



Insider

August 2006

For More Information

The following are summaries of recent news stories from Mayo Clinic in Arizona, Florida and Minnesota. For complete versions, please visit us online at www.mayoclinic.org/news and click on the state that matches the dateline. Thanks for your continued interest in learning about us.

Subscribing and Comments

If you'd like to electronically receive *Insider* monthly or would like to unsubscribe, please e-mail Insider@mayo.edu. Feedback is welcome and appreciated!

For Our Patients

Researchers provide first-ever measure to lessen removal of healthy tissue in those with skin cancer

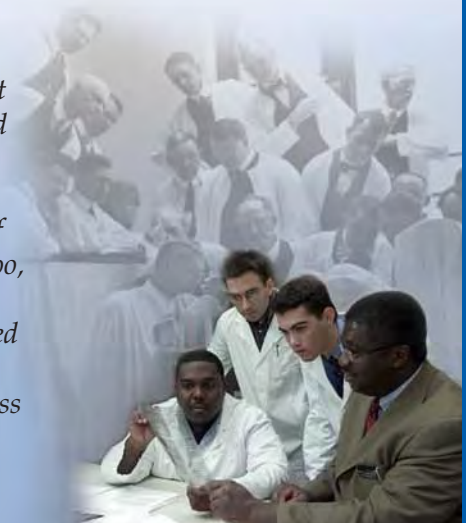
Florida – A Mayo Clinic physician and colleagues have defined the normal number of melanocytes that are present in Caucasians' sun-exposed skin. Melanoma originates in melanocytes, the cells that produce melanin, which colors skin, hair and eyes. Until now, there has not been a measure to distinguish sun damage from early-stage skin cancer (melanoma in situ). Researchers recommend that doctors use the study's findings as their new baseline for melanoma diagnosis and tissue removal. The guideline will help physicians remove the least amount of tissue necessary to treat this early-stage skin cancer. Benefits of the using the new guideline include reduced surgery, scarring, complications and deformity.

"There are many uncertainties in medicine. In many instances these uncertainties lead to overly aggressive treatments," says Dr. Ali Hendi, Mayo Clinic dermatologic surgeon and lead investigator of the study. "To be able to look in the microscope and have a measurement by which to determine successful removal of melanoma in situ is something we've hoped for quite a while," he says.

More than a century ago, Drs. Charlie and Will Mayo organized medical professionals in a new way to better care for patients. They created a system that allowed doctors to take the time to thoroughly investigate issues and quickly and easily get help from other specialists. It encouraged a continual search for better ways to diagnose and treat disease.



Patients flocked to the Mayos because of their ability to find answers. Doctors, too, came to observe and learn. Despite growth and change, we're still committed to our heritage of using our collective wisdom and experience to carefully assess problems, deliver accurate answers and provide effective treatment.





Mayo surgeons performing new sling procedure to treat stress urinary incontinence

Florida – Surgeons at Mayo Clinic in Florida are performing a new procedure to treat women with stress urinary incontinence. The procedure involves implanting a small, adjustable sling, which acts like a hammock, to support the bladder neck and control leakage.

The procedure is the latest in minimally invasive incontinence procedures performed by Mayo Clinic urogynecologists. It offers the potential for better results for two reasons. Optimal leakage control is possible because the sling tension is adjusted after the procedure while the patient exerts the type of abdominal pressure that causes her to leak, and the sling tension can be readjusted months (or years) later without undergoing additional surgery.



Mayo Clinic puts new face on “Broken Heart Syndrome”

Stress remains the culprit, but study may help focus future research

Arizona – More than one woman facing a stressful situation such as public speaking or pressure at work has rushed to her local emergency room, convinced she is experiencing a heart attack. More questions than answers still surround so-called “Broken Heart Syndrome.” But a recent study by Mayo Clinic indicates previous theories about the disorder may need to be refocused as symptoms may indicate Transient Mid-ventricular Ballooning Syndrome.



Diastolic heart failure now most common form of heart failure

Minnesota – Data from a 15-year period show that the prevalence of a certain type of heart failure – heart failure with preserved ejection fraction, also known as diastolic heart failure – is on the rise. This type of heart failure now accounts for more than half of heart failure cases.

Nearly 5 million Americans are living with heart failure. Heart failure refers to symptoms of shortness of breath, exercise intolerance and fluid retention, which occur when heart function is impaired.

Men with multiple sclerosis pass disease to offspring more often than women

Minnesota – According to a new study, men transmit multiple sclerosis (MS) to their children 2.2 times more often than women in families where the father or mother and a child have multiple sclerosis.



Effective alternative for vaginal vault prolapse – robot-assisted, laparoscopic surgery

Minnesota – Mayo Clinic researchers have found that laparoscopic surgery helped by a surgical robot to fix vaginal vault prolapse, a collapse of the vagina that can occur after a hysterectomy, is an effective option to the traditional, open surgical repair when measured at least a year after the surgery. In the United States, one out of nine women will undergo hysterectomy, a surgery to remove all or parts of the uterus. Ten percent of these will develop vaginal vault prolapse.

Arizona

MRIs show drug treatment slows brain deterioration on road to Alzheimer's disease

Minnesota – According to a new study, the drug donepezil measurably slows the rate of brain shrinkage in some patients with mild cognitive impairment, a pre-Alzheimer's disease condition. The shrinkage was measured by magnetic resonance imaging (MRI).

Study finds there is weight loss before women are diagnosed with dementia

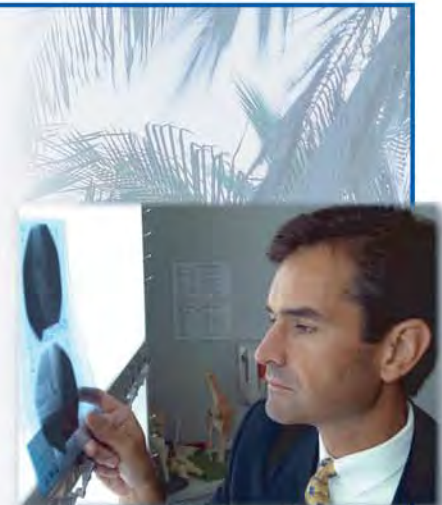
Minnesota – Mayo Clinic researchers have found that women who develop dementia experience a decline in weight as many as 10 years before the onset of memory loss, compared to peers who do not develop dementia.

“In those women who did not go on to develop dementia, 30 years before the year of their peers' onset of dementia, their average weight was 140 pounds,” says Dr. David Knopman, Mayo Clinic neurologist and lead study investigator. “At the year of their peers' dementia onset, they weighed 142 pounds. The women who later developed dementia started off at the same weight as those who didn't develop dementia, but then their weight drifted downward to 136 pounds 10 years before symptom onset and 128 pounds at symptom onset.”

As Alzheimer's develops, worsening memory is followed by decline in concentration, decision-making and problem-solving abilities

Minnesota – A new Mayo Clinic study finds that after memory begins to decline, executive function is the next brain function to deteriorate in the progression from mild cognitive impairment (a pre-Alzheimer's disease condition) to Alzheimer's disease.

“Knowing what area of cognitive function is likely to become impaired after memory helps us as we try to keep our eyes out for people when they are worsening,” says Dr. Ron Petersen, Mayo Clinic neurologist and senior study investigator.



The Microscope

Genetic cause for atrial fibrillation discovered

Minnesota – Mayo Clinic investigators have discovered a gene mutation causing chaotic electrical activation of the heart muscle and atrial fibrillation (AF), a common heart-rhythm disturbance that affects millions of Americans. Atrial fibrillation can lead to heart failure and stroke.

The Mayo Clinic study provides new insight into a previously unrecognized mechanism for electrical instability in the human heart. The Mayo multidisciplinary team is the first to identify a specific genetic mutation of the ion channel gene KCNA5 that leads to a disease-causing condition called a channelopathy.

Florida

New criteria for early, accurate diagnosis of multiple sclerosis variant developed

New definition promises quicker, more accurate treatment

Arizona – Specific, measurable criteria by which neuromyelitis optica (NMO) can be distinguished from standard multiple sclerosis (MS) shows promise in understanding demyelinating diseases.

NMO is one of several diseases that cause damage to the myelin sheath surrounding the nerve fibers in the body's central nervous system. The resulting damage, called demyelination, impairs a patient's vision, movement, strength and sensation by hindering the transmission of electrical impulses throughout the body.

Researchers discover mutations in the progranulin gene cause frontotemporal dementia

Florida – Researchers at Mayo Clinic and colleagues at the University of British Columbia and the University of Manchester have discovered mutations in the progranulin gene cause frontotemporal dementia (FTD). Their work indicates that progranulin function plays an important but previously unrecognized role in neuronal survival.

Progranulin is a type of protein known as a growth factor. Production of too much progranulin has been associated with cancer. So the gene that codes for progranulin was not an obvious one to sequence in order to look for mutations that cause neurodegenerative disease. However, researchers solved a 10-year genetic puzzle when they found mutations in the gene explain a large number of FTD cases in North America and Europe.

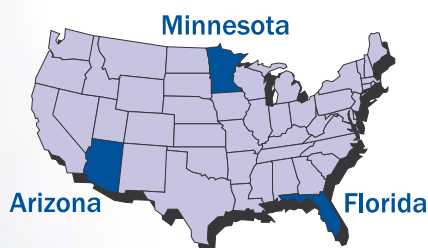
Honors & Awards

Mayo Clinic cardiologist new American Heart Association president

Minnesota – Dr. Raymond Gibbons, a cardiologist at Mayo Clinic and a professor of Medicine at Mayo Clinic College of Medicine, is the president of the American Heart Association (AHA) for its 2006-07 fiscal year.

Dr. Gibbons has been an AHA volunteer for more than 20 years. As president, he will serve as chief volunteer scientific and medical officer, responsible for medical, scientific and public health matters.

Three Locations, One Mayo Clinic



Mayo Clinic is the world's first and largest integrated group practice. Specialists from every medical specialty work together to care for patients, joined by common systems and a philosophy of "the needs of the patient come first." Nearly 5,000 physicians, surgeons and scientists and 43,000 allied health staff work at the clinics in Arizona, Florida and Minnesota, treating more than half a million people each year.



Minnesota