

# Stroke Savvy

Vol. 10

EXCITE Program Monthly Newsletter

Welcome to the tenth issue of *Stroke Savvy*. We tackle the signs and symptoms of stroke, and the benefits of early detection and treatment. Please feel free to send comments or suggestions for the newsletter to Carol Giuliani at [carol\\_giuliani@med.unc.edu](mailto:carol_giuliani@med.unc.edu) or (919) 966-9797.

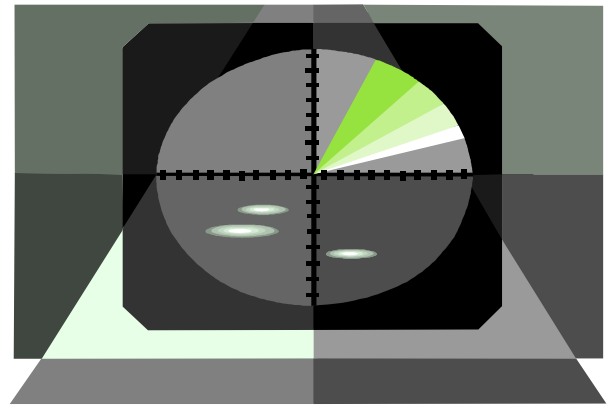
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## EARLY DETECTION

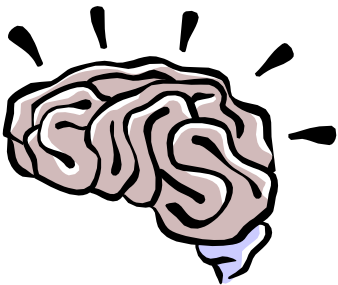
### EMERGENCY! BRAIN ATTACK!

A stroke is just like a heart attack. Brain tissues need a constant supply of oxygen and nutrients. If a blood vessel is blocked, the brain tissue will starve and soon die. Just like a heart attack, a stroke is time sensitive emergency, requiring immediate medical care. The National Institute of Neurological Disorders and Stroke (NINDS) and the National Stroke Association (NSA) list the following as signs and symptoms of a stroke, indicating a medical emergency:

- Sudden weakness, numbness, or paralysis of the face, arm, or leg, (usually on one side of the body)
- Sudden loss of speech, difficulty talking, garbled or slurred speech
- Sudden difficulty understanding language or confusion
- Sudden loss of vision or blurred vision
- Sudden, severe headache with no apparent cause
- Sudden trouble walking, loss of balance or coordination (may be associated with dizziness)



Other symptoms, which may or may not be present, include: nausea, vomiting, fainting, seizures or coma.



Occasionally, the symptoms may go away or become less intense; however you should still call for help and see a doctor to assess if any damage has been done.

When treating a stroke, time is of the essence. Many drug treatments, such as the clot-busting drugs work only if given within 3 hours after the onset of a stroke. Unfortunately, studies have shown few people are aware of the warning signs of strokes, resulting in delays in seeking medical help. To help educate the public, The NINDS, NSA, and American Stroke Association have funded a public education campaigns to teach the signs and symptoms of stroke.

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Editors' Note: Please don't forget to send in the quiz after you've completed the newsletter!!

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Early detection is usually based on the symptoms the person is experiencing. However, several tests are available to help diagnose a stroke. Unfortunately, if the symptoms go away quickly (a situation called a transient ischemic attack, or TIA), all of the medical tests could be normal. Therefore, the symptoms that the person reports to a healthcare provider are very important. Additional medical testing can provide valuable information to confirm the diagnosis of stroke. Common tests are computerized tomography (CT) scans, and magnetic resonance imaging (MRI) scans. These tests can determine whether the person had a stroke due to bleeding (a brain hemorrhage) or a blocked blood vessel (ischemic stroke). Both CT and MRI scans take



pictures of the brain tissue and blood vessels. Usually, a person will lie in a large machine for one to two hours while the brain is scanned. CT and MRI scans are used to determine other conditions which can “masquerade” as a stroke, but are treated very differently. Carotid ultrasound and duplex scans are tests which utilize sound waves to detect blockages in blood vessels. All blockages in blood vessels need to be opened either surgically or dilated with a balloon catheter to prevent a larger stroke, or future strokes from occurring. MRI scans can also directly visualize blood vessels. Occasionally x-ray dye is injected directly into blood vessels to look for a blockage. Again, timing is critical. If the person has already had a major stroke resulting in damage to brain cells, reopening blood vessels does not reverse the damage already done.

### TISSUE PLASMINOGEN ACTIVATOR (t-PA)

One of the most exciting new treatments for stroke is Tissue Plasminogen Activator (t-PA). We actually already have a supply of t-PA in the cell lining of our blood vessels, where it helps dissolve blood clots. When t-PA is given intravenously (in the veins), it helps to break clots blocking blood flow to the brain. Tissue plasminogen activator (t-PA) is the first FDA-approved acute treatment for ischemic stroke. The National Institute of Neurological Disorders and Stroke (NINDS) conducted a 5 year study that found certain stroke patients who received t-PA within 3 hours of onset of symptoms were at least 33 percent more likely than a placebo (inactive ingredient) group to recover from their stroke with little or no disability after three months. The most common complication with t-PA is hemorrhage or bleed. Therefore, patients with symptoms of stroke must have a computerized cranial tomography (brain scan) to be sure their stroke is not caused by a hemorrhage or bleed in the brain. A physical and neurological examination must be done prior to the drug treatment to rule out anyone who may be at increased risk. Getting medical attention quickly is important so the necessary test can be done before treatment is given. **TIMING IS EVERYTHING!**



**Continued...**

A person may not be eligible for t-PA for several reasons. Minor strokes or rapidly improving stroke symptoms are not treated with t-PA because of side effects. If there is a possibility of bleeding in the brain, active bleeding anywhere in the body, head trauma, or prior stroke in the last 3 months, t-PA will not be given. Finally, if someone has had recent major surgery or trauma, GI (stomach or intestines) or urinary tract bleeds in last 21 days, recent medical procedures such as arterial puncture, lumbar puncture, they are not eligible for t-PA. Medical conditions that limit use of t-PA include a history of seizures, aneurysm, intracranial hemorrhage, heart attack, pericarditis, hypertension, abnormal blood sugar (<50 or >400), or platelet count <100,000.

**WARNINGS:** There is an increased risk of intracranial hemorrhage in very large strokes, or if CT scans show major early infarct signs. As you can see, a complete history and examination is needed before giving t-PA to a person safely. Every minute counts when the symptoms first begin to the time medication can be given. Keeping a record of medical conditions and medications taken in an easily accessed place is a good idea to help out in medical emergencies. If you are with someone experiencing stroke symptoms, do not waste valuable time! Call for help immediately!

**OTHER TREATMENTS**

Early detection is also important for several other stroke treatments. As already mentioned, surgery to open an artery can be performed to help blood flow to the brain, as long as a major stroke has not already occurred. As with t-PA, timing is often very important. In certain types of smaller strokes, other blood thinners, such as heparin or aspirin might be given in hopes of preventing a major stroke. The specific treatment given depends on many different factors, but the most important thing of all is to get medical help as quickly as possible so that the appropriate treatment can be initiated.

**PREVENTION IDEAS**

Prevention is always the best medicine. These are the key factors that help with prevention:

**Control your hypertension**

**Stop smoking**

**Exercise regularly**

**Eat a healthy diet**

**Control your diabetes**



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