

**Meta:** Understanding Ischemic Stroke is understanding the risk factors that lead to ischemic stroke which is crucial for prevention and effective treatment.

# Ischemic Stroke

Ischemic stroke is the most common stroke type. It's a life-threatening medical condition, accounting for about 87% of all strokes. The reason why a person may have an ischemic stroke is the interruption or limitation of blood supply to a part of the brain. This interruption prevents brain tissue from receiving the oxygen and nutrients it needs, leading our brain cells to die within minutes. That's why, a case of Ischemic stroke can potentially be more fatal than any other medical emergency.

## What Causes Ischemic Stroke?

Understanding Ischemic Stroke is understanding the risk factors that lead to ischemic stroke. It is crucial for prevention and effective treatment. Let's take a look at some of the main causes of ischemic stroke:

### Atherosclerosis:

Atherosclerosis refers to the buildup of fatty deposits (plaque) on the inner walls of arteries, which can reduce or block blood flow to the brain resulting in Ischemic Stroke.

### Embolism:

When a substance, such as a blood clot, air bubble, fat globule, or other foreign material, travels through the bloodstream and lodges in a blood vessel, it ends up blocking blood flow. This blockage is known as Embolism. This is often associated with conditions like atrial fibrillation, which can cause blood clots to form in the heart.

### Thrombosis:

The formation of a blood clot (thrombus) inside a blood vessel that obstructs the flow of blood through the circulatory system is called Thrombosis. This can occur in the presence of atherosclerosis when a plaque ruptures and a clot forms at the site.

### **Cardiac Conditions:**

Cardiac Conditions, such as atrial fibrillation, heart attack, or valve disease, can also lead to the formation of clots that may travel to the brain and cause Ischemic Stroke.

### **Other Blood Disorders:**

There are some other conditions that increase the likelihood of blood clotting, such as sickle cell disease, clotting disorders, or inflammation of blood vessels (vasculitis).

## **Who Is More Likely To Have An Ischemic Stroke?**

Anyone can have a stroke regardless of their age. But still, there are certain risk factors that can increase the possibility of having a stroke. While some risk factors for stroke can be avoided with proper lifestyle, others can't.

Here are some of the risk factors that increase the likelihood of having an ischemic stroke:

### **Age:**

As we have already stated, anyone can have a stroke at any age, but still, advanced age is a risk factor for having an Ischemic Stroke. The risk of stroke increases with age, particularly after age 55.

### **Gender:**

Gender-wise, men are generally at a higher risk of stroke than women. But that doesn't mean women are safe. Women tend to have strokes at older ages and may be more likely to die from them.

### **Family History:**

A family history of stroke is a major risk factor for having an ischemic stroke, and unfortunately, it is something we cannot control. If you have a family history of stroke or transient ischemic attack (TIA), your risk of having a stroke is higher.

## Medical Conditions:

Some medical conditions can increase your risk of having an ischemic stroke. Let's take a look at some of them:

- **High Blood Pressure:** This is the leading cause of stroke, it damages blood vessels over time, putting you at higher risk of having a stroke.
- **Diabetes:** If you have diabetes, you are more likely to have a stroke in the future due to how it damages blood vessels and the heart.
- **Heart Disease:** Conditions such as atrial fibrillation, heart valve disease, and heart failure increase the risk of blood clots, making you more prone to stroke.
- **High Cholesterol:** If you have High Cholesterol, it can lead to atherosclerosis, which increases stroke risk.

## Lifestyle Factors:

Our lifestyle plays a pivotal role in preventing ischemic stroke. Here are some lifestyle factors that can significantly impact our health and increase the risk of stroke.

- **Smoking:** It goes beyond saying how badly smoking can impact our health. Smoking can increase blood clotting and the buildup of plaque in arteries, which are the main causes of ischemic stroke.
- **Obesity:** Other risk factors such as high blood pressure, diabetes, and heart disease are closely connected to Obesity, making it one of the major causes of strokes.
- **Lack of Physical Activity:** Regular physical activities reduce the chance of getting obese. So if your lifestyle doesn't allow you to exercise regularly, you are at higher risk of stroke.
- **Unhealthy Diet:** Diets high in saturated fats, trans fats, cholesterol, and sodium increase stroke risk.
- **Excessive Alcohol Consumption:** Can raise blood pressure and contribute to other risk factors.

## Race and Ethnicity:

Some may find it surprising, but race and ethnicity can impact the risk of having strokes due to a combination of genetic, socioeconomic, and lifestyle factors. Let's take a look at how race can be a risk factor for Ischemic strokes.

- **African Americans:** People from the African-American community are more likely to have a higher prevalence of hypertension, diabetes, and obesity, which significantly increase the risk of stroke. They are also more likely to experience strokes at younger ages compared to other groups.
- **Hispanic Americans:** If you are a Hispanic American, you are more likely to have higher chances of getting type 2 diabetes and obesity, which contribute to an increased risk of stroke. Unsurprisingly, stroke is a leading cause of death among Hispanics.
- **Asian Americans:** People from South Asian regions have a higher prevalence of hypertension and diabetes, making them more prone to stroke. However, the risk can vary widely among other Asian populations due to differences in food habits and lifestyle.
- **Native Americans:** Higher rates of hypertension, diabetes, and smoking are significant risk factors for stroke, and these are all very common among Native Americans.

### **Previous Stroke or TIA:**

If you've had a stroke or transient ischemic attack (TIA) before, your risk of having another one is higher.

### **Certain Blood Disorders:**

Certain blood conditions that increase blood clotting, such as sickle cell disease and clotting disorders, raise the risk of ischemic stroke.

## **How Do I Know If I Am Having An Ischemic Stroke?**

Recognizing these symptoms quickly is crucial for seeking immediate medical attention, which can significantly improve outcomes. There is an easy way to recognize early symptoms of Ischemic Stroke. It's popularly known as FAST (Face drooping, Arm weakness, Speech difficulty, Time to call emergency services)! Call 911 as soon as you recognize these symptoms.

You should know that the symptoms of an ischemic stroke can vary depending on the part of the brain affected. Here are some of the most common symptoms:

- **Sudden Numbness or Weakness:** Particularly on one side of the body, affecting the face, arm, or leg.
- **Confusion:** Sudden trouble speaking or understanding speech.
- **Vision Problems:** Sudden trouble seeing in one or both eyes.
- **Difficulty Walking:** Sudden dizziness, loss of balance, or lack of coordination.
- **Severe Headache:** Sudden, severe headache with no known cause.

Apart from these common symptoms, let's take a look at some less common symptoms of Ischemic Stroke:

- Sudden Trouble Swallowing (dysphagia)
- **Sudden Difficulty with Coordination or Clumsiness**
- Sudden Memory Loss or Cognitive Difficulties
- Sudden Trouble with Balance or Vertigo
- Sudden Altered Sensation

## Diagnosis Of Ischemic Stroke

Everything happens so quickly during a stroke, once you are at the hospital, your emergency team needs to do everything to determine the type of stroke you are having. Let's check out what your healthcare professionals need to do to ensure a prompt diagnosis of an ischemic stroke.

### Physical Examination:

The first thing your healthcare provider will do is check for signs and symptoms of a stroke, such as numbness, weakness, and difficulty with speech or coordination.

They may also perform neurological assessments to evaluate brain function which includes tests of reflexes, vision, and balance.

### Imaging Tests:

- **CT Scan:** In order to quickly identify bleeding or other abnormalities in your brain, they will do a CT Scan. This will help them identify if you are having an ischemic stroke or hemorrhagic stroke.
- **MRI:** An MRI provides a more detailed image of the brain. It detects which areas of your brain tissue have been damaged by an ischemic stroke.

### **Blood Tests:**

You will be given blood tests to check for risk factors such as high blood sugar, clotting disorders, and infections. These tests will also measure the levels of substances like cholesterol and homocysteine that can influence stroke risk.

### **Electrocardiogram (ECG):**

Heart rhythm problems, such as atrial fibrillation, can lead to the formation of blood clots and increase the risk of stroke. By recording the electrical activity of the heart, an ECG can detect any abnormality with your heart rhythms.

### **Carotid Ultrasound:**

With the use of sound waves, Carotid Ultrasound creates images of the carotid arteries in the neck, detecting narrowing or blockages in these arteries.

### **Cerebral Angiography:**

Cerebral angiography makes blood vessels visible on X-ray images by inserting a catheter into a blood vessel and injecting a contrast dye. This allows medical professionals to identify blockages or abnormalities in the brain's blood vessels.

### **Echocardiogram:**

An echocardiogram creates images of the heart with the use of sound waves. An echocardiogram helps to detect sources of blood clots in the heart that might travel to the brain and cause a stroke.