A Leader in Stroke Treatment and Prevention

The Mount Sinai Hospital, a leader in stroke treatment—and the first Joint Commission-certified comprehensive stroke center in New York State—continues to push the boundaries of research and clinical care.

“We have won high marks for the rapid response we’re able to deliver, particularly to complex stroke patients who need endovascular intervention, and for our commitment to community outreach and education,” says Stanley Tuhrim, MD, Professor and Vice Chair of Clinical Affairs, Department of Neurology, and Director of the Stroke Center at The Mount Sinai Hospital.

Experts estimate that up to 80 percent of strokes can be prevented by weight loss, healthy eating habits, exercise, not smoking, and maintaining a normal blood pressure. When strokes occur, however, the amount of time it takes to receive proper treatment is crucial to the patient’s survival and ability to recover brain function. Ischemic strokes that stem from blocked blood vessels in the brain comprise the vast majority of strokes; a smaller percentage are hemorrhagic, which occur when a blood vessel ruptures in the brain or on its surface.

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Pioneering Surgical Techniques to Benefit Stroke Patients

A 37-year-old devoted runner, Cory Root, PhD, seemed an unlikely candidate for an acute stroke. But in the midst of a seven-mile jog along the Hudson River in early March, he suddenly felt weak and began to drag his foot. After he fell and struggled to get up, several onlookers rushed to his side. “They thought I showed signs of a stroke and called an ambulance,” recalls Dr. Root, a postdoctoral fellow in neuroscience at Columbia University. “I thought that was crazy because I was too young for a stroke.”

Dr. Root was brought to Mount Sinai St. Luke’s, where he was evaluated by vascular neurologist Carolyn Brockington, MD, Director of the Stroke Center, who confirmed that he had a large vessel occlusion in the brain. Dr. Brockington and her specially trained stroke team quickly administered intravenous tissue plasminogen activator (tPA), a medicine
Developing a New Approach to Emergency Stroke Care

It is estimated an individual loses 1.9 million brain cells in the first minute of a stroke, and 10.2 billion brain cells after 10 hours, according to Stephan Mayer, MD, newly appointed Director of Neurocritical Care for the Mount Sinai Health System. “Stroke is really a very devastating disease, but very, very treatable—the key is getting to people quickly,” he says.

On Thursday, April 23, Dr. Mayer convened an Acute Stroke Summit with Carl Ramsay, MD, Vice President, Emergency Medicine Clinical Operations, Mount Sinai Health System, to develop major new protocols in emergency stroke treatment.

It is a rapid and coordinated team approach involving Emergency Medicine, Neurology, Nursing, Neuroradiology, and Pharmacy at each Health System hospital. This approach, when finalized, aims to vastly reshape how each Emergency Department interacts with a stroke patient—a process that will begin with prenotification from the ambulance.

Moving activation of the “Stroke Code” to the ambulance will allow staff to get an early patient history, imaging colleagues to clear CT machines for use, and Pharmacy to order the clot-buster tPA drug. Patients who receive tPA, tissue plasminogen activator, within three to four-and-a-half hours of initial stroke symptoms typically recover more quickly and are less likely to have severe disability.

“It’s all about developing parallel processing, which will allow us to give tPA to more patients, faster,” says Dr. Mayer. “Now, it takes a little over one hour before we can administer tPA. Our eventual goal is 20 minutes.”

He expects the process to be as famously smooth as a NASCAR pit stop. “A typical pit crew involves seven people, and in 12 to 15 seconds, four tires are changed, the car is refueled, and repairs are performed—an effortless process,” he says.

Adds Dr. Ramsay: “This is about instituting every time-saving step that we can to help our patients.”

A Leader in Stroke Treatment and Prevention (continued from page 1)

Mount Sinai’s Stroke Center averages 65 minutes between a patient’s arrival at the hospital and the start of an endovascular vessel recanalization, which reopens the blood supply to the brain when a patient has an ischemic stroke. This compares to the national average of 109 minutes at more than 2,400 hospitals that participated in the Get with the Guidelines stroke program through the American Heart Association.

In addition, Mount Sinai belongs to a network of 25 regional coordinating centers known as StrokeNet, organized by the National Institutes of Health (NIH) in 2013. The goal of StrokeNet is to develop and perform clinical trials of promising new treatments for stroke patients or those who are at risk for stroke.

Under Dr. Tuhrim, Mount Sinai has assembled a widely acclaimed team of professionals with a vast range of competencies and skill sets to manage the Mount Sinai Stroke Center. The stroke team includes vascular neurologists, neurointensivists, neurosurgeons, neuroradiologists, emergency medicine physicians, rehabilitation specialists, social workers, and a dedicated clinical nursing staff.

Sonia Nelson, MSN, BSN, RN, a Clinical Nurse Manager in Neuroscience Services, says, “Every team member knows we can’t work in silos. Because every minute is critical, we need to be well informed, and that means constantly communicating.”

Mount Sinai has pioneered the use of mechanical thrombectomy devices, also known as stent retrievers, which slip a wire mesh around the clot and pull it out through a long microcatheter, restoring the flow of blood. These advanced procedures are frequently done in conjunction with the intravenous administration of tissue plasminogen activator (tPA), a clot-busting medication for acute ischemic stroke that must be started within three to four-and-a-half hours of the onset of stroke symptoms.

As part of its ongoing research, the Mount Sinai Stroke Center is in the final stages of evaluating the administration of tPA through a catheter directly into a ventricle in the brain in order to dissolve clots in patients with intracerebral bleeding.

Other Health System hospital campuses have also been recognized for excellence in stroke care. Mount Sinai Queens was named an Advanced Primary Stroke Center by The Joint Commission and a Designated Stroke Center by the New York State Department of Health—the only hospital in Queens to receive this dual recognition. Mount Sinai St. Luke’s and Mount Sinai Roosevelt, Mount Sinai Beth Israel, and Mount Sinai Beth Israel Brooklyn also have Designated Stroke Centers.
Carolyn Brockington, MD, a board-certified vascular neurologist and Director of the Stroke Center at Mount Sinai St. Luke's and Mount Sinai Roosevelt, is actively involved in educating the public about all aspects of stroke—from its symptoms to its prevention and treatment.

“Most people do not realize anyone can have a stroke at any age, but the good news is many strokes can be prevented,” Dr. Brockington says. “The key lies in identifying and successfully controlling the risk factors with lifestyle changes like diet, exercise, and possibly medication.”

Last year, in conjunction with the American Stroke Association (ASA), Dr. Brockington created an award-winning campaign to increase stroke awareness and highlight prevention strategies, particularly in young adults. One of the patients featured in the campaign was Claudia Mason, a young, active supermodel, author, and actress with no stroke risk factors, who developed a stroke shortly after participating in a dance class in which she sustained an injury to one of the arteries in the neck supplying the brain.

Although Ms. Mason’s vision was suddenly disrupted and she experienced a severe
designed to dissolve clots stemming from an acute ischemic stroke.

For additional intervention, they called in Johanna Fifi, MD, Assistant Professor of Neurology, Neurosurgery, and Radiology, who performed a thrombectomy, a newly proven minimally invasive endovascular procedure that Mount Sinai has helped to pioneer nationally. Mount Sinai’s unique endovascular stroke team can deploy to hospitals within the Mount Sinai Health System and ensure the fastest possible time to treatment.

During the procedure, Dr. Fifi inserted a catheter through a small incision in the groin and snaked it through blood vessels to the site of the clot in the brain. A vacuum-like suction canister was then attached to the clot, dislodging and removing it, and restoring blood flow to Dr. Root’s occluded artery within minutes.

“In the last couple of years, the new generation of endovascular devices has become a game changer for patients,” says Dr. Fifi, who is also Director of the Endovascular Stroke Program at the Mount Sinai Health System. She says the devices—including stent retrievers that use a wire mesh to ensnare the clot in order to extract it—are effective in about 80 percent of cases. “We often see patients improving as soon as we pull the clot out.”

J Mocco, MD, Director of the Mount Sinai Health System’s Cerebrovascular Center and Professor and Vice Chair for Education, Department of Neurosurgery, says Mount Sinai has conducted recent clinical trials that support the use of endovascular clot removal. “We’ve been leading the conversation internationally and generating the data needed to prove the benefits of endovascular treatment,” says Dr. Mocco. “The good news for patients is that if someone has a major stroke with a blockage of a large brain artery, there are now clear indications that this time-sensitive therapy can dramatically improve the likelihood they will get better.”

Following Dr. Root’s 25-minute procedure, there was immediate and significant improvement in his symptoms. He was back at work and back running along the Hudson River just weeks afterward.

“The more I think about it, the more I realize how lucky I was to get the kind of treatment I did at St. Luke’s,” he says. “Even my advisor at Columbia (Nobel laureate Richard Axel, MD) told me he was impressed with the first-rate medical care I received.”
headache, she did not seek immediate medical attention because she did not suspect a stroke. When her symptoms persisted, she went to the emergency room at Mount Sinai Roosevelt and was diagnosed with a stroke. After being treated with a blood thinner for several months, she was able to return to work and her busy life.

Despite delaying treatment, Ms. Mason was able to recover from her stroke, but the key to improving the chances of a good outcome is to start treatment as soon as possible after the symptoms develop. “People need to learn about stroke symptoms and the importance of getting to an emergency room right away,” Ms. Mason says.

The public awareness campaign in which Ms. Mason is featured promotes the acronym **B.E. F.A.S.T.** as an easy way to remember the most common stroke symptoms and the importance of rapid treatment:

- **Balance** — Is there sudden loss of balance or coordination?
- **Eyes** — Are there sudden visual changes, like double vision or loss of vision?
- **Face** — Does one side of the face droop when asked to smile?
- **Arm** — Does one arm drift downward when asked to raise both arms?
- **Speech** — Are the words slurred? Is the speech confused?
- **Time** — Time is Brain; call 9-1-1 immediately.

Stop Stroke Before It Stops You

**A Stroke Awareness Afternoon**

Learn about the signs, symptoms, and treatment of stroke and ways to minimize risk in a program led by Mount Sinai Queens Stroke Program Director Aaron Tansy, MD; Tara Roche, RN, MS; and Celia Chu Diep, RD, CDE. Go to [www.mshq.org/events](http://www.mshq.org/events) to register.

**Thursday, May 14**
3 - 5 pm
George T. Douris Tower
27-40 Hoyt Avenue South
2nd Floor
Community Room
Astoria, Queens

Educating the Public About Stroke (continued from page 3)

Promoting Outstanding Research in Child Health

The 17th Annual Child Health Research Day, held at The Mount Sinai Hospital campus on Thursday, April 16, highlighted outstanding research in child health by Mount Sinai students, housestaff, clinical and research postdoctoral fellows, research staff, social workers, nurses, and junior faculty.

The event, sponsored by the Jack and Lucy Clark Department of Pediatrics and The Mindich Child Health and Development Institute, provided a unique opportunity for young investigators to share the results of their research with colleagues and identify potential areas for future collaboration. This year, 82 research projects were submitted for presentation. Eight projects were selected for oral presentations during a morning plenary session, and the rest were presented by the authors in poster format.

Joel N. Hirschhorn, MD, PhD, son of the former Chair of Pediatrics, Kurt Hirschhorn, MD, delivered the Dr. Howard Rappaport Memorial Grand Rounds Lecture, “Human Height and Weight: From Genetics to Biology.”

Dr. Hirschhorn is Concordia Professor of Pediatrics, and Genetics, Harvard Medical School; Director, Center for Basic and Translational Obesity Research, Boston Children’s Hospital; and Senior Associate Member, Broad Institute.

The plenary presenters were: Ana Belen Blazquez, PhD; Thomas W. Church, research assistant; David Dunkin, MD; Maya Kappil, PhD, postdoctoral fellow; Yu Kevin Liu, PhD, postdoctoral fellow; Siri Sastry and Meryam Shikara, both Icahn School of Medicine at Mount Sinai medical students; and Annemarie Stroustrup, MD, MPH.

Six poster presenters were selected for special recognition: Kelly Brunst, PhD, postdoctoral fellow, and Megan Horton, PhD, MPH, for population-based research; Nelson Rodriguez, medical student, and Nataly Shtraizent, PhD, postdoctoral fellow, for basic science research; and Doerthe Andreae, MD, PhD, and Brian Cohen, medical student, for clinical research.
Students Host Community Health Fair

More than 100 Icahn School of Medicine at Mount Sinai students hosted the 12th Annual Mount Sinai Community Health Fair on Saturday, April 11—an event dedicated to improving the health of residents in East and Central Harlem, neighborhoods that have experienced a disproportionate burden of chronic disease and illness. Forty community organizations took part, including the East Harlem Health Outreach Partnership, Settlement Health, and Boriken Neighborhood Health Center. The fair offered 19 kinds of health screenings, including blood pressure, diabetes, hearing and vision, adolescent health conditions, obesity, and HIV. The estimated 200 adult and children attendees were also treated to live music, healthy food samples, and family fun activities. The event was made possible by funding from the Mount Sinai Auxiliary Board, the Icahn School of Medicine at Mount Sinai Student Council, and the Center for Multicultural and Community Affairs.

Kidney Stone Center Opens

The Kidney Stone Center at Mount Sinai opened with a ribbon-cutting ceremony and reception on Monday, April 20, at Mount Sinai Roosevelt’s Department of Urology. The new Center offers a comprehensive approach to manage and treat kidney stones, with a focus on prevention. “We have an integrated team of urologists, nephrologists, and other specialists who employ a wide range of noninvasive and minimally invasive procedures to treat and prevent all sizes and types of kidney stones,” says Mantu Gupta, MD, Chair of Urology at Mount Sinai Roosevelt and Mount Sinai St. Luke’s, and Director of Endourology and Stone Disease for the Mount Sinai Health System. The Center has two locations: Mount Sinai Roosevelt, 425 West 59th Street, Suite 4F, and 625 Madison Avenue, Second Floor.

Leadership and Staff Celebrate National Walking Day

Hundreds of Mount Sinai Health System employees laced up their sneakers and participated in several 30-minute, lunchtime walks in their hospital campus communities on Wednesday, April 1, for National Walking Day, to raise awareness of the health benefits of walking for cardiovascular health. Beth Oliver, DNP, RN, Vice President of Cardiac Services for the Mount Sinai Health System, set the tone for the day, saying, “Mount Sinai is committed to teaming up to get active and make strides against cardiovascular diseases. A simple 30-minute brisk walk each day can significantly impact and improve heart health and longevity.” Walking, she says, can help individuals lower risk of heart attacks and strokes, maintain normal blood pressure, reduce cholesterol, and prevent diabetes and obesity.
Celebrating National Nurses Week 2015

Among key activities taking place at the Mount Sinai Health System:

**TUESDAY, MAY 5**

Joyce J. Fitzpatrick, PhD, MBA, RN, FAAN, Elizabeth Brooks Ford Professor of Nursing, Case Western Reserve University, presents “The Year of Ethics: Local and Global Opportunities for Nurses.”

10:30 – 11:30 am
Mount Sinai St. Luke’s
Muhlenberg Room 410

2 – 3 pm
Mount Sinai Roosevelt
Conference Room B

**WEDNESDAY, MAY 6**

Nighttime Madness: Start of a Tradition
Nursing leadership rounds

7 - 8 pm
Mount Sinai Beth Israel Brooklyn

**THURSDAY, MAY 7**

Esma Paljevic, EdD, Assistant Professor of Nursing Ethics, Pace University Lienhard School of Nursing, presents “American Nurses Association Code of Ethics with Interpretive Statements 2015.”

Noon – 1 pm
Mount Sinai Queens
Administration Building, Administrative Conference Room

Sandra Myerson, MBA, MS, BSN, RN, Chief Patient Experience Officer, The Joseph F. Cullman, Jr. Institute for Patient Experience, presents “Patient Engagement in the Patient-Centered Environment.”

1 – 2 pm
New York Eye and Ear Infirmary of Mount Sinai
North Building Room 314

**FRIDAY, MAY 8**

2015 Beatrice Renfield Circle of Excellence Awards

2 – 4 pm
Mount Sinai Beth Israel
Podell Auditorium

**TUESDAY, MAY 12**

**KEYNOTE ADDRESS**

LeAnn Thieman, co-author, *Chicken Soup for the Nurse’s Soul, Second Dose*, will present.

8 – 9:30 am
Mount Sinai Queens
Crescent Tower Condominium Lobby

1 pm and 4 pm
The Mount Sinai Hospital Campus
Stern Auditorium

Simulcast at the following locations:

1 pm
Mount Sinai Beth Israel
Petrie Division — Nursing Education Classroom, 2 Dazian

Mount Sinai Phillips Ambulatory Care Center — Bogart Conference Room 4A-18

Mount Sinai Cancer Center West — Main Conference Room

Mount Sinai Beth Israel Brooklyn
Conference Room A

New York Eye and Ear Infirmary of Mount Sinai
North Building Room 314

Mount Sinai St. Luke’s
Muhlenberg Auditorium

Mount Sinai Roosevelt
Conference Room B

**Prerecorded presentation:**

10 pm
The Mount Sinai Hospital
Annenberg MC 330

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**ANNOUNCEMENT**

**May is Better Hearing and Speech Month**

Pick up handouts and talk to an audiologist when the Center for Advanced Medicine/Department of Ambulatory Care Operations commemorates Better Hearing and Speech Month.

Friday, May 8
Noon – 3 pm
The Mount Sinai Hospital
Center for Advanced Medicine
Lobby

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**INSIDE MOUNT SINAI**

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