



HIGH BLOOD PRESSURE AND STROKE



A stroke, sometimes called a "brain attack," occurs when blood flow to an area in the brain is cut off. As a result, the brain cells, deprived of the oxygen and glucose needed to survive, die. If not caught early, permanent brain damage can result.

Uncontrolled high blood pressure increases a person's stroke risk by four to six times. Over time, hypertension leads to atherosclerosis and hardening of the large arteries. This, in turn, can lead to blockage of small blood vessels in the brain. High blood pressure can also lead to weakening of the blood vessels in the brain, causing them to balloon and burst. The risk of stroke is directly related to how high the blood pressure is.

How Does a Stroke Occur? There are two types of stroke.

- **Ischemic stroke** is similar to a heart attack, except it occurs in the blood vessels of the brain. Clots can form either in the brain's blood vessels, in blood vessels leading to the brain, or even blood vessels elsewhere in the body which then travel to the brain. These clots block blood flow to the brain's cells. Ischemic stroke can also occur when too much plaque (fatty deposits and cholesterol) clogs the brain's blood vessels. About 80% of all strokes are ischemic stroke.
- **Hemorrhagic (heh-more-raj-ik) strokes** occur when a blood vessel in the brain breaks or ruptures. The result is blood seeping into the brain tissue, causing damage to brain cells. The most common causes of hemorrhagic stroke are high blood pressure and brain aneurysms. An aneurysm is a weakness or thinness in the blood vessel wall that causes it to balloon outward.

Signs of Stroke - If you or a loved one experience any of the following signs, call 911 immediately.

- Sudden numbness or weakness in the face, arm, or leg (especially on one side of the body)
- Sudden blurred vision or decreased vision in one or both eyes
- Sudden inability to move part of the body (paralysis)
- Sudden dizziness or headache with nausea and vomiting
- Difficulty speaking or understanding words or simple sentences
- Difficulty swallowing
- Dizziness, loss of balance, or poor coordination
- Brief loss of consciousness
- Sudden confusion

A transient ischemic attack (TIA), often called a "mini-stroke," may be a warning of an impending stroke. It typically consists of the same signs and symptoms of stroke, but the symptoms are temporary. It occurs when blood flow to a certain part of the brain is cut off for a short period of time, usually 15 minutes or less. A TIA can occur anywhere from a few minutes to several months before a stroke. A TIA is a painless episode, but it is a warning that something is wrong. It should be treated as seriously as a stroke.

What Should I Do If I Experience Stroke Symptoms?

Immediately call 911 if you have stroke symptoms. Stroke is a medical emergency. Immediate treatment can save your life or increase your chances of a full recovery.

What Is the Treatment for a Stroke?

The only FDA-approved treatment for acute ischemic (sudden onset) stroke is a thrombolytic agent or "clot buster" medication called tPA. tPA must be given within the first 3-4.5 hours of the onset of stroke symptoms.

Also, there are several new and experimental drugs that may stop -- and even reverse -- the brain damage associated with stroke if administered immediately after a stroke. Other treatments focus on preventing another stroke by treating risk factors associated with stroke such as atherosclerosis and high blood pressure. Treatment of high blood pressure is the most important way to prevent stroke.

Are Strokes Preventable?

Up to 80% of all strokes are preventable. Many risk factors can be controlled before they cause problems. Some controllable risk factors include:

- High blood pressure (High = greater than 140/90)
- Atrial fibrillation (an irregular heart rhythm)
- Uncontrolled diabetes
- High total cholesterol (greater than 200)
- Smoking
- Alcohol (more than one drink per day)
- Being overweight
- Existing carotid and/or coronary artery disease

To prevent stroke it is very important to take measures to lower blood pressure and cholesterol if they are elevated, control diabetes, quit smoking, and get plenty of exercise, and maintain a healthy weight. People at risk for stroke and heart attack may also be treated with aspirin or similar medications, which can prevent blood clots from forming. Some people may need to undergo procedures to remove plaque from the arteries or widen the arteries to improve blood flow.

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