayo orchestrates patient's citizenship ceremony

A momentous occasion occurred recently at Mayo Clinic in Florida when Kongphaly Aphayasane, a bone marrow transplant patient, was awarded U.S. citizenship in her hospital room.

Aphayasane, a native of Laos, had worked diligently to achieve this significant milestone. "I studied a lot for the citizenship, and I am so happy and I feel like I have a new life," said Aphayasane.

She passed the citizenship examination days prior to her hospital stay for a bone marrow transplant to treat non-Hodgkin's lymphoma. Unfortunately, her condition prevented her attendance at her citizenship ceremony. Much to her delight, the ceremony was brought to her hospital room.

John Wade, transplant clinical coordinator, and Stephen Dyar, M.D., worked with the U.S. Citizenship and Immigration Services to orchestrate a touching citizenship ceremony.

# Mayo Clinic in Florida named to list of 'Best Hospitals'

U.S. News & World Report has again named Mayo Clinic's campus in Jacksonville, Fla., to its annual list of "Best Hospitals."

Mayo Clinic is the only hospital in northeast Florida and one of only seven hospitals in the state of Florida to make this year's rankings. Mayo was ranked nationally among the top 50 hospitals in gastroenterology and neurology/ neurosurgery.

"We're pleased that Al B the excellent work of our staff has been acknowledged by this widely recognized honor roll," says Bob Brigham, chief administrative officer of Mayo Clinic in Florida.

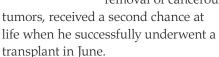
The publication's list of best hospitals for 2010–2011 includes rankings of 152 medical centers nationwide in 16 specialties.

# Update: Al Burne's successful transplant

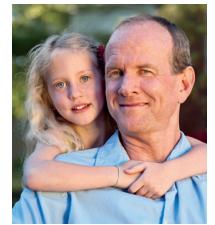
When he was diagnosed with a rare genetic liver and lung disorder — alpha-1-antitrypsin deficiency — in

1987, Al Burne was told that eventually a liver transplant might be necessary. A cancer diagnosis in 2010 complicated his chances for a transplant.

But Burne, who was featured in the summer 2011 issue of *Sharing Mayo Clinic* as one of the first patients to undergo laser ablation for the removal of cancerous



"I never thought I'd see this day. It's been such a miracle in so many ways," says Burne. "I hope to be able to, if not pay it back, then at least pay it forward," he says, by letting others in similar situations know they have options.



Al Burne and his daughter

Mayo Clinic's annual economic impact on Jacksonville and Florida exceeds \$1 billion



- Campus hosts first 26.2 with Donna marathon and provides medical support
- Hospital opens on San Pablo Road campus

2,000th liver transplant



- ◆ Gabriel House of Care opens
- 410+ physicians and scientists with support staff of 4,200 work on campus. 520,000+ patients from all 50 states and 143 countries cared for since 1986

2006 2008 2009 2011

Mayo Clinic works with hundreds of insurance companies and is an in-network provider for millions of people. In most cases, Mayo Clinic doesn't require a physician referral. Some insurers require referrals, or may have additional requirements for certain medical care. All appointments are prioritized on the basis of medical need.

To make an appointment, contact us by phone or online:



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### Connect with others who have been there

Here's a new way to learn about health from the experience and wisdom of others: Mayo Clinic's online health community.

This resource connects patients with each other and with others interested in learning more about Mayo Clinic or a particular health interest. To join, you need an Internet connection and an email address. On Mayo Clinic's online health community, you can:

- Click on the name or photo of community member and send a friend request. Choose many friends or a few who share similar health concerns.
- Maintain your privacy. You can use your real name or chose a different name to maintain privacy.
- Send a private message to a community member or post comments for all to see.

 Peruse discussions on dozens of health topics, adding comments or asking questions.

There is no advertising, and you can easily link to reliable health information from Mayo Clinic experts. In the first two months, more than 6,400 people joined Mayo Clinic's online community.

Here are some comments from members: "I think it is wonderful. Everyone who suffers needs to have access to useful information and help with their issues."

"I think this site is great! Very often it is hard to find others who are experiencing the same health issues."

"I like the fact that I can share my story of illness, and I can also help someone with their illness as well."

Join the community at mayoclinic.org/connect