MAYO CLINIC

News and information for patients and friends of Mayo Clinic

Volume 7 No. 2 | February 2010

CONNECTION

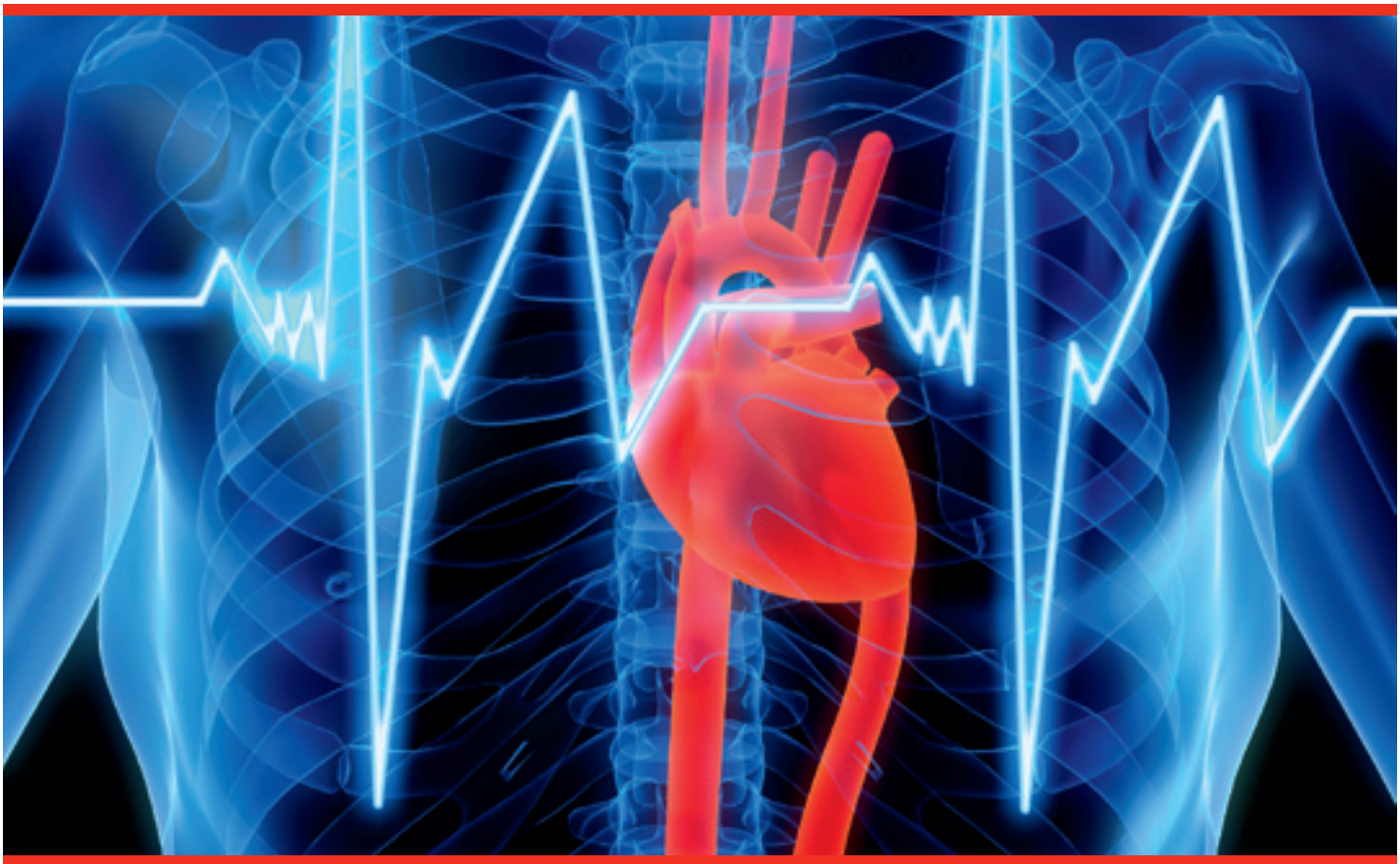
TREATING ATRIAL FIBRILLATION: The most common serious heart rhythm abnormality

Atrial fibrillation (AF) is the most common cardiac arrhythmia seen by physicians. It is marked by a rapid, irregular heart rhythm originating in the small upper chambers of the heart. If not treated effectively, it can lead to stroke, serious bleeding, cardiac arrest and death.

Most individuals with atrial fibrillation have identifiable risk factors, such as high blood pressure or structural heart disease, and tend to be over 60 years of age. Patients can experience symptoms such as heart palpitations, shortness of breath and fatigue.

Treatment focuses on preventing stroke through the use of blood thinners or aspirin and controlling symptoms with medications or invasive procedures.

"Atrial fibrillation has a large impact on a patient's life and on health care costs.



This Issue:

TREATING ATRIAL FIBRILLATION { cont. }

Study investigates the most common serious heart rhythm abnormality


Dr. Douglas Packer

Recent clinical trials have shown the inadequacy of drug therapy to maintain normal heart rhythm and reduce death," said Douglas Packer, M.D., a cardiologist at Mayo Clinic in Rochester, Minnesota and lead researcher of a new study investigating a catheter-based treatment for atrial fibrillation.

The trial, dubbed CABANA, will include 3,000 patients at 140 centers around the world and is designed to determine whether catheter ablation is more effective than drug therapy to treat the condition.

A Landmark Trial

Mayo Clinic received $48 million in grants from the National Heart, Lung and Blood Institute and from industry to conduct this study. The trial will randomize patients over three years, with half undergoing catheter ablation and half receiving rate control or rhythm control drug therapy (used to keep the heart in normal rhythm).

"We believe that CABANA will be a landmark trial that will guide therapy in the atrial fibrillation arena for years to come."

Douglas Packer, M.D.

"While prior trials have investigated the effectiveness of ablation in treating AF, their value in guiding the treatment of patients is limited by the small size of the studies, relatively short follow-up periods, and the exclusion of older patients. CABANA will include these patients and follow them for a longer time period to clearly define optimal therapy. We believe that CABANA will be a landmark trial that will guide therapy in the atrial fibrillation arena for years to come," said Dr. Packer.

The trial will also examine AF recurrence, stroke risk, quality of life and cost-effectiveness. It will be conducted as collaboration between the Heart Rhythm Service and Biomedical Imaging Resource Center at Mayo Clinic, Duke Clinical Research Institute, and CABANA investigators worldwide. //

REDUCING THE RISK OF STROKE

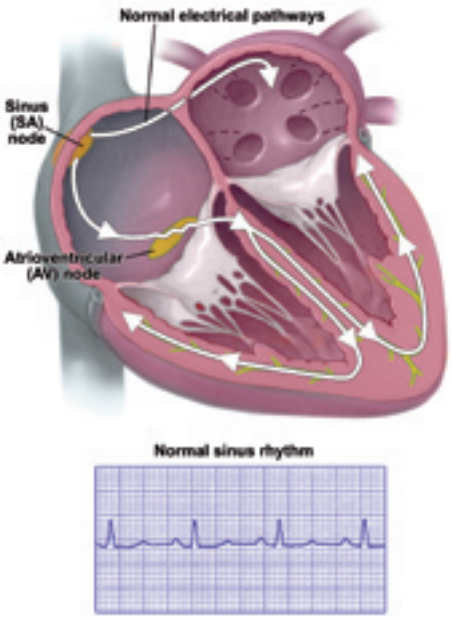
Atrial fibrillation typically does not lead to a heart attack, but it is a significant risk factor for stroke. In fact, AF is the cause of stroke for about 30 percent of new stroke patients seen in hospital emergency departments. People with AF have an increased risk of stroke because during an episode of atrial fibrillation, blood doesn't flow easily, creating an ideal environment for blood clot formation. A stroke can occur if the blood clot travels to an artery supplying the brain.

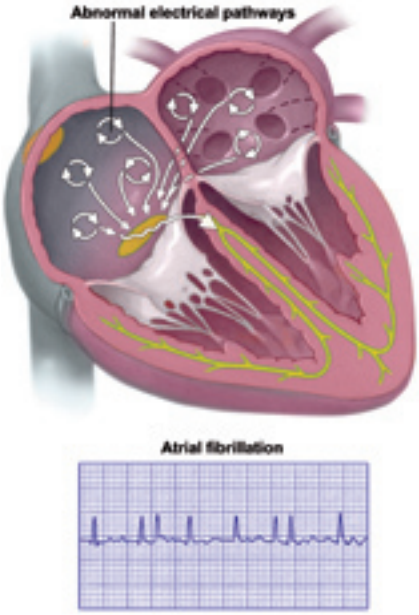
The first goal of treatment for AF is to decrease the risk of stroke and then restore a normal heart rhythm. For some, that risk can be adequately reduced by taking aspirin as an anti-clotting agent and making lifestyle changes. These changes may include reducing caffeine and alcohol intake, losing weight, quitting smoking, and controlling high blood pressure, diabetes or other medical conditions that can lead to atrial fibrillation.

For more information on atrial fibrillation treatment at Mayo Clinic, visit: **www.mayoclinic.org/atrial-fibrillation/**

TREATING ATRIAL FIBRILLATION { cont. }

Study investigates the most common serious heart rhythm abnormality





A HEART ATTACK is the tip of the iceberg

In the formation of an iceberg most of the ice is found under the surface of the water and out of view of the naked eye. Heart disease is similar, in that it often goes undetected because it begins its development under the artery wall in an area called the intima-media. Increased thickening of this area within the artery can eventually precipitate a heart attack or stroke. Advances in ultrasonography now make it possible to measure the intima-media thickness in the carotid arteries of the neck with a safe and non-invasive assessment called carotid intima-media thickness (CIMT) testing.

Mayo Clinic in Arizona is now using this technology to screen apparently healthy people who may be at risk in an initiative called the Heart Health and Performance Program. Using non-invasive, state-of-the-art screenings, this program provides a comprehensive evaluation by a highly trained team of experts. Under the direction of cardiologist Todd Hurst, M.D. at Mayo Clinic in Arizona, health care professionals with training in nutrition and exercise make proactive recommen-- dations to help prevent what has been, for many, the inevitable heart attack. Anyone with a history of heart disease or with high blood pressure or abnormal cholesterol should be evaluated.

A NEW LEASE ON LIFE

Double lung transplant gives woman hope after a long struggle.


Patricia Alejandra Rodriguez pictured with her husband Marcello.

Patricia Alejandra Rodriguez was only 22 years old and a newlywed when she started to have respiratory problems. It was 2003, just one year after she and her husband, Marcello, had moved to Italy from Argentina, their native country. After consultations, doctors told her she had psychosomatic asthma and that her illness was likely related to homesickness.

It was not until 2007 that Alejandra realized she had a serious health condition. While on vacation in Argentina, she started to feel weak and could not get up from bed. A family physician diagnosed a lung problem by simply examining her hands and seeing abnormal-looking nails. A CT scan revealed a serious condition, and doctors in Argentina urged her to get a lung biopsy.

Following the lung biopsy and evaluations in Italy, doctors were still unable to pinpoint what was causing the decreased pulmonary capacity. By December 2007, Alejandra required oxygen therapy, and by March 2008 she needed over two liters of oxygen per minute. Her illness was advancing rapidly.

A fight against time

Alejandra's doctors determined that the only solution was a double lung transplant. In Italy the wait for an organ would be at least four years. Unfortunately, Alejandra could not wait that long.

With the support of her employer in Italy, the young couple pursued the referral from her local doctors to Mayo Clinic in Rochester, Minnesota. "We worked with Mayo's international appointment office, and got a response right away," said Marcello.

Alejandra and Marcello arrived in Rochester in July 2008, and met with pulmonologist Udaya Prakash, M.D. After a series of exams, Mayo physicians diagnosed severe pulmonary fibrosis and also recommended a double lung transplant. Dr. Prakash and the consulting team of physicians concluded that Alejandra needed to stay in Rochester until suitable lungs were found for transplantation. With the help of Sharri Kalgren of Mayo Clinic patient affairs office and an immigration lawyer, the couple secured the special visa required to remain in the U.S. "Sharri 'adopted' us and went the extra mile to help us," said Alejandra.

Pulmonary rehabilitation

During the wait, Alejandra participated in a pulmonary rehabilitation program – essential for patients with chronic respiratory disease. "The Mayo staff motivated Alejandra and provided moral support," said her husband. "Thanks to them, she arrived in great shape for her transplant."

The wait was long, close to nine months. Finally, on the morning of April 23, 2009, Stephen Cassivi, M.D., thoracic surgeon and director of lung transplantation at Mayo Clinic, informed them that donor lungs were available for Alejandra. The double lung transplant took place later that day. The left lung was replaced just after 8:00 p.m. and the right one just before 9:30 p.m. Dr. Cassivi and the surgical team operated on Alejandra for more than seven hours.

"Even after being involved in close to 200 lung transplant procedures during my career, each one remains a very special opportunity to give someone a second chance at life. We were very fortunate to find a donor for Alejandra when we did. She was very sick. It is a testament to both the excellent care she received while waiting for her transplant and her own strength of will that she was able to survive until her transplant opportunity came," said Dr. Cassivi.

After continuing her recovery in Rochester for three months, Alejandra and Marcello returned to Italy. Although Alejandra will always remain a Mayo Clinic patient and her progress will be closely monitored by Mayo Clinic physicians, she will continue her general follow-up care in Italy.

"I will always treasure my experience at Mayo Clinic. Despite my condition, I never lost confidence in their ability to help me," she said. "From the caring physicians and nurses to the interpreters who surprised me with a birthday party, there is a culture of pride and compassion that permeates the institution. No one can do medicine with a human touch like Mayo Clinic." //

LONG LIFE

Open heart surgery at Mayo Clinic ensures long-term connection.

Henry Barbier

Henry Barbier was 30 years old when he was diagnosed with mitral valve insufficiency due to rheumatic fever – a condition he did not recall having. He was put on penicillin and suffered greatly with stomach problems, so much so that he felt he was too young to live his life this way. Instead, Henry traveled to Mayo Clinic in Rochester, Minnesota for a second opinion.

He arrived at Mayo with no appointment some 28 years ago. He came hoping to gain peace of mind and was immediately given four appointments. In the first minute of his first consult, a Mayo Clinic cardiologist, using only a stethoscope, realized that he had been misdiagnosed and ordered further tests to confirm what he suspected to be a defective bicuspid aortic valve.

A genetic condition

Henry was taken off of the penicillin to resolve his ongoing stomach problems, but his new worry came when his physicians counseled that he would need to be monitored for his genetic heart condition. Henry began traveling to Mayo Clinic for an annual medical exam. A few years later during one such visit, he met with cardiac surgeon Hartzell Schaff, M.D., on a Friday. Dr. Schaff advised him that he would need cardiac surgery to replace the valve with the genetic defect and that the open-heart surgery could be performed the following Monday.

As a grain farmer from Saskatchewan, Canada, Henry would have preferred to have had his surgery after the harvest but when Dr. Schaff noted that there was no time to waste, Henry had only one question for his surgeon – how experienced was he? "We do 600 of these surgeries a year and have a 98 percent success rate. If I did 1,000 procedures like yours it is very unlikely I would lose one," replied Dr. Schaff. The surgery to repair his aortic valve was done the following Monday and was a success. So much so that Henry was discharged by Saturday, drove himself back home and was at work on the farm a month later. "I was doing so well that I forgot I had heart surgery," commented Henry.

Given his long-standing relationship with his Mayo Clinic team, Henry has been back every year since his surgery for an annual check-up. At 70 and now living in Medicine Hat, Alberta, he continues to say that because of Mayo Clinic, "I am alive and enjoying life." //

CARDIAC SURGERY AT MAYO CLINIC

Cardiac and thoracic surgeons at all three Mayo Clinic locations specialize in diagnosing and surgically treating disorders of the heart, lung and chest. More than 20 Mayo surgeons perform thousands of operations each year using state-of-the-art technology, including minimally invasive techniques and "off pump bypass" heart procedures. Mayo Clinic offers the full spectrum of cardiothoracic and cardiovascular surgical services. In most cases, it takes only two to three days for patients to be evaluated and surgery (when necessary) to be scheduled.

For more information, go to:
www.mayoclinic.org/cardiac-surgery/

HOMING IN ON RESTLESS LEGS SYNDROME

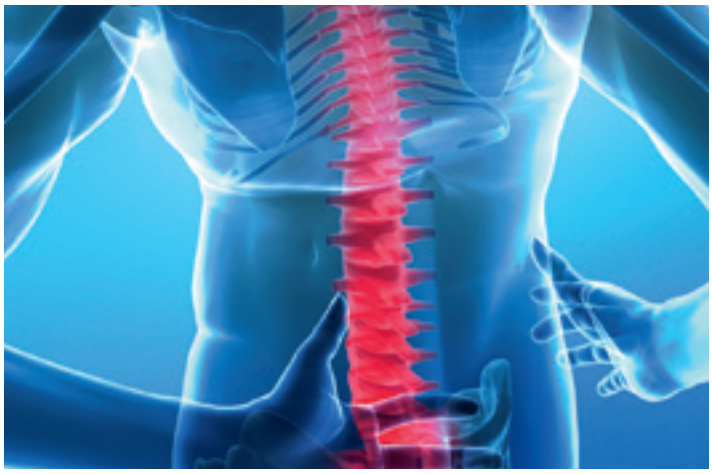

Dr. Vilariño-Güell

JACKSONVILLE, Florida – An international team of researchers led by scientists at Mayo Clinic have found what they believe is the first mutated gene linked to restless legs syndrome, a common neurologic disorder. The researchers doubt that a large proportion of the millions of people who suffer from the syndrome have the mutated MEIS1 gene. They point out, however, that understanding the function of both the normal and abnormal genes will give some insights into this mysterious disorder.

"We think restless legs syndrome may be due to a number of clinical factors, but we also believe that there is a strong genetic component to the disorder," says the study's lead investigator and neuroscientist, Carles Vilariño-Güell, Ph.D. Researchers from Canada, Ireland, and Norway also participated in the study. In total, 378 restless legs syndrome patients and 853 healthy participants were evaluated for the presence of this newly discovered mutation in their DNA. "The presence of the mutation in all affected individuals supports a pathogenic role for the MEIS1 gene, and we now need to confirm this finding with other international research groups who study this syndrome," Dr. Vilariño-Güell says. For more information visit: www.mayoclinic.org/restless-legs-syndrome/. //

"We think restless legs syndrome may be due to a number of clinical factors, but we also believe that there is a strong genetic component to the disorder." Carles Vilariño-Güell, Ph.D.

To read more about recent research findings from Mayo Clinic, go to: **www.mayoclinic.org/news**



VERTEBROPLASTY FOR PATIENTS WITH Osteoporotic Spinal Compression Fractures

ROCHESTER, Minnesota – A new study led by Mayo Clinic researchers has found that relief of pain from vertebral compression fractures, as well as improvement in pain-related dysfunction, were similar in patients treated with vertebroplasty and those treated with simulated vertebroplasty without cement injections.

The simulated vertebroplasty procedure involved bringing the patient to the interventional suite, administering sedation by vein, and administering local anesthesia as is typical for vertebroplasty. Instead of placing the large needle for cement infusion, pressure was applied to the patient's back and verbal clues to suggest infusion of cement were given, to simulate the vertebroplasty procedure.

Researchers from eight medical centers in the United States, the United Kingdom and Australia enrolled a total of 131 patients in the trial. The baseline characteristics of pain and function were similar in the vertebroplasty group containing 68 patients and the simulated procedure group containing 63 patients. Within days of treatment, both groups showed similar improvements in function and pain. "We aren't saying the vertebroplasty doesn't work, because it somehow does," says David Kallmes, M.D., study leader and specialist in radiology and neurosurgery. "But both sets of patients experienced significant improvements in pain and function a month following the procedure, whether they received cement injections or not." For more information on the study visit: www.mayoclinic.org/news2009-rst/5369.html. //

TO YOUR HEALTH: Horror, it's hemorrhoids – self-care tips for common problem

By about age 50, more than half of adults have dealt with hemorrhoids. Hemorrhoids are blood-engorged veins in the lower rectum (anal canal) that form tiny sacs (anal cushions) when too much pressure is exerted on the veins serving the pelvic and rectal areas. Increased pressure can result from straining during bowel movements, sitting on the toilet for an extended time, chronic diarrhea or constipation, obesity, lifting heavy objects, sitting or standing for long periods and pregnancy. Mild pain, swelling and inflammation from hemorrhoids often can be managed with self-care measures. Additionally, a doctor can discuss minimally invasive surgical procedures for consideration. //

SELF-CARE OPTIONS INCLUDE:

- Topical over-the-counter remedies: Nonprescription hemorrhoid creams, suppositories containing hydrocortisone or pads containing a topical numbing agent.
- Cleanliness in anal area: A sitz bath several times a day, where only the hips and buttocks are immersed can provide relief.
- Swelling relief: Ice packs or cold compresses on the anus can relieve swelling.
- Pain relievers: Nonprescription pain relievers such as acetaminophen (Tylenol, others), or ibuprofen (Advil, Motrin IB, others) may provide relief.
- Hydration and fiber: Softening and bulking up stool for easier passage is helpful. Drinking six to eight glasses of water, eating high-fiber foods, and taking fiber supplements such as Metamucil can be helpful.

Staying hydrated along with eating high-fiber foods as part of a balanced diet, help to soften and bulk up stool for easier passage.

MAYO CLINIC PERSPECTIVE ON HEALTH CARE REFORM IN NEW ENGLAND JOURNAL OF MEDICINE

Mayo Clinic's perspective about how to get high-value health care is the focus of a Perspectives article in the *New England Journal of Medicine*, published in October 2009.

In the article, Mayo Clinic recommends basing a portion of Medicare payments to physicians and hospitals on value scores (measurable good outcomes, safety and service delivered at a lower cost), rewarding those providers who deliver high-value care and providing an incentive for others to improve.

The essay emphasizes key points to achieve true patient-centered health care reform including: coordinating patient care services across people, functions, activities, sites, and time; reducing conflict of interest so physicians have less of a personal financial incentive to order unnecessary tests or procedures.

To read the full article, visit: http://healthcarereform.nejm.org/?p=1890&query=home. //

MAYO CLINIC CONNECTION

News and information for patients and friends of Mayo Clinic

Volume 7 No. 2 | February 2010

CONTACT DETAILS

To request an appointment, or for more information, please contact one of our International Appointment Offices listed below, or online at: www.mayoclinic.org/english/appointments.html

Mayo Clinic in Jacksonville, Florida
T. 904.953.7000 F. 904.953.7329 E. intl.mcj@mayo.edu
Office hours: 8 a.m. to 5 p.m. Monday - Friday (Eastern Time)

Mayo Clinic in Rochester, Minnesota
T. 507-284-8884 F. 507-538-7802 E. intl.mcr@mayo.edu
Office hours: 7:30 a.m. to 5 p.m. Monday - Friday (Central Time)

Mayo Clinic in Arizona
T. 480-301-7101 F. 480-301-9310 E. intl.mcs@mayo.edu
Office hours: 8 a.m. to 5 p.m. Monday - Friday (Mountain Time)

In Canada, the following Mayo Clinic telephone information services are available:
Calgary T. 403.242.5320
Thunder Bay T. 807.346.2218
Winnipeg T. 204.942.0659
Mayo Clinic direct: T. 888.441.2133

Medical Editor:
Mark Wilhelm, M.D.

Editorial Team:
Mariana Iglesias
Vicki Chambard Torkelson

MAYO CLINIC AND YOU

To let us know if you would like to continue receiving this newsletter, and to share your Mayo Clinic experience, please e-mail us at: connection@mayo.edu.

CONTINUING A LEGACY OF TEAMWORK

Bach Mai Hospital in Hanoi, Vietnam

Mayo Clinic physicians are passionate about sharing their knowledge, both at home and around the world. Such passion was evident when seven Mayo cardiologists and a cardiovascular surgeon traveled to Vietnam to participate in a cardiovascular symposium held jointly by Mayo Clinic and the Vietnam Heart Institute.

More than 400 physicians attended the two-day symposium at the Bach Mai Hospital in Hanoi, Vietnam. Rakesh Suri, M.D., D.Phil., the cardiovascular surgeon on the trip, performed a surgical case with a young Vietnamese surgeon. “Physicians and support staff at the Bach Mai hospital are eager to maintain currency in a rapidly evolving medical world, and it is an honor to help them in that process,” said Dr. Suri.

The surgery performed was a complex aortic arch aneurysm repair, and the partnership, according to Dr. Suri, will enable this surgeon to embark upon his own aortic aneurysm practice in Hanoi. The Mayo cardiovascular team provided lectures and training to hospital staff, fostering a valuable partnership among medical professionals at opposite ends of the globe. //

MAYO CLINIC

4500 San Pablo Road
Jacksonville, FL 32224

200 First Street SW
Rochester, MN 55905

13400 East Shea Boulevard
Scottsdale, AZ 85259

www.mayoclinic.org

MC0911-19rev0110