## Stroke care improves, but patients need to act FAST

Stroke symptoms can include weakness or numbness on one side of the body, vertigo, nausea, difficulty understanding or speaking and impaired coordination. In the face of a possible stroke, remember the acronym FAST: Face drooping, Arm weakness, Speech difficulty and Time to call 911.

Roughly every 40 seconds, someone in the United States has a stroke, and almost every four minutes one of those people will die as a result, making stroke a major cause of death and disability.



Quick response at the first signs of a stroke is key to limiting the harm. "There is still a lack of sufficient awareness in the community about the importance of time with regard to recognition and to seeking emergency treatment for stroke," says May Nour, MD, PhD, a UCLA interventional neurologist. "For every minute that passes with lack of blood flow as the result of blockage of a large blood vessel in the brain, 2-million neurons die."

Most strokes are ischemic, meaning that a clot has blocked blood flow and oxygen to the brain. About 20 percent of strokes are hemorrhagic; they are caused by the rupture of a blood vessel. Stroke symptoms can include weakness or numbness on one side of the body, vertigo, nausea, difficulty understanding or speaking, and impaired coordination. In the face of a possible stroke, Dr. Nour urges people to remember the acronym FAST: Face drooping, Arm weakness, Speech difficulty and Time to call 911.

People who seek treatment as soon as stroke symptoms appear have much to gain, says Doojin Kim, MD, a UCLA neurologist and director of the UCLA Stroke Program in Santa Monica. A medication called tissue plasminogen activator (tPA) has been shown to be effective when administered within four-and-a-half hours from symptom onset, which highlights the importance of seeking treatment immediately.

People who have a clot lodged in a large blood vessel that is not responsive to tPA may also be candidates for a minimally invasive procedure to remove the clot called a thrombectomy.

"Studies have shown that by getting these treatments promptly, the patient has a greater chance of recovering without disability," Dr. Kim says. UCLA Medical Center, Santa Monica, a primary stroke center, and Ronald Reagan UCLA Medical Center, a comprehensive stroke center, offer the highest levels of stroke care and can receive the most severely impacted stroke patients brought in by paramedics.



To view a video about stroke care, go to: uclahealth.org/strokecare





## Mobile Stroke Unit provides fast evaluation and treatment

UCLA Health has launched the first mobile stroke unit on the West Coast, enabling rapid delivery of brain-saving medications to stroke patients who might otherwise face debilitating delays in treatment.

The Mobile Stroke Unit (MSU) ambulance brings the hospital to the patient by including a mobile computed tomography (CT) scanner, laboratory testing equipment, telemedicine connection with a hospital, and appropriate medication and assessment tools.

The unit is staffed with a specialty stroke team, including a neurologist specializing in stroke treatment, to diagnose the type of stroke and initiate appropriate treatment. That can include clot-busting medications for ischemic strokes or bleeding-reversal agents for hemorrhagic strokes. The patient is then transported to the nearest stroke center. The goal, says May Nour, MD, PhD, interventional neurologist and medical director of the UCLA Arline and Henry Gluck Stroke Rescue Program, is to reach patients within the "golden hour" — 60 minutes from symptom onset. "This ultrafast treatment initiation is expected to help improve patients' clinical outcomes," Dr. Nour says. "The process also ensures that we triage the patient to the medical center most equipped to treat their level of medical/neurological complexity."

"It's an important evolution in the future of stroke care and a great advance to even further reduce deaths and disability related to stroke," says Jeffrey Saver, MD, director of the UCLA Comprehensive Stroke Center. "There's a saying: Time lost is brain lost."

The program will be part of a national study and during the demonstration phase will respond to 911 calls in Santa Monica, Lakewood, Cerritos and Long Beach, with a plan for future expansion of geographic coverage.