

MEDICAL BREAKTHROUGHS **RESEARCH SUMMARY**

TOPIC: STROKE TREATMENT KEEPS BRAIN CELLS ALIVE
REPORT: MB #4873

BACKGROUND: A stroke is a sudden interruption in the blood supply of the brain. There are two kinds of stroke a person can experience. An ischemic stroke is caused by a blockage of arteries leading to the brain, and a hemorrhagic stroke is caused by bleeding into brain tissue when a blood vessel bursts. When the symptoms of a stroke last less than an hour, it is called a transient ischemic attack (TIA) or mini stroke. Strokes can cause sudden weakness, loss of sensation, or difficulty with speaking, seeing, or walking. It is important to recognize the warning signs of stroke and get immediate medical attention if one occurs.

(Source: <http://www.strokecenter.org/patients/about-stroke/what-is-a-stroke/>)

TESTS AND DIAGNOSIS: The very first thing for healthcare workers to figure out is what kind of stroke a person had. They may perform a CT scan or imaging test upon arriving at the hospital. They will listen to your heart, check your blood pressure, and complete a neurological exam to see how the stroke is affecting the nervous system. Several blood tests will occur to check how fast your blood clots and whether your blood sugar is too high or low. An MRI can detect any damaged brain tissue. Medical personnel may inject a dye into a blood vessel to view the arteries and veins and highlight blood flow. A carotid ultrasound is when sound waves create detailed images of the inside of the carotid arteries in the neck and show buildup of fatty deposits, or plaques. Finally, an echocardiogram uses sound waves to create detailed images of the heart and find a source of clots that may have traveled from the heart to the brain and caused the stroke.

(Source: <https://www.mayoclinic.org/diseases-conditions/stroke/diagnosis-treatment/drc-20350119>)

BREAKTHROUGH IN STROKE RESEARCH: The body naturally responds to an injury anywhere in the body by initiating an inflammatory reaction. However, the inflammation can sometimes cause even more damage. "We're trying to understand how we can harness the immune system's knowledge about how to repair tissues after they've been injured," says Lauren Sansing, MD, Academic Chief of the Division of Stroke and Vascular Neurology. Her team is working to understand the biological signals guiding the immune response to stroke. That knowledge can direct the development of targeted therapeutics for the treatment of stroke that minimize early injury and enhance recovery. "We want to be able to lead research efforts that change the lives of patients around the world," says Dr. Sansing.

(Source: <https://www.yalemedicine.org/news/3-stroke-breakthroughs>)

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com