



A seasonal publication for friends of the Mayfield Clinic & Spine Institute

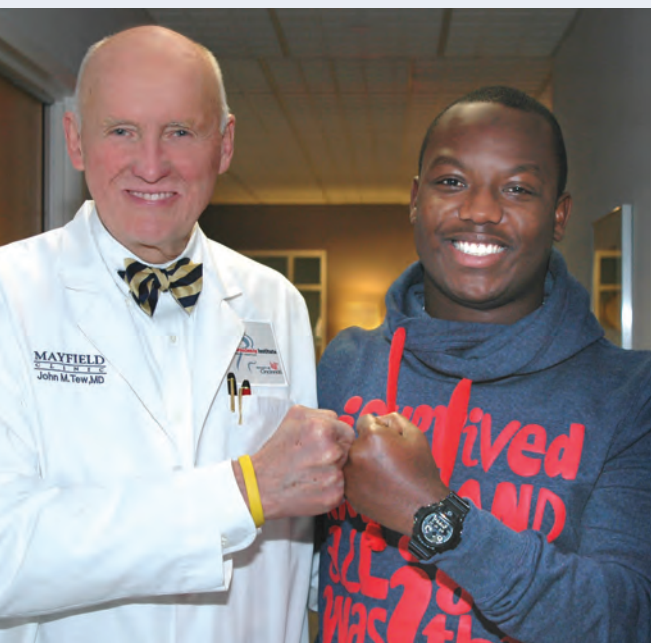
A continuing legacy: 75 years of neurosurgical excellence

The Mayfield Clinic is celebrating a significant milestone throughout 2012: its 75th anniversary.

Founded by Frank H. Mayfield, MD, in July 1937, the Mayfield Clinic has never been just another medical practice. Dr. Mayfield laid the foundation of excellence in neurosurgical care, research, technical innovation, and education. He showed compassion toward his patients, he cared deeply about his community, and as a leader he inspired fellow neurosurgeons throughout the United States.

Those bedrock Mayfield values have never changed. And because the Mayfield Clinic has always been devoted to continuous improvement, it has never stood still. From a small office of three distinguished physicians in the early days of neurosurgery, we have matured into a robust and internationally acclaimed practice of 27 physicians and 150 associates. More than 20,000 patients come through our doors each year, and our influence through teaching and research spans the globe.

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John M. Tew, Jr., MD, left, with Harold, a young patient with Chiari

New Chiari Center fills need for expert diagnosis and treatment

The new Mayfield Chiari Center offers expert diagnosis and treatment of a neurological condition that is often misunderstood and misdiagnosed and that often goes untreated.

John M. Tew, Jr., MD, a Mayfield Clinic neurosurgeon, is a leader of the Chiari Center, which is an affiliate of the Mayfield Spine Institute. Dr. Tew is a nationally recognized expert in the treatment of Chiari malformation, a condition in which a portion of the brain pushes through the opening at the base of the skull, causing an array of symptoms that range from mild to severe. Symptoms can include headaches, fatigue, difficulty swallowing, muscle weakness, and balance problems.

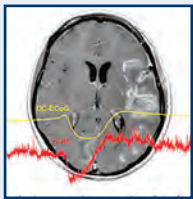
“Some of our most satisfying work involves treating people with Chiari,” Dr. Tew said. “Patients come to us in search of someone who will listen. Often they have sought help from one doctor after another, trying to find someone who will understand their problem and help them find a solution.”

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Outcomes...

Mayfield's commitment to evidence-based medicine

The Mayfield Clinic is committed to the practice of evidence-based medicine. That means the health care we provide is backed up by sound science. We use proven treatments that are the safest and most effective for each individual patient. When answers aren't clear-cut, or when solutions are unavailable, we try to find them by engaging in laboratory and clinical studies. Here is a sampling of our recent efforts to gather evidence about what works best for our patients.

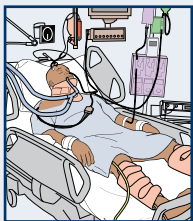


What we found: Spreading depolarizations, electrical disturbances that spread slowly through an injured brain like tiny tsunamis, are connected to worse outcomes in patients who have suffered a brain injury.

Where it was published: Lancet Neurology

Who led Mayfield's efforts: Jed Hartings, PhD, Director of Clinical Monitoring for the Mayfield Clinic and Research Assistant Professor in the Department of Neurosurgery at the University of Cincinnati (UC)

Why the finding is important: "This finding gives us incentive to find a way to stabilize the brain's electrical activity and block spreading depolarizations," Dr. Hartings says. "If we are able to measure and monitor specific cellular brain events, such as spreading depolarizations, and if we acquire the ability to treat patients in accordance with these measurements, we will have made a significant medical advance."

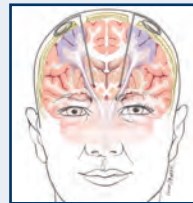


What we found: A large number of people who have suffered a brain injury either do not have any access to neurocritical care expertise, or the access is so delayed in the course of the disease process that optimal therapy cannot be provided. Twenty-one states have no access to specialized neurocritical care units (like the Neuroscience Intensive Care Unit at UC Health / University Hospital).

Where it was published: Neurocritical Care

Who led Mayfield's research efforts: Lori Shutter, MD, a Mayfield Clinic neuro-intensivist and Director of the Neurocritical Care Program at the UC Neuroscience Institute

Why the finding is important: "These results should be used to help guide the growth of neurocritical care programs and to help us focus on areas that are currently underserved," Dr. Shutter says.

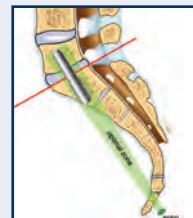


What we found: A new type of deep brain stimulation device to treat Parkinson's disease symptoms provides benefits to patients.

Where it was published: Lancet Neurology

Who led Mayfield's efforts: George Mandybur, MD, a Mayfield Clinic neurosurgeon and Associate Professor of Neurosurgery at UC

Why the finding is important: The study signals the arrival of a competitor, St. Jude Medical, into the neurostimulation technology market, which is currently filled only by Medtronic, Inc. Competition is likely to spawn improvements that will benefit patients.



What we found: Of 26 patients who underwent axial lumbar interbody fusion at L5-S1 (17 patients) or L4-5 and L5-S1 (9 patients), none experienced adverse events during the 24-month study period. Fusion was achieved by 22 patients at 12 months and by 23 at 24 months. One patient had a successful revision, and 2 dropped out of the study.

Where it was presented: Spine

Who led Mayfield's efforts: William Tobler, MD, a Mayfield Clinic neurosurgeon and Professor of Neurosurgery at UC

Why the finding is important: "Surgeons perform spinal fusion using multiple techniques," Dr. Tobler says. "One of those techniques is axial lumbar interbody fusion, a minimally invasive, tissue-sparing, and minimally destructive technique for achieving fusion at the lower two levels of the lumbosacral spine."

Mayfield Clinic resolutions for your spine

It's never too late to make a resolution in honor of your miraculous spine, which keeps you upright and allows you to twist, bend, and lift. Do your spine a favor, and you are likely to enhance other areas of your health as well. Five Mayfield neurosurgeons offer the following resolutions for a healthy spine in 2012.



#1: Strive for a healthy BMI (body mass index).

#2: Eat more healthfully.

#3: Quit smoking.

#4: Quit smoking before fusion surgery.

#5. Exercise!



Resolution #1: "Do you know your BMI?" asks **Tann Nichols, MD.** "Thirty is obese, 25-29 is overweight. Being overweight strains the muscles and ligaments, pulling the spine out of alignment. This strain can cause low back pain, musculoskeletal pain, osteoarthritis, sciatica, and even disc herniation. Obese patients undergoing back surgery may face higher risks for complications and infections. Walk instead of drive, take the stairs whenever possible, and cut out mid-morning and late-night snacks."



Resolution #2: "Could the foods you eat be causing your pain?" asks **Arthur Arand, MD.** "Consider an anti-inflammation diet. Eat healthy whole foods and eliminate processed, high-sugar junk foods. You can fight inflammation by consuming more anti-inflammatory foods like lean proteins (e.g., Alaskan salmon, lean poultry), fresh fruits and vegetables (especially dark green leafy), and green tea."



Resolution #3: "Aside from the many health problems associated with smoking, tobacco use also affects your spine," says **Steven Bailey, MD.** "Researchers have found a link between smoking and lower back pain. Smoking history, hypertension, and coronary artery disease—all risks for clogged arteries—all are significantly associated with the development of low back pain. If you are one of the nearly 20 percent of Americans who smoke, talk with your doctor about quitting."



Resolution #4: "Studies show that tobacco use is associated with a significantly decreased rate of successful fusion," says **Brad Skidmore, MD.** "Therefore, if you are facing spinal fusion surgery, it is important that you stop smoking to maximize your chances of achieving pain reduction and a successful outcome. And if you stop smoking for your spine surgery, hang in there and remain a non-smoker!"



Resolution #5: "Move 15 to 30 minutes at least 3 times weekly," says **Brad Curt, MD.** "Regular exercise can improve your posture. Cross-training combines different types of exercise: strengthening for the core muscles (back, abdominals, buttocks), stretching, and aerobic exercise. Exercise also increases the production of synovial fluid, which keeps joints lubricated and makes them supple. Your doctor or fitness trainer can advise you about what kinds of exercises are best for you."

Chiari, continued from page 1. "Some have been told they have migraines or fibromyalgia," Dr. Tew continued. "Some have been told their discomfort is 'all in their head.' It is a true privilege to be able to help these patients, who have sought relief from their pain for so long."

Chiari (pronounced kee-AR-ee) malformation affects one in every 1,000 to 1,200 individuals and is classified as Chiari I, II, III, or IV. Chiari I is the least severe and most common form.

Symptoms can appear at birth or late in life. The first symptom, which is often headache, emerges once the blockage is sufficiently severe. A Chiari I malformation often goes undiagnosed until adulthood, because symptoms are delayed. Confusing or ambiguous symptoms are frequently misinterpreted.

Each year the Mayfield Clinic evaluates more than 90 people affected by Chiari malformation. Some patients require monitoring only, but most need decompression surgery to enlarge the bony opening, to restore normal fluid circulation around the brain, and to prevent a syrinx, a cyst that results from the accumulation of cerebrospinal fluid in the spinal canal. This condition, called syringomyelia, can damage the spinal cord, thereby causing its own cascade of neurological problems.

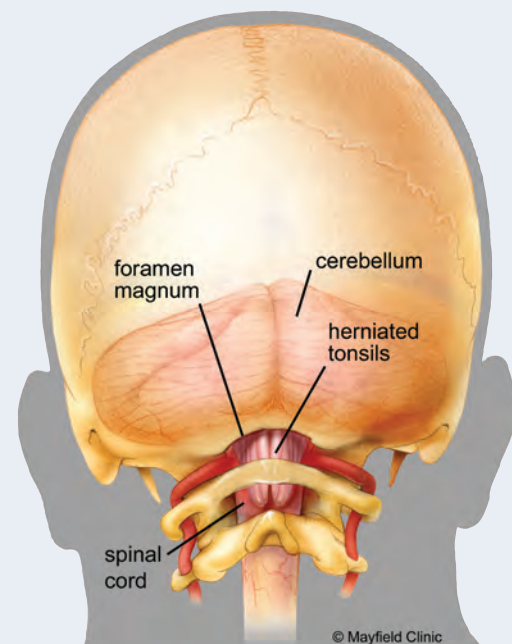


Illustration showing a Chiari malformation. A portion of the cerebellum (the tonsils) has pushed through the foramen magnum of the skull.

Mayfield places 19 in 'top docs'

The Mayfield Clinic proudly reports that 19 of its specialists have been named to the latest regional and national lists of leading physicians.

Cincinnati Magazine, in its January 2012 edition, published its new listing of Top Doctors who practice in the eight counties that make up the Greater Cincinnati region. And in December Cincy magazine re-published the 2011-2012 list of area physicians named by Best Doctors in America®.

Mark Farrington, CEO of the Mayfield Clinic, commended the physicians included in one or both of the prestigious listings while noting that all of Mayfield's specialists are superbly trained and highly skilled. "The neurosurgeons we recruit are leaders in their field. Further, their commitment to excellence has enabled Mayfield to recruit star physicians in related sub-specialties."

For a complete report about the best doctors' lists, please visit: <http://www.mayfieldclinic.com/releases.php>



Young epilepsy surgeon takes aim at toughest seizures



Dr. Ellen Air

The Mayfield Clinic welcomed an outstanding young neurosurgeon, Ellen L. Air, MD, PhD, to its team this fall. Dr. Air, who specializes in the treatment of epilepsy and movement disorders, arrived with impeccable credentials and the kind of inquiring mind that could help change the path of medical research.

Dr. Air chose neurosurgery because it brought her into the vortex where the "big questions" in medical science swirl. In particular, she is focused on the question of how to help the thousands of Americans whose epileptic seizures are not controlled by medication. For some, surgery can be very successful in controlling seizures because the precise starting point of the seizures – the seizure focus – is clear. For others, pin-pointing the seizure focus is a challenge.

As the field has come to realize that high-frequency activity may better localize the seizure focus, Dr. Air aims to take that information into the operating room to improve seizure outcomes for surgical patients.

Dr. Air, a native of the Cincinnati area, graduated from Northwestern University and completed doctorate and medical degrees at UC. She recently completed a fellowship in the neurosurgical treatment of epilepsy, movement disorders, and pain at the University of California, San Francisco.

At Mayfield Dr. Air will treat a wide range of neurological conditions and diseases affecting the brain, spine, and peripheral nerves. In addition to building her private practice, she will serve as Assistant Professor of Neurosurgery at UC and as a member of the Epilepsy Center and the Gardner Center for Parkinson's Disease and Movement Disorders at the UC Neuroscience Institute. She also will see patients at Cincinnati Children's Hospital Medical Center.

Visit us on YouTube!

The Mayfield Clinic is building an educational video library on YouTube for the benefit of our patients. In our newest video, Andrew Ringer, MD, a Mayfield Clinic neurosurgeon and endovascular specialist, explains treatments for unruptured brain aneurysms.

Additional topics include:

- Acoustic neuroma
- Chiari malformation
- Deep-brain stimulation for Parkinson's disease
- Trigeminal neuralgia
- And much more!

Go to www.YouTube.com and search **mayfieldclinic**.



Dr. Andrew Ringer of the Mayfield Clinic discusses treatment options available for unruptured intracranial aneurysms in the YouTube video entitled, "Treatment options, unruptured brain aneurysm."

Service to the community

You may know that Greater Cincinnati's premier hospitals are all served by Mayfield Clinic neurosurgeons. You may not realize the extent to which the Mayfield Clinic permeates our community outside the hospital and medical office doors. From mission-related activities to the Fine Arts Fund to the Pink Ribbon Girls, Mayfield embraces charitable living. We also officially support numerous programs and events that benefit patients with diseases and disorders of the brain and spine, including Impact Autism, the Arthritis Foundation, and the American Heart Association. A sampler:

- Eighty-two Mayfield employees pledged \$64,988 during the 2012 United Way campaign, placing Mayfield at No. 56 on the "Live United 100" list of small businesses with the highest per-capita giving.
- Thanksgiving Day began at 6 a.m. for Physician Liaison Ali Willis, a planning committee member of Give Back Cincinnati's Fall Feast, which served 6,000 people at the Duke Energy Convention Center with dinner, coats, haircuts, vision screenings, flu shots, and more.
- Mayfield celebrated the holidays by providing gifts to 60 children from Children's Home of Cincinnati, FACE (For AIDS Children Everywhere), and our Partner in Education, South Avondale Elementary. Financial donations enabled residents of Children's Home of Northern Kentucky to attend the Festival of Lights at the Cincinnati Zoo, and volunteers shared their time with residents of Meadowbrook Nursing Home.
- Mayfield imaging technologists supported the Green Team's efforts recently by recycling thousands of old MRI folders that were being discarded during the Mayfield Imaging Center's conversion to a digital MRI filing system. Proceeds benefitted South Avondale Elementary.
- On any given weekend, Mayfield associates volunteer at walks, runs, or symposia that benefit medical research or help educate patients, families, and caregivers.
- This fall, for the fifth time, Mayfield's Thomas Berger, MD, joined a team of physicians, nurses, and volunteers on a two-day mission to the small Mexican town of Nuevo Progreso. The trip was sponsored by the West Ohio Conference of the United Methodist Church and supported financially by Mayfield associates and physicians.



From top: Mayfield's Ali Willis with Rick June at Walk Ahead for a Brain Tumor Cure; scene from a medical mission attended by Dr. Thomas Berger; Lynn Richmond and Becky Gilley at a weekend symposium.



Celebrating 75 Years of Neurosurgical Excellence

75 years, continued from page 1

"History informs us that early success in any endeavor is no guarantee of continued success or permanence," says Ronald Warnick, MD, Chairman and President of the Mayfield Clinic. "Only through vigilance, attention to customer satisfaction, and ongoing self-appraisal can a company survive and thrive.

"We are proud that the Mayfield Clinic remains an exemplary model of success, as both a provider of tertiary healthcare and as a business, after 75 years. Our pledge is to continue our mission to serve our patients and the local and global communities in the decades to come."

Mayfield will celebrate throughout its 75th anniversary year with articles in the Mayfield Standard and with special features and a new timeline at www.mayfieldclinic.com.

Other anniversary highlights will include:

March 14: The inaugural Jeffrey T. Keller Lectureship in Education and Surgical Anatomy, showcasing Albert Rhoton, MD, of the University of Florida.

June 8: Mayfield Society Weekend, including graduation exercises for neurosurgical residents at the University of Cincinnati College of Medicine.

Nov. 10: Mayfield 75th Anniversary Gala, hosted by the Mayfield Education and Research Foundation, at the Hilton Cincinnati Netherland Plaza. The gala will raise funds for the foundation, which supports neuroscience research and educational programs for physicians and the community. For an invitation or sponsorship information, please contact Kelly Bollinger at (513) 569-5277.

For a full schedule of 75th anniversary events, visit mayfieldclinic.com.

MAYFIELD
— EDUCATION & RESEARCH —
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The Standard



Mr. Farrington

Mayfield welcomes
CEO Mark Farrington

Backed by a 25-year career that includes leadership roles in neurosurgery and orthopedic spine surgery practices, Mark Farrington joined the Mayfield Clinic on Oct. 3, 2011.

Mr. Farrington, who came to Mayfield from the Culicchia Neurological Clinic in New Orleans, assumes the senior leadership position vacated by Michael J. Gilligan, who retired as President and CEO of the Mayfield Clinic on Sept. 16. Mr. Farrington's selection followed a national search for a successor to Mr. Gilligan, who served as Mayfield's CEO and President for 24 years.

Eco-friendly
To receive your Mayfield Standard by e-mail as a PDF rather than on paper, please call Jillian at 513.569.5354. You can review current and past issues at www.mayfieldclinic.com/mc_newsletter/standard.htm



Breaking ground, from left: Michael Lamba, PhD, John Breneman, MD, Brian McGill, Loraine Henderson, and Ronald Warnick, MD.

Radiotherapy expansion underway

Acquisition of a new-generation linear accelerator is included in a \$6.5 million expansion underway at the Precision Radiotherapy Center, a state-of-the-art radiotherapy/radiosurgery treatment center for people with cancer, benign tumors, and other abnormalities. The West Chester, Ohio, facility is operated by the Mayfield Clinic and UC Health's Department of Radiation Oncology.

The expansion, which will be completed by mid- to late summer, will double Precision Radiotherapy's size to 16,000 square feet and will more than double the center's operating capacity, increasing the number of patients treated from 35 per day to 75.

