

STROKE

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Stroke is a medical condition in which blood stops to flow to a part of the brains as a result of damaged vessels or damage caused by a bleeding part of the brain. When this happens, the brain cells in this area stops to receive oxygen and the cells begin to die leading to the malfunctioning of the affected part of brain such as memory loss and loss of movement coordination.

Stroke can also be referred to as a neurological condition which lasts for more than a day or is stopped by death within one day which is capable of causing an irreversible damage and also causing deformities in the patient.

Types of stoke:

1. **ISCHEMIC STROKE:** This is a type of stroke in which blood clots in a particular part of the brain leading to the blockage of the arteries and also damage the affected part of the brain. When a brain cell stops to receive oxygen as a result of the ruptured blood channel damage caused by a bleeding vessel, the affected part of the brain stops to function and this leads to death of the cell after some time which causes an irreversible damage or effect to the brain cells. Since the blood vessels are blocked, the brain becomes low in energy and results in anaerobic metabolism by the brain and this process produces less ATP but releases lactic acid. This lactic acid released by the process of anaerobic metabolism of the brain tends to disrupt the acid base balance because of its acidity. This type of stroke is responsible for about 85% of all stoke types.

0 2. **HEMORRHAGIC STROKE :** This type of stoke is caused by the bursting of brain aneurysm, weakened blood vessel leakage, hypertensive hemorrhage, ruptured AV fistula, and drug induced bleeding. As a result of this, blood spills in a particular area of the brain increasing the pressure and creates swelling, damaging cells and tissues of the brain. There are basically two types of hemorrhagic stroke which are;

1 I. **Intracerebral hemorrhage** - This happens when a blood vessel inside the brain bursts and leaks into the tissues of the brain (intracerebral hemorrhage). This bleeding causes the brain cells to die and the affected area stops to function well. Causes are hypertension and aging blood vessels;

2 II. **Subarachnoid hemorrhage-** This bleeding occurs outside the brain tissue which is known as the subarachnoid space. Causes are burst aneurysm, blood thinner medications, head injuries.

PREVENTION.

For healthy patients, taking aspirin for the prevention or cure of stoke doesn't seem to be necessary. In patients who have been diagnosed of hypertension, daily intake of 75mg-15mg of aspirin can prevent a first stroke. Patients who have had a stroke, treatment with drugs like aspirin, clopidogrel and dipyridamole will be beneficial because they help in opening the channels through which blood flows

RISK FACTORS. Hypertension, high cholesterol level, elevated sugar level, smoking, heavy alcohol use, drug use, obesity, processed red meat consumption, and unhealthy diet.

Smoking one stick of cigarette per day increases the risk of having a stroke by 30%.

High level of exercise reduces the chances of having a stroke by 26%.

Blood pressure accounts for 35-50% of stroke risk. Lowering the systolic and diastolic by 10mmhg reduces the risk by 40%.

Stroke was the second most frequent cause of death worldwide in 2011 accounting for 6.2 million deaths. It is ranked after heart failure and before cancer. 95% of stroke occur in people age 45 and above. At an average, stroke kills faster when it happens at an older age which means the older you are at the time of the stroke the more the risk of death.

Men usually suffer stroke more than women but yet 60% of people who die of stroke yearly are women. Since they live longer, they are usually older on average when they have stroke and thus often killed as death risk increases exponentially with age.

Stroke is actually hereditary. Having had stroke by your parents or relations increases the chances of you having stroke which simply means it can be hereditary.

SIGNS AND SYMPTOMS.

A mnemonic to link to the warning signs which relates to stroke is FAST (facial droop, arm weakness, speech difficulty and time to call emergency line). Early recognition of stroke reduces the risk and also prevents it. The manifestations of stroke depends on the affected side of the brain leading to the malfunctioning of that portion of brain. For example, for an affected cerebellum, symptoms like altered movement, altered walking may be noticed in the patient.

Stroke can be diagnosed through different methods such as CT scans, neurological examination, doppler ultrasound, and arteriography. Running tests with blood serum can be used to find out the actual origin or starting point of stroke in a patient.

Diagram of stroke types with the first two showing how the blood channels are blocked and the last two showing the bleeding in a particular side of the brain.