MAYO CLINIC

Inside Mayo Clinic

News and information for patients and friends of Mayo Clinic

Winter 2002

In this issue

Patient education update

New glaucoma research

Motion Analysis Lab

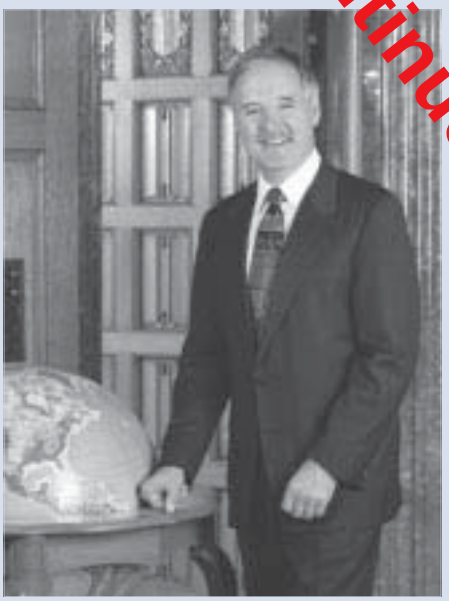
coverstory 3

Marfan Clinic patient Barbara Flasch

Coordinated, comprehensive care for Marfan syndrome

Meeting patient needs through cooperative care

Patients who come to a medical facility expect comprehensive health care: care that covers all aspects of their medical needs. At Mayo Clinic, we specialize in making sure patients receive just that type of care.



For example, in this issue of *Inside Mayo Clinic*, you'll read about our Marfan Clinic. The clinic cares for patients with Marfan syndrome, an uncommon and complicated condition. The disease can affect an individual's heart, eyes, bones and lungs, just to name a few. Patients with Marfan syndrome often need to see multiple specialists and undergo a range of tests and procedures. At Mayo, we bring all the necessary specialists together to work with the patient and treat the condition collaboratively so that care is seamless and comprehensive.

Mayo Clinic's physicians are supported by a talented and diverse group of individuals who further contribute to our outstanding patient care. Nurses, educators, dietitians, technicians, chaplains, administrators, and many more, all help to create Mayo Clinic's unique care environment.

In addition to the teamwork and staff needed to provide comprehensive care, our facilities help to make medical care at Mayo Clinic more integrated and thorough. Featured in this publication is an article about our new area for patients who have breast-health concerns. By locating several specialty services in close proximity, staff now can quickly and easily consult with one another, and patients can receive this integrated care in a single location rather than in multiple locations.

Practicing medicine in an atmosphere of cooperation and collaboration has always been a hallmark of Mayo Clinic. It is in this tradition of teamwork that we are consistently able to offer the highest quality health care and best meet our patients' needs.

Hugh C. Smith, M.D.
Chair, Mayo Clinic
Board of Governors

Inside Mayo Clinic

Inside Mayo Clinic — **Winter 2002**
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Table of contents

Marfan Clinic....3
Patient Education update....6
Glaucoma research....7
Breast-health services....8
Patient confidentiality....10
New treatment for aneurysms....11
Motion Analysis Lab....12
Mayo Clinic news....14
- "Women and Health: A Time for You"
- New Mayo Foundation president
- Mayo nursing receives Magnet award
- New Mayo Clinic hospital pharmacies
- Prostate health information

Mayo Clinic study results....16

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Treating patients with Marfan syndrome
A coordinated approach offers the most comprehensive care

Barbara Flasch first came to Rochester, Minn., in 1995 as a Mayo Clinic patient. Years after that first visit, Barbara is still here. But now she comes in from 8 to 5 every day as a Mayo Clinic employee.

In her role as a Development officer, Barbara frequently hears from grateful Mayo patients to whom she can offer an especially empathetic ear. For most of her life Barbara has been fighting Marfan syndrome, a disorder of the connective tissue in the body, which can affect the skeletal system, blood vessels, heart, lungs, eyes and other organ systems.

Searching for answers

Marfan syndrome is an inherited disease in 75 percent of cases, but because Barbara has no genetic history of the disease, her diagnosis came gradually. Over the years, several components characteristic of Marfan syndrome, such as overly flexible joints and a curved spine, became problems. But it wasn't until the mitral valve in her heart failed that the diagnosis became clear.

Barbara, who was then living in Florida, was advised by local cardiologists to undergo heart surgery in order to repair her faulty mitral valve. She was forced to face a trial most young women don't ever have to think about.

She asked her cardiologist to recommend a medical center that would offer her the highest rate of success for her surgery and was referred to Mayo Clinic. Barbara wanted a surgery that would repair, rather than replace, her mitral valve without leaving a noticeable scar. "Mayo surgeons were confident in their ability to not only repair my valve, but also to perform an incision that would leave minimum scarring," she says. "Mayo Clinic was the answer for me."

Repairing a failing heart

In the winter of 1995, Barbara traveled to Mayo to have her surgery. The mitral valve, located in the heart between the upper and lower cambers on the left side, consists of two flaps or leaflets. These leaflets normally open and shut in coordinated fashion to allow blood to flow

continued on page 4

For Barbara Flasch (front row, middle), a talented team of health-care professionals has been key to the ongoing, successful treatment of her Marfan syndrome. That team includes (back row, left to right) Dr. Amir Khan, Ophthalmology; Dr. Noralane Lindor, Medical Genetics; Cindy Boyum, Preventive Medicine; Dr. Guy Reeder, Cardiovascular Diseases; Dr. Fredric Meyer, Neurologic Surgery; (front row, left to right) Dr. Hartzell Schaff, Cardiovascular Surgery; and Dr. Douglas Nichols, Radiology.

Marfan Clinic continued from page 3

in only one direction – from the upper camber (atrium) to the lower chamber (ventricle). In Barbara's case, her leaflet was no longer functioning as it should.

Hartzell Schaff, M.D., who performed Barbara's surgery, repaired the valve by removing the section that was causing the problem and sewing the leaflet back together. In order to minimize scarring, he made an incision along her side, rather than across her chest. The operation was a success.

Although recovery was not an easy process, Barbara was determined not to give up. Three weeks after having heart surgery, she was slowly making her way around Disney World. Within three months, she was playing softball. While doctors warned her to keep her guard up, Barbara soon resumed her normal active lifestyle: traveling, playing sports, walking and gardening. She felt great.

Overcoming obstacles

However, last summer Barbara experienced another setback. "Something wasn't feeling right," she says. She immediately consulted with her nurse practitioner, Cindy Boyum, followed by an Internal Medicine resident, Fionnuala Gurley, fully experiencing Mayo's team practice. She eventually landed in the office of Bahram Mokri, M.D., a Mayo Clinic neurologist, who diagnosed Barbara with a brain aneurysm.

An aneurysm occurs when the wall of a blood vessel becomes weak or damaged. Over time the constant pressure of blood coursing through a weakened vessel can cause a section of it to slowly enlarge, creating a bulge, or aneurysm. Dr. Mokri referred Barbara to Fredric Meyer, M.D., a Mayo Clinic neurologic surgeon, and radiologist Douglas Nichols, M.D., who determined they could repair the aneurysm through endovascular neurosurgery.

The procedure was performed on September 12, 2001 – a particularly poignant date that year. Barbara lay in her hospital bed watching the news coverage about the terrorist acts against the United States. "All I could think about was how lucky I am," she says. "It really put things into perspective."

Twenty-four hours after the procedure, Barbara was dismissed from St. Marys Hospital. She was out working in her garden that weekend, proving to be a real testimony to modern medicine's technology and the extraordinary talents of her doctors and their teams.

Barbara remembers that after her heart surgery, Dr. Schaff told her that some day she would wake up in the morning and her illness wouldn't be the first thing she thought about. "That day finally arrived," she says triumphantly. "And I knew I was well on my way to recovery."

– Kamala Nair

Treatment of Marfan syndrome at Mayo Clinic

Mayo Clinic's new Marfan Clinic, formed by Heidi Connolly, M.D., the clinic's director and a Mayo Clinic cardiologist, opened Aug. 7, 2002. The Marfan Clinic involves an integrated genetic, medical and surgical team of Mayo Clinic physicians who provide diagnosis and treatment for patients with Marfan syndrome.

The Marfan Clinic allows patients to access a variety of specialty physicians – cardiologists, cardiac and vascular surgeons, geneticists, ophthalmologists, pediatricians and orthopedic surgeons – all within one clinic visit. The Marfan Clinic also offers genetic and reproductive counseling, which is an important part of the management of patients and families with Marfan syndrome. The new clinic provides patients affected by Marfan syndrome with a single point of entry, with coordination of care and access to all areas at Mayo.

While Marfan syndrome is a relatively rare condition, the high level of coordination of care required to treat it uniquely positions Mayo to provide the comprehensive services that these patients need.

"We have been interested in starting a Marfan Clinic for a number of years specifically designed to provide specialized, long-term, multi-disciplinary care for patients with Marfan syndrome," says Dr. Connolly. "If a patient wants an appointment, he or she is offered care in multiple specialty areas during one visit."

Marfan syndrome

What is Marfan syndrome?

Marfan syndrome is a disorder of the connective tissue that affects many organ systems, including the skeleton, lungs, eyes, heart and blood vessels. It is estimated that at least 200,000 people in the United States have Marfan syndrome or a related connective tissue disorder.

What causes this condition?

A single abnormal gene causes Marfan syndrome. Usually, this gene is inherited from a parent who also is affected.

What medical problems are associated with Marfan syndrome?

The main areas affected by the condition are:

The cardiovascular system – Cardiovascular complications can include enlargement of the aorta which may cause tearing (dissection). This can be a potentially fatal condition if not immediately treated. Additional cardiovascular concerns are leaking of the aortic valve (aortic valve regurgitation), and mitral valve prolapse with associated mitral valve regurgitation.

The skeleton – Skeletal problems common in people with Marfan syndrome include curvature of the spine (scoliosis), abnormally shaped chest (pectus deformity), loose jointedness and disproportionate growth usually, but not always, resulting in tall stature.

The eyes – People with Marfan syndrome are often near-sighted (myopic). In addition, about 50 percent experience dislocation of the ocular lens.

How is it diagnosed?

Marfan syndrome may be difficult to diagnose because there is no specific laboratory test for the condition. In addition, characteristics of the disorder vary greatly among individuals. Most affected people do not have all of the possible signs and complications of the syndrome.

In order to diagnose a patient with Marfan syndrome, the following physical examinations must occur:

- Echocardiogram, a sound wave picture of the heart
- Slit-lamp eye examination
- Skeletal examination
- Complete family and genetic history

How is it treated?

Patients with Marfan syndrome should be treated by a physician familiar with the condition and how it affects all body systems. There is no cure for the disorder yet, but careful medical management can result in a near normal lifestyle and life expectancy in most cases.

*for*Information

For more information on Mayo's Marfan Clinic visit the following Web site: http://www.mayoclinic.org/marfan-rst. Or call the *Inside Mayo Clinic* information line at 1-877-372-1610.

Need more information? **Check out Mayo Clinic's patient education resources**

You have been diagnosed with a pheochromocytoma. Or atherosclerosis. Or high blood pressure. Your health-care provider talked with you about the diagnosis, but after you leave the office, you think of questions. You can talk to your health-care provider at your next appointment, but you don't want to wait until then to get further information. What can you do?

Mayo Clinic's Patient Education Center offers visitors publications, videos, classes, computer programs and Internet resources that cover an extensive range of health-care topics.

At Mayo Clinic in Rochester, there are several places you can go to get the information you need. The Patient Education Center, located in the Siebens Building, subway level, is one option.

Patient Education Center

In the center, you will find more than 1,300 books, thousands of pamphlets, medical journals, videos and computer programs. Center staff members are experienced in searching for hard-to-find information and have compiled more than 300 resource files on specific topics. Health-care providers at Mayo have reviewed and approved all of the materials in the center.

If you can't find what you need within the center, you can search the Internet on the center's computers. For patients' convenience, staff members have bookmarked reputable sources of health information.

The Patient Education Center also has video viewing rooms and classrooms. Patient education specialists teach classes to help people better understand their conditions and participate in their care. A variety of classes are offered, including sessions on asthma, breast self-examination and back care.

Education in Gonda

The center also has patient education areas on each floor of Mayo Clinic's new Gonda Building. These areas have computer terminals on which people can search for health information, as well as direct-line phones to the Patient Education Center. If you do not find information you need in the Gonda area, you can call and speak with staff in the Siebens Patient Education Center.

Cancer Education Center

If you are diagnosed with cancer, the Cancer Education Center on the main floor of the Gonda Building also offers a variety of resources, including brochures, books, journals, videos, classes and Internet access. An interactive, educational software series about 24 specific types of cancer provides an innovative approach to learning and understanding your diagnosis. Cancer Education Center staff are available to help you and your family.

Hospital libraries

Patient libraries in Saint Marys Hospital and Rochester Methodist Hospital have medical information including books, pamphlets and health newsletters. The Saint Marys Hospital library receives several medical journals as well. Patients and their families can search the Internet for medical information from computer terminals in the libraries, and staff are available to help search for information.

– Beth Keim de Bera

*for*Information

For more information about patient education at Mayo Clinic, visit the Web site, www.mayoclinic.org/patienteducation/. Or, call the *Inside Mayo Clinic* information line at 1-877-372-1610.

Preventing glaucoma: **Research uncovers a new treatment for patients at high-risk**

Glaucoma is one of the leading causes of vision loss in the United States. More than two million people have the disease, and an estimated 80,000 of them suffer blindness as a result. But, findings of a recent study reveal that early treatment of people at higher risk for developing glaucoma may delay – and possibly prevent – the disease.

The study, sponsored by the National Eye Institute and conducted at 22 sites throughout the country including Mayo Clinic, revealed that eye drops used to treat elevated pressure inside the eye can be effective in delaying the onset of glaucoma. Researchers found that pressure-lowering eye drops reduced by more than 50 percent the development of primary open-angle glaucoma, the most common form of the disease.

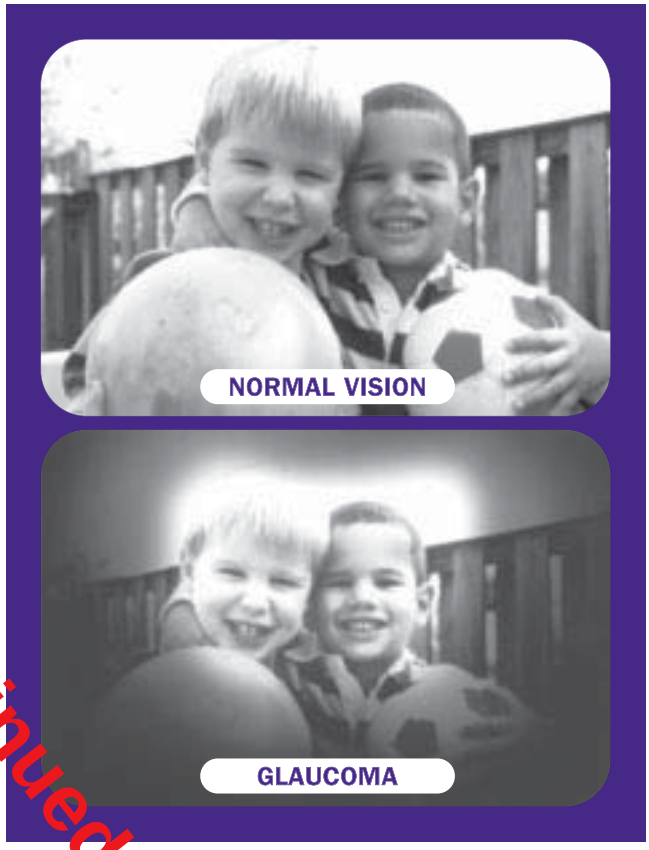
Elevated eye pressure – also known as ocular hypertension – results when the fluid that flows in and out of the eye drains too slowly, gradually increasing pressure inside the eye. Between three and six million people in the U.S. have elevated eye pressure and are at increased risk for developing open-angle glaucoma.

"Before this study, we did not know if treating patients who had elevated eye pressure would help prevent glaucoma," says David Herman, M.D., a Mayo Clinic ophthalmologist and the principal investigator of the study at Mayo Clinic. "Through this study, we now know that, for people at higher risk, we can decrease their likelihood of developing glaucoma by more than 50 percent."

The study – called the Ocular Hypertension Treatment Study – examined 1,636 people who had elevated eye pressure but no signs of glaucoma. Half were assigned daily eye drops, and the other half were assigned to observation (no medication). In the medication group, treatment reduced eye pressure by approximately 20 percent.

"The results of this study are exciting for two reasons," says Dr. Herman. "First, we found that decreasing the pressure inside the eye can delay the onset of glaucoma. Second, we found that the medications were safe in the patients who used them."

Glaucoma occurs when the optic nerve is damaged. In most cases, increased pressure in the eye plays an important role in this damage. The damage to the optic nerve causes loss of peripheral (side) vision. As the disease worsens, the field of vision gradually narrows and blindness can result. However, if detected early, glaucoma can usually be controlled and serious vision loss prevented.



According to Dr. Herman, finding out if you have elevated eye pressure is as simple as a trip to your eye-care professional. "A diagnosis of ocular hypertension is made by measuring the pressure within the eye," he says. "This measurement should be done as part of any routine eye exam for glasses, contact lenses or anything else for which a patient may see an eye-care professional."

– Tracy Reed Will

Integrating services: New facilities benefit patients with breast-health concerns

When Cynthia Affolder first arrived at Mayo Clinic ten years ago with a lump in her breast, she knew she had come to the right place. "I've always admired Mayo's team approach," she says. "I really like that all my concerns are addressed at one time."

Fortunately, Cynthia's lump was not cancerous. She was diagnosed with fibrocystic breasts: a condition where the breast forms masses that are often associated with breast cysts. She continued traveling to Mayo over the years from her home in Suwanee, Georgia, for follow-up examinations.

Offering a wide range of care

Cynthia came back to Mayo Clinic in August 2002 for an examination and was impressed by the new facilities for patients with breast-health concerns, now open on the second floor of the Gonda Building. The Breast Diagnostic Clinic and Breast Imaging and Intervention used to be separated by 10 floors in the Mayo Building. The new facilities, which opened in July 2002, integrate both of these areas into one location.

Cynthia now can receive care from both clinics in a single visit, without having to step on an elevator. The Breast Diagnostic Clinic, headed by Sandhya Pruthi, M.D., provides evaluation and treatment of patients with a variety of breast-related complications or concerns, including:

- New breast lumps
- Breast pain
- Nipple discharge

- Changes in breast skin
- Family history of breast cancer

"We are an integral part of the care team," says Dr. Pruthi. The Breast Diagnostic Clinic also evaluates women at increased risk for breast cancer, provides information on breast cancer risk assessment, and evaluates women with abnormal mammograms.

Breast Imaging and Intervention, headed by Marilyn Morton, D.O., performs screening and diagnostic mammograms, breast ultrasound examinations and image-guided breast biopsy procedures. The radiologists interpret mammograms and perform breast ultrasounds and needle biopsies in order to determine whether an abnormal mammographic finding, breast lump or other clinically suspicious breast condition is cancerous.

Women with a new diagnosis of breast cancer or patients who have a history of breast cancer with new concerns currently are seen in the Breast Cancer Clinic in the Mayo Building. Eventually, this clinic will become part of the Mayo Clinic Cancer Center's services that will move into the Gonda Building.

Encouraging early detection

Because breast cancer is the most common female cancer in this country, Drs. Pruthi and Morton emphasize the importance of annual mammograms for women 40 and older.

"While mammography may not be a perfect screening tool for breast cancer detection, it is the best tool we have available today. Studies have shown that breast cancer mortality – or the number of deaths from breast cancer – is reduced in women who undergo routine mammograms" says Dr. Morton. "Mammograms can find small, early-stage breast cancers before they can be felt, markedly improving the chances for survival. Early detection is key."

Recognizing individual needs

At her visit in August, Cynthia first went to see Dr. Pruthi for a breast evaluation. Next she headed straight to Breast Imaging and Intervention, where an ultrasound determined the lumps in her breasts were non-cancerous cysts. "The thing I like best about Mayo Clinic is the individualized approach," she says, "I know I'm not going to be treated like the patient before me because my needs are different. Mayo recognizes that."

The new facilities of the Breast Diagnostic Clinic and Breast Imaging and Intervention provide more ready access to their services, and continue to enhance Mayo's efficiency and quality of care.

– Kamala Nair

The STAR trial examines breast cancer prevention

As part of its ongoing efforts toward breast cancer prevention, Mayo Clinic has been participating in a nationwide study by the National Cancer Institute called the STAR trial (Study of Tamoxifen and Raloxifen). This study involves the trial of two drugs, tamoxifen and raloxifene, drugs which researchers hope will be key in reducing a woman's risk of developing breast cancer.

Currently, close to 14,000 women throughout the United States and Canada are enrolled in the study. Participants must be 35 and older, post-menopausal and at high risk of developing breast cancer. Women in the study randomly receive one of the two drugs, and researchers test the effects of the drug over time.

Anne Dery, a registered nurse, is a participant in the STAR trial. Anne decided to participate in this study for a variety of reasons. She is at high-risk of developing breast cancer, and after seeing her own mother succumb to the disease, she wants to not only be proactive in her own health, but also to prevent other families from having to go through what hers did.

"I was happy to participate in this study so I can help other people down the line," she says. "My niece is at even higher risk than I am, and I want to do anything I can to help women like her."

Participation in the STAR trial involves taking two tablets per day for five years, follow-up breast exams every six months and yearly mammograms.

*for*Information

For more information about the STAR trial, call the *Inside Mayo Clinic* information line at 1-877-372-1610.

Patient confidentiality at Mayo Clinic: Providing high-quality care while keeping health information private

In a time when the Internet has made it easy to access millions of documents in a moment or two, we've grown accustomed to having virtually all types of information at our fingertips. However, even in our age of technology, there are some items most people prefer to keep confidential, such as personal financial information, medical records and other personal health information.

Protecting your health information

In response to growing concerns about keeping health information private, Congress passed the Health Insurance Portability and Accountability Act of 1996 (HIPAA). The legislation includes a privacy rule that creates national standards to protect individuals' personal health information. Most health-care providers in the country are required to implement these standards by April 14, 2003.

Mayo Clinic has a long-standing, successful practice of protecting patients' privacy and maintaining confidentiality. We already have begun implementing additional methods to further protect patients' medical information in the electronic age and anticipate full compliance with HIPAA requirements. The HIPAA privacy rule will not significantly change the way Mayo Clinic currently protects medical information.

While it is true that many employees involved in a patient's visit – from registration through patient care and billing – have access to medical information, Mayo Clinic limits that access to only the pertinent medical information those employees need to do their jobs. We believe that appropriate access to your medical record by members of your care team at Mayo Clinic enables us to provide you with the most comprehensive care available.

"Compliance with the HIPAA privacy rule is important to continuing our tradition of patient confidentiality."

You will likely see information related to HIPAA at your next visit. Beginning in early 2003, all Mayo Clinic patients will receive a document, called the "Notice of Privacy Practices," that outlines your privacy rights and Mayo Clinic's privacy practices. You will receive the document during your first or second visit to Mayo starting in April 2003. You will be asked to sign a form that acknowledges you have received this information. Once you have received the document and signed the acknowledgement form you will not need to receive another copy – or sign another acknowledgement – unless Mayo makes major changes in its privacy practices.

Continuing a tradition of patient confidentiality

Mayo Clinic takes seriously its responsibility for protecting patients' medical information. Providing you with the "Notice of Privacy Practices" and having you sign the acknowledgment that you received a copy of it are part of Mayo Clinic's efforts to comply with the rules mandated by HIPAA. Mayo is participating in this effort along with the majority of other health-care providers in the United States. Compliance with the HIPAA privacy rule is important to continuing our tradition of patient confidentiality.

– Tracy Reed Will

*for*Information

If you have questions about HIPAA or Mayo Clinic's privacy practices, call the *Inside Mayo Clinic* information line at 1-877-372-1610.

Strengthening weakened blood vessels

Mayo Clinic offers a new procedure to repair aneurysms

Thanks to a new procedure that strengthens weakened blood vessels from within, some patients with potentially deadly abdominal aortic aneurysms may not have to undergo major surgery.

What is an aneurysm?

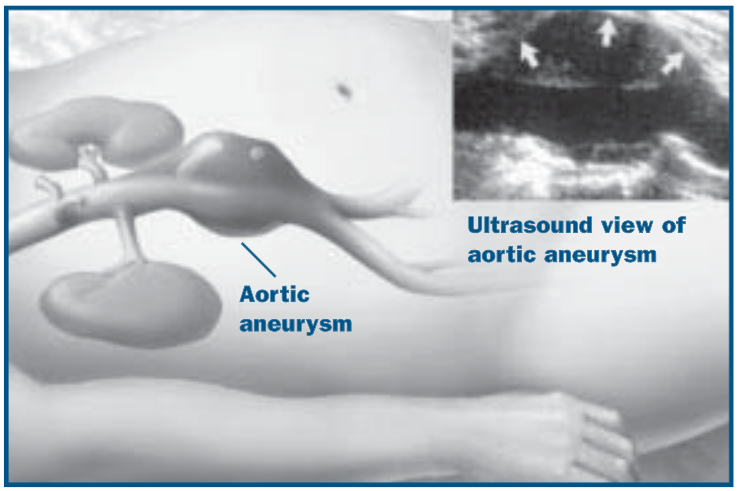
An abdominal aortic aneurysm is a bulge in the aorta (the main blood vessel coming from the heart that supplies blood to all organs) in the abdomen caused by weakening of or damage in the blood vessel wall. Aneurysms may occur in any blood vessel, but they are most common in the abdomen below the renal arteries (vessels that provide blood to your kidneys).

A normal aorta below the renal arteries measures about 2.3 cm in diameter (1 inch) in men and 1.9 cm in diameter (3/4 inch) in women. An aorta is considered to have an aneurysm when it grows more than 50 percent greater than its normal size. Aneurysms are most often found during a routine physical exam or when a doctor examines your heart, gallbladder or kidneys.

How is it treated?

The new procedure to repair aneurysms, called endovascular stent grafting, involves placing a wire-mesh tube with fabric coating inside a diseased vessel. This procedure makes it possible for patients with large aneurysms at risk of rupture to undergo a repair without the degree of physical trauma, extensive hospitalization, and lengthy recovery associated with abdominal surgery.

"Traditional abdominal aortic aneurysm repair requires open abdominal surgery with five to seven days' hospitalization and four to six weeks' recovery," says Peter Gloviczki, M.D., a Mayo Clinic vascular surgeon. "With this new, minimally invasive procedure, we can repair the problem with much less stress on the patient."



Often, an aortic aneurysm may be found incidentally, such as during a routine ultrasound test.

Patients repaired with a stent graft, however, do require regular follow-up because long-term results of this new procedure are not yet well known.

The stent-graft procedure takes approximately two hours and is done in an operating room with the patient under general anesthesia. Through a small incision, a catheter is inserted into an artery in the patient's leg. A stent graft is then guided through the catheter to the section of the aorta where the aneurysm is located.

How common is this condition?

Aneurysms are four times more common in men than women and occur most often after 55 to 60 years of age. Aneurysm rupture affects approximately 15,000 people per year and is the 13th leading cause of death in men in the United States. Almost 50,000 aortic aneurysms are repaired in the U.S. each year. At Mayo Clinic, 90 percent of the abdominal aortic aneurysms operated on last year were repaired with a stent graft.

– Jesse Bradley

Stronger than yesterday

Motion Analysis Lab helps determine the best treatment for patients

"Stronger than yesterday, now it's nothing but my way," nine-year-old Courtney Lange sings with the radio. The hit song's lyrics fit her perfectly.

At six months old, Courtney was diagnosed with cerebral palsy, a brain injury during early development that causes abnormalities in motor control. Because of her condition, she did some things a little slower than her peers, including walking, which she began at about 18 months.

At the age of four, Courtney was referred to William Shaughnessy, M.D., chair, Division of Pediatric Orthopedic Surgery at Mayo Clinic in Rochester. "Courtney could get around, but she did so in an inefficient way, at a considerable cost of energy," says Dr. Shaughnessy. "She was a lot like a car with poor gas mileage."

After his first visit with Courtney, Dr. Shaughnessy was concerned with her spasticity, or abnormal muscle reflexes. She underwent one operation in December 1999, and the spasticity in Courtney's lower extremities decreased; her legs were a little more relaxed and flexible.

However, as Courtney became more mobile, her ability to walk worsened. Dr. Shaughnessy then referred Courtney to Mayo Clinic's Motion Analysis Lab for a gait (walking) analysis.

"Health-care professionals commonly evaluate and treat patients based on visual observation, physical examination, manual muscle testing, and testing done in a stationary position," says Kenton Kaufman, Ph.D., director of the Motion Analysis Lab. "In contrast, we have the capability to evaluate impairments while the patient is moving."

Three types of data are collected during gait analysis: motion (how the patient is moving), the forces at each joint while moving, and the muscle activity while moving.

During gait analysis, the patient walks over force plates with small ball-like markers placed on his or her body. Ten cameras collect kinematic, or joint angle, data from the markers, and the force plates collect kinetics, or force, data. A computer program processes the data and displays a real-time image of the patient walking.

"To get the benefits from a gait analysis, the care team has to go through all the detailed information we've gathered," says Dr. Shaughnessy. "Then we decide

Since her surgeries, Courtney Lange has been able to enjoy swimming, riding bike and playing basketball just as much as her twin brother, Tanner.

Staff at Mayo's Motion Analysis Lab work with Courtney to help guide her treatment and evaluate the effectiveness of her therapies.

what the abnormalities are and what we can do to fix them."

For Courtney, the gait analysis showed that her right side was within normal limits for her age, so she would only need surgery on her left side. In June 2001, Dr. Shaughnessy performed an operation to realign Courtney's femur (thigh bone) and tibia (shin bone) and lengthen her left Achilles tendon (heel chord).

"When Dr. Shaughnessy told us they only needed to do surgery on her left leg, I was a little skeptical. I didn't want Courtney to have to go through another surgery," says Wayne Lange, Courtney's father. "But [based on the gait analysis] they thought that her right leg would come around to a more normal position after the surgery on her left leg, and it did. It was amazing."

After she recovered from the surgery, Courtney went through another gait analysis study that showed dramatic improvement. If you ask Courtney what the Motion Analysis Lab did for her, she'll put it plainly, "It helped me walk better."

Today, Courtney spends her days at the local swimming pool, riding her specialized tri-wheel bicycle, playing basketball with her brother, Tanner, and of course, singing along with the radio: *"Stronger than yesterday."* Yes, she is.

– Elizabeth Grote

A closer look at the way we move

Motion analysis is the study of human movement. Staff at Mayo Clinic's Motion Analysis Laboratory perform tests for patients who have a wide variety of movement difficulties. The information from these tests helps guide treatment planning and allows health-care providers to assess the effectiveness of treatment and therapy.

The following types of studies are performed at the lab:

Gait analysis – A computerized analysis of the motion and forces exerted on various joints when people walk. The test is commonly used for patients with cerebral palsy, polio, stroke, multiple sclerosis or balance problems.

Upper extremity strength testing – Equipment tests the strength of the hand, wrist and elbow in patients with tendon ruptures or other work-related injuries.

Lower extremity strength testing – Several machines are used to test the strength of the ankle, knee and hip. This information is used for post-polio patients to determine the progression of the disease. It is also used to evaluate the effectiveness of new drug therapies for patients with Lou Gehrig's disease.

Foot pressure analysis – A special sensor placed within a shoe measures the pressure on the sole of the foot. This analysis is used for patients with diabetes to fit orthopedic insoles that alleviate excess pressure which can cause ulcers.

Electromyography – This equipment collects data about muscle activity while walking. The information determines if a muscle is working at the right time and at the right level and is used to prescribe care for patients with cerebral palsy and stroke.

Running-shoe evaluation – Specialized equipment measures the properties of running shoes and can determine the amount of shock absorption and energy return. The results can be used to aid in the selection of running shoes.

Tremor measurement – This test measures tremor in patients with multiple sclerosis. It is used to determine who will benefit from surgery and to evaluate the effectiveness of surgery.

Balance testing – Dynamic balance is assessed using a 13 link biomedical model of a person moving in three-dimensional space.

Orthosis evalution – Data is obtained to quantify the effectiveness of various bracing systems.

"Women and Health: A Time for You" – April 12, 2003

On Saturday, April 12, 2003, the Mayo Clinic Office of Women's Health will sponsor "Women and Health: A Time for You." The one-day conference will offer women the opportunity meet and learn from Mayo Clinic and community experts in disease prevention and self care. Topics will include hormone replacement therapy; treatment for varicose veins; sleep disorders in mid-life; physical fitness; fibromyalgia; holistic cooking; stress management; and healthy skin.

For more information about "A Time for You," or if you would like to register for the conference, call the Office of Women's Health at 507-255-2287.

Photograph of the bronze sculpture, © Renaissance Woman (Celebration of Life) is used with permission of Charles Eugene Gagnon, sculptor, Rochester, Minn.

Filling your dismissal medication prescriptions at Mayo

Mayo Clinic Pharmacy now offers a convenient way for patients at Rochester Methodist Hospital and Saint Marys Hospital to fill dismissal medication prescriptions before they even leave the hospital.

Patients who choose to have prescriptions filled at Mayo Clinic Pharmacy have two options. A nurse can deliver the prescriptions to the pharmacy, or patients can take the prescriptions to the pharmacy as they leave the hospital. When the medications are ready, a pharmacist will provide additional instructions, answer questions, and check the prescriptions against the patient's complete drug profile.

When picking up medications, patients should be prepared to present their prescription drug-benefit card and to pay the co-insurance. Mayo Clinic Pharmacy accepts a wide variety of prescription drug plans. Patients can pay using cash, check or credit card.

Following are the pharmacy hours and locations:

Mayo Clinic Pharmacy – Mary Brigh (Saint Marys Hospital)
Mary Brigh Building, main floor, lobby, next to the cashier's desk

Monday – Friday	7 a.m. to 9 p.m.
Saturday and Sunday	7 a.m. to 6 p.m.

Mayo Clinic Pharmacy – Eisenberg (Rochester Methodist Hospital)
Eisenberg Building, lobby level, east end of the main lobby

Monday – Friday	7 a.m. to 9 p.m.
Saturday and Sunday	7 a.m. to 3:30 p.m.

Nursing at Mayo Clinic receives prestigious Magnet award

Nursing at Mayo Clinic in Rochester, Minn., was recently awarded Magnet status redesignation for excellence in nursing services. Magnet status is the highest level of national and international recognition awarded to organized nursing services. Mayo Clinic is the only health-care organization in Minnesota to receive this renowned nursing award.

The American Nurses Credentialing Center administers the award program. Recognition indicates excellence in delivery of nursing services to patients; existence of an environment that supports professional nursing practice; and growth and development of nursing staff.

Nursing at Mayo Clinic first received Magnet status in 1997, and redesignation signifies that Mayo Clinic continues to maintain excellence in nursing services.

Dr. Denis Cortese becomes president and CEO of Mayo Foundation in February 2003.

New president named for Mayo Foundation

Denis Cortese, M.D., has been named to succeed Michael Wood, M.D., as president and CEO of Mayo Foundation beginning in February 2003.

Dr. Cortese has been a consultant in Internal Medicine and Pulmonary Diseases at Mayo Clinic for 26 years. He is a member of the Mayo Foundation Board of Trustees and the Foundation Executive Committee. He served on Mayo Clinic's Board of Governors in Rochester and was chair of the Clinical Practice Committee in Rochester for three years. In 1999, Dr. Cortese was named chair of the Board of Governors at Mayo Clinic in Jacksonville, Fla., and of the Board of Directors at St. Luke's Hospital in Jacksonville. Dr. Cortese has conducted National Institute of Health-sponsored research and served as a member of the Mayo Foundation Research Committee. He is a professor of medicine at Mayo Medical School and has twice been voted teacher of the year in the Department of Internal Medicine. He also served as director of Mayo's Pulmonary Disease fellowship program.

"The role of the president and CEO is a vital one in this institution," says Bert Getz, chair of the Board of Trustees and leader of the search committee. "It serves to unite Mayo Clinic – in all its locations and activities – in a shared vision and strategic direction. This unity will continue to be critical to the future success and ongoing excellence of Mayo Clinic."

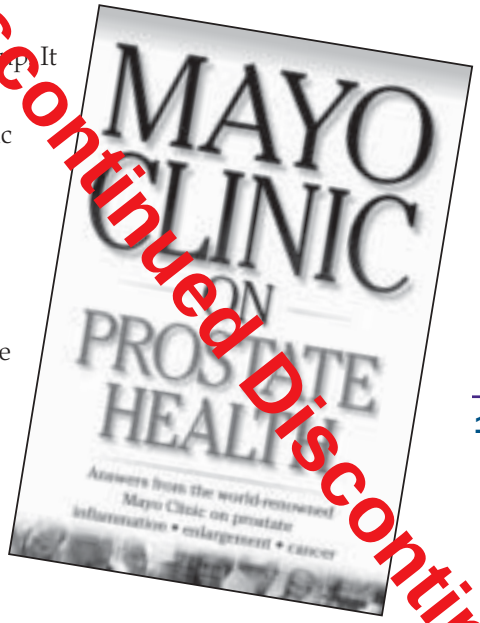
What men need to know about prostate health

Prostate cancer is the most common cancer in men and the second leading cause of cancer deaths in men. Half of all men will experience some kind of prostate problem in their lifetime, according to the book *Mayo Clinic on Prostate Health* (ISBN 1-893005-03-8).

If you are 40 years or older, it's important to have a yearly prostate checkup. It also is important to know the early warning signs of prostate disease: increased urination; difficulty urinating; pain while urinating; lower pelvic and back pain; or blood in your urine. If you experience any of these symptoms, discuss them with your doctor as soon as possible.

On average, an American man has about a 30 percent risk of having prostate cancer, but only about a three percent risk of dying from the disease. While prostate cancers usually grow slowly, some forms are more aggressive, so prompt diagnosis and consideration of treatment options is essential.

To order *Mayo Clinic on Prostate Health*, (soft cover, $14.95 plus shipping, handling and applicable sales tax), call 1-800-291-1128.



NEW FINDINGS *from* Mayo Clinic

Study finds optimists report a higher quality of life than pessimists

Your outlook on life not only may help you live longer, but it appears to have an impact on your perceived quality of life. Mayo Clinic researchers have found optimists report a higher level of physical and mental functioning than pessimists.

"The wellness of being is not just physical, but attitudinal," said Toshihiko Maruta, M.D., of the Mayo Clinic Department of Psychiatry and Psychology and principal author of the study. "How you perceive what goes on around you and how you interpret it may have an impact on your longevity, and it could affect the quality of your later years."

Researchers looked at health survey results reported by 447 patients in the 1990s. This group had originally completed the Minnesota Multiphasic Personality Inventory (MMPI) between 1962 and 1965. The MMPI is an assessment that helps researchers classify personality traits. An optimism and pessimism scale was developed for the MMPI in 1994. Using that scale, researchers found 103 participants were classified as optimistic, 272 as mixed and 71 as pessimistic.

Researchers said pessimists scored below optimists on quality-of-life assessments, and also scored lower than the national average on five of eight scales. The scales included physical functioning; role limitations, physical; bodily pain; general health perception; vitality; social functioning; role limitations, emotional; and mental health.

"Our study provides documentation for beliefs commonly held by patients and health-care practitioners about the importance of optimistic and pessimistic attitudes," Dr. Maruta said. "However, questions remain about the practical significance of these findings for health-care practitioners." Still, he believes the results might begin to help health-care professionals in assessing their patients.

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