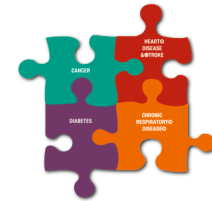


# Stroke

Things you should know :  
Your risk and how to be prepared



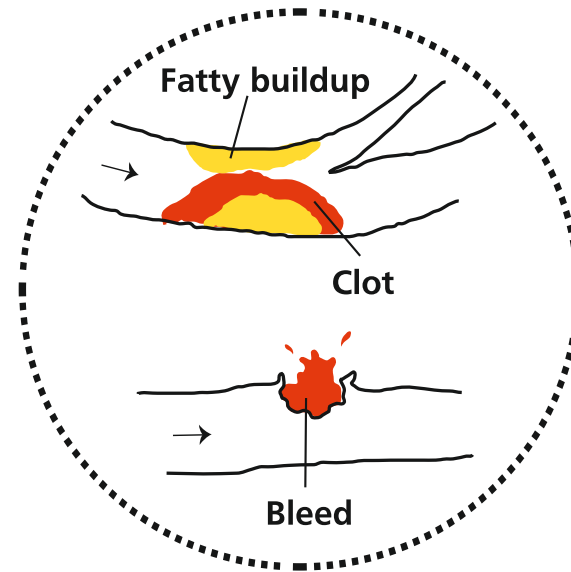
**Developed by**

WHO Collaborating Centre for Capacity Building and Research in Community-based Noncommunicable Disease Prevention and Control

Centre for Community Medicine, All India Institute of Medical Sciences (AIIMS), New Delhi, India

## What is a stroke ?

A stroke occurs when blood flow to a part of the brain stops.  
A stroke is sometimes called a brain attack.



# What is a stroke ?

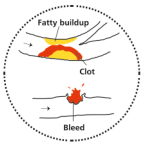

A stroke or **Cerebrovascular Accident (CVA)** is a serious life-threatening medical condition that occurs when the blood supply to a part of the brain is cut off.

Strokes are divided into two groups depending upon the cause. There can either be a blockage called an ischaemic stroke or a bleed called a haemorrhagic stroke. It is important to identify the type of stroke since treatment varies according to the type.

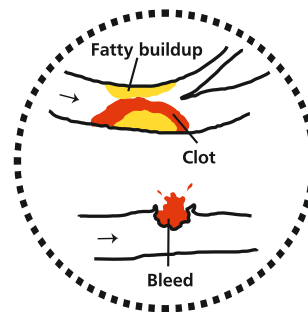
**Ischaemic stroke or Blockage stroke** is commonly caused by a buildup of fatty materials inside the blood vessels which prevents blood from flowing freely. This fatty deposit may lead to a clot which blocks the blood supply just in the case of a heart attack. This is why a stroke can be termed as a brain attack.

**A haemorrhagic stroke or bleeding stroke** happens when a blood vessel bursts suddenly causing blood to leak in or around the brain. In this kind of stroke, blood in the brain can lead to a swelling of the brain which requires surgery in some cases. Bleeding stroke is most commonly seen among people with high blood pressure (hypertension).

**What is a stroke ?**  
A stroke occurs when blood flow to a part of the brain stops.  
A stroke is sometimes called a brain attack.



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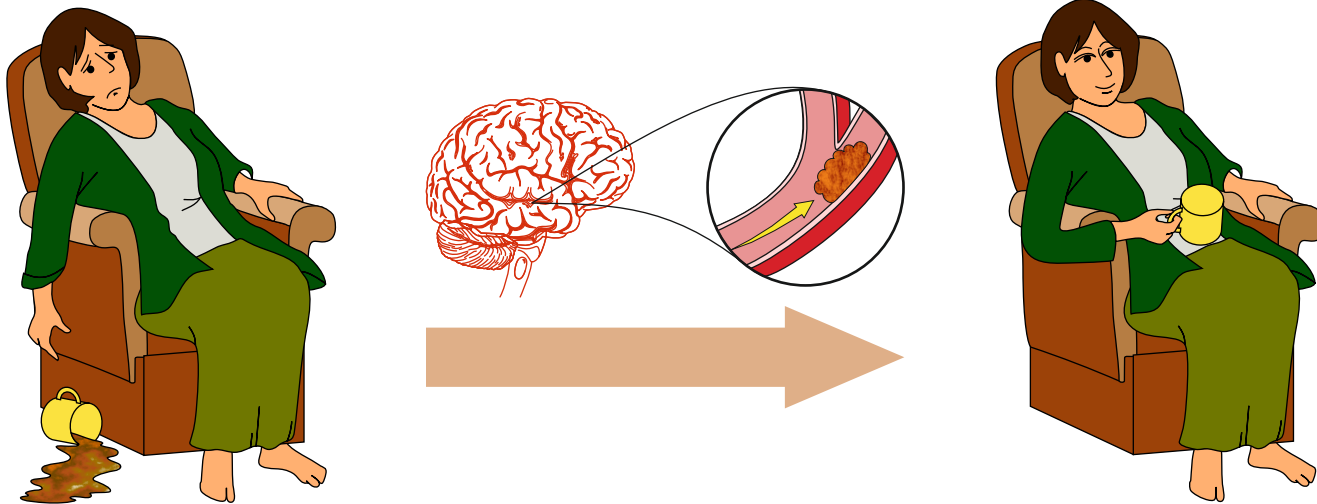


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## What is a mini-stroke?

Some people have a small stroke, sometimes called a mini-stroke. The signs are the same as for a stroke, but may not be as bad.

Mini stroke is a **serious warning sign** that a stroke may happen in the future and **should not be ignored**



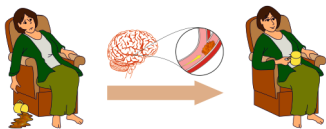
# What is a mini-stroke?

- Sometimes stroke symptoms completely disappear in less than 24 hours. This is called a mini-stroke or a transient ischaemic attack (TIA).
- When a TIA occurs, the artery either becomes unblocked after a short time or a new path opens up and blood flow becomes normal.
- Just as in a full blown stroke, if a TIA is suspected, one must go to hospital immediately.
- This is because the TIA is a warning sign that one is at high risk of having a full stroke
- TIAs are usually caused by one of three things:
  - Low blood flow at a narrow part of a major artery carrying blood to the brain, such as the carotid artery.
  - A blood clot in another part of the body (such as the heart) breaks off, travels to the brain, and blocks a blood vessel in the brain.
  - Narrowing of the smaller blood vessel in the brain, blocking blood flow for a short period of time; usually caused by plaque (a fatty substance) build-up.

## What is a mini-stroke?

Some people have a small stroke, sometimes called a mini-stroke. The signs are the same as for a stroke, but may not be as bad.

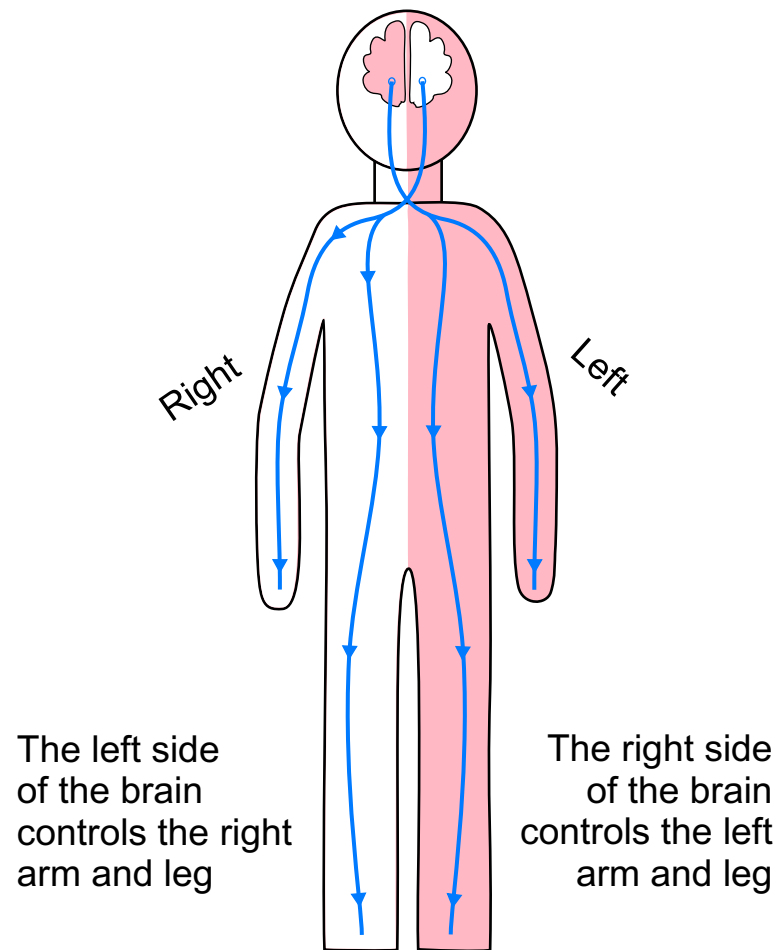
Mini stroke is a **serious warning sign** that a stroke may happen in the future and **should not be ignored**



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# How does our brain function?



# How does our brain function?

The right brain controls the left side of the body, while the left brain controls the right side. A stroke affecting one side will result in neurological complications on the side of the body it affects.

## Right Brain

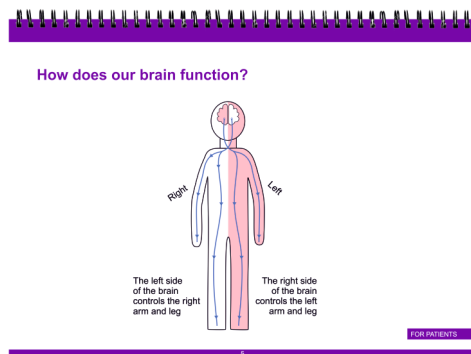
**If the stroke occurs in the brain's right side, the left side of the body (and the left side of the face) will be affected, which could produce any or all of the following:**

- Paralysis on the left side of the body
- Vision problems
- Quick, inquisitive behavioral style
- Memory loss

## Left Brain

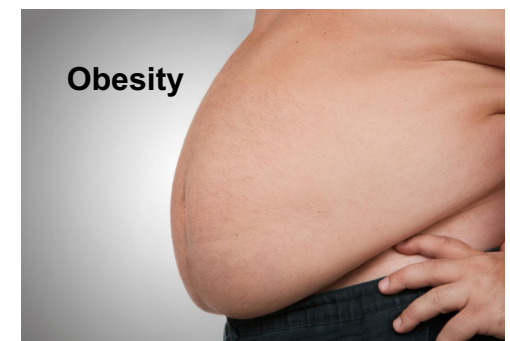
**If the stroke occurs in the left side of the brain, the right side of the body will be affected, producing some or all of the following:**

- Paralysis on the right side of the body
- Speech/language problems
- Slow, cautious behavioral style
- Memory loss





# Who is at risk of having a stroke?



# Who is at risk of having a stroke?

## Someone with -

- High blood pressure
- High cholesterol
- Heart disease
- Diabetes
- Obesity
- Smoking
- Heavy alcohol consumption
- Physical inactivity
- Prior stroke
- Prior TIA

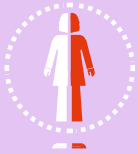
### Who is at risk of having a stroke?



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# Know the signs of stroke



Sudden numbness or weakness of face, hand or leg especially on one side of the body.



Sudden confusion or trouble in speaking and understanding.



Sudden trouble seeing in one or both eyes.



Sudden trouble walking, dizziness or loss of balance or coordination.








Sudden severe headache which may be accompanied by altered consciousness.

# Know the signs of Stroke

- Sudden weakness in one side of the body
- Sudden numbness in one half of the body
- Sudden difficulty in speaking or understanding speech
- Sudden trouble seeing in one or both eyes
- Sudden loss of consciousness
- Sudden trouble walking, dizziness or loss of balance
- Sudden severe headache with no known cause.

## Knot the signs of Stroke

-  Sudden numbness or weakness of face, arm or leg especially on one side of the body.
-  Sudden confusion or trouble in speaking and understanding.
-  Sudden trouble seeing in one or both eyes.
-  Sudden trouble walking, dizziness or loss of balance or coordination
-  Sudden severe headache which may be accompanied by altered consciousness.

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# Act F.A.S.T.



## Face

Is there drooping of one side of face?



## Arms

Is there weakness in one arm?



## Speech

Is the speech slurred or strange?

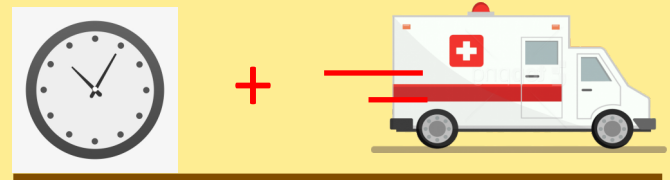


If yes,

**Immediately contact the nearest health facility**

## WHEN A STROKE OCCURS

Quick decisions and timely treatment may improve recovery.



*Quick Treatment = Less Brain Damage*

# Why is there a need to act fast if someone has a sign of stroke?

- Stroke is a medical emergency. Every minute counts.
- The term **golden hour** is used to designate the hour immediately following the onset of stroke symptoms and the reason it is “golden” is that stroke patients have a much greater chance of surviving and avoiding long-term brain damage
- The longer the normal blood flow to the brain is reduced, the greater the chance for damage.
- Damage to the brain can be reduced or reversed if proper treatment (either medicines or surgery) is started early.
- This is why it is **important to act quickly if you suspect a stroke.**
- Diagnostic tests should be done as soon as possible
- If medicines to dissolve or treat clots are needed and available they should be started within three hours of experiencing the stroke for the greatest chance of recovery.



**Act FAST**

- Face**  
Is there drooping of one side of face?
- Arms**  
Is there weakness in one arm?
- Speech**  
Is the speech slurred or strange?
- If yes,**  
Contact the nearest health facility

**WHEN A STROKE OCCURS**  
Quick response and timely treatment may prevent recovery.

Quick Treatment = Less Brain Damage

FOR PATIENTS

# How can stroke be prevented ?



FOR PATIENTS

# How can stroke be prevented ?

Maintain a healthy lifestyle.

Patients may need to take certain medications to reduce chances of getting a stroke

- Anti hypertensive medicines might be needed if blood pressure is high.
- Cholesterol-lowering medicines might be needed if blood cholesterol is high and by those who already have had a stroke irrespective of cholesterol levels.
- Hypoglycaemic drugs - Insulin and oral diabetes medicines might be needed for persons with diabetes
- Besides, certain medicines are commonly given to prevent a second stroke:
- Anticoagulants: prevent the blood from clotting and causing a stroke.
- Antiplatelet agents. Platelets are blood cells that help the blood clot when blood vessels are injured. Antiplatelet medicines prevent platelets from causing a clot in blood vessels.



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**World Health  
Organization**

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