# STROKE EDUCATION

## For Patients, Families, and Caregivers

Redeemer Health

redeemerhealth.org/stroke-education

Rev. 07/2026

# Introduction to Stroke Education

Holy Redeemer Hospital has been recognized as a **Nationally Certified Primary Stroke Center** with expertise in diagnosing and treating people with transient ischemic attack (TIA) and cerebrovascular accident (CVA) or stroke. Members of our health care team – doctors, nurses, physical therapists, occupational therapists, speech therapists, care managers, dietitians and others – are dedicated to treating and educating patients and their families who are experiencing the difficulties that CVA can bring.

A nurse will review the information in this booklet with you and/or a member of your family. We want to provide you with all of the appropriate education and support you need. Evidence shows that patients who understand and participate in their care can reduce the risk and/or severity of another CVA.

## What is a TIA?

A transient ischemic attack (TIA) happens when a blood clot briefly blocks blood flow to the brain. The symptoms mirror those of a stroke but often pass quickly. Around 12% of strokes follow a TIA, so treat it seriously. **Call 911 or get emergency help right away.**

## What is a Stroke?

A stroke is a sudden decrease in the amount of blood to the brain. Blood carries oxygen to the brain. When oxygen to the brain is reduced, brain nerve cells may become damaged or die. Nerve cells can start to die within minutes of a stroke and the part of the body that they control will not function as well. The longer one waits to get help, the more brain cells will die.

# Major Types of Strokes

## Ischemic Stroke: 87% of strokes

It occurs when blood flow to the brain is partially or completely blocked.

- **Thrombotic Stroke.** The most common type. It happens when a blood clot forms in an artery supplying blood to the brain. Atherosclerosis (hardening/thickening of vessel walls) can lead to a clot formation.

***Some risk factors: High blood pressure and diabetes.***

- **Embolic Stroke.** It occurs when a clot or plaque breaks off elsewhere in the body and travels to the brain, blocking blood flow.

***Some risk factors: High cholesterol, atrial fibrillation, heart attack.***

## Hemorrhagic Stroke: 13% of strokes

It occurs when a blood vessel bursts, causing bleeding in or around the brain..

- **Intracerebral hemorrhages.** The most common type of hemorrhagic stroke. It occurs when a blood vessel bleeds or ruptures into the tissue deep within the brain.

- **Subarachnoid hemorrhages.** An aneurysm ruptures and bleeds into the space between the brain and the skull.

***Some risk factors: Chronically high blood pressure, aging blood vessels, cigarette smoking, excessive alcohol intake, use of illicit drugs, blood thinners, brain aneurysms.***

# Warning Signs

## BE FAST Test:

### B – BALANCE
Does the person have a sudden loss of balance?

### E – EYES
Does the person have blurred or double vision?

### F – FACE
Ask the person to smile. Does one side of their face droop when smiling?

### A – ARMS
Ask the person to raise both arms. Does one arm drift downward when raised?

### S – SPEECH
Ask the person to repeat a sentence. Is their speech slurred or incorrect?

### T – TERRIBLE HEADACHE / TIME
Does the person have a sudden severe headache?

# BE FAST

*The American Stroke Association wants everyone to know the warning signs of stroke.*

***If you notice one or more of these warning signs, get emergency help (dial 911) immediately.***

# Recognize a STROKE

## Think B E F A S T

**B**

### BALANCE

Sudden loss of balance or coordination

**E**

### EYES

Sudden trouble seeing in one or both eyes

**F**

### FACE

Face drooping on one side

**A**

### ARMS

Arm or leg weakness on one side

**S**

### SPEECH

Sudden trouble speaking or understanding

**T**


### TERRIBLE HEADACHE

Sudden severe headache with no known cause

### TIME TO ACT

Time to call 911 right away

**CALL 911 IMMEDIATELY**

**TIME IS BRAIN.**
**CALL 911 IMMEDIATELY.**

# Risk Factors

**Check All That Apply To The Patient**

## NON-MODIFIABLE Risk Factors

***(Risk factors that CANNOT be changed)***

- [ ] Age (the older you are, the greater your stroke risk)
- [ ] Race and ethnicity (Black and Hispanic people have a higher risk of stroke)
- [ ] Sex (women have a higher stroke risk)
- [ ] Heredity (family history of stroke)
- [ ] Prior stroke or TIA
- [ ] Prior heart attack

## MODIFIABLE Risk Factors

***(Risk factors that CAN be changed)***

- [ ] High blood pressure
- [ ] Cigarette smoking
- [ ] Diabetes
- [ ] Carotid artery blockage
- [ ] Abnormal heart rhythm
- [ ] Unhealthy diet
- [ ] High cholesterol
- [ ] Obesity
- [ ] Physical inactivity
- [ ] Alcohol use
- [ ] Drug use (cocaine, amphetamines)
- [ ] Birth control pill use

# Diagnosis

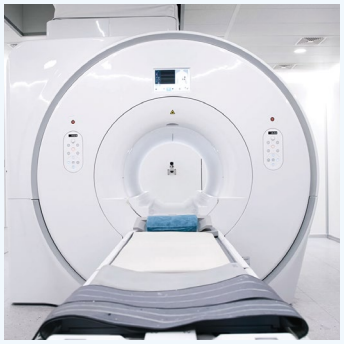
The following tests can be used to diagnose stroke and its severity. A health care provider may recommend one or more of these tests to help determine the best treatment for the patient's condition.

**Physical and neurological examinations** by a physician or other health care provider (HCP).

**Basic Lab Test.** The patient may require testing for blood clotting issues, sugar and cholesterol levels as determined by HCP.

**Computer Tomography (CT) Scan.** This is usually the first test done when a stroke is suspected and generally as the patient arrives in the emergency department. CT scans are painless and use X-rays to take pictures of the brain and skull. It determines if the stroke is ischemic or hemorrhagic.

**Computed Tomography Angiography (CTA).** CTA is a medical imaging technique that combines a CT scan with an injection of a contrast dye to produce detailed images of blood vessels and surrounding tissues.



**Magnetic Resonance Imaging (MRI).** The MRI allows a physician to see a very detailed picture of brain tissues and arteries in the neck and brain. It's usually done to determine the area in the brain that is affected by an ischemic stroke.

It is important to know if a patient has any metal implants in the body before MRI. ***Have your device card (ICD, pacemaker, stent, etc.) with you!***

**Carotid Ultrasound.** This study uses sound waves to create images that show blood flow through the carotid arteries *(blood vessels in the neck that bring blood to the brain)*. A carotid ultrasound allows a physician to see if there is blockage or narrowing in the carotid artery that may lead to a stroke.

# Medications

Hospital care, medications and rehabilitation are all part of the treatment for stroke and measures to reduce the risk for recurrent stroke.

## Medications that are the often used to treat and/or prevent a stroke:

### Clot-Busting Medications (Thrombolytics)

**Example: Tenecteplase (TNK)**

It is used during the initial treatment of an ischemic stroke. Must be given as soon as possible (ideally within 4.5 hours). These medications break up the clot and restore blood flow. This medication is not used for bleeding (hemorrhagic) strokes.

### Antiplatelet Medications

**Example: Aspirin, Clopidogrel**

These medications help prevent platelets from sticking together. Often started within 48 hours. Some patients will receive **dual** therapy (two medications short-term) to prevent another stroke.

### Anticoagulants (Blood Thinners)

**Example: Heparin, Enoxaparin (Lovenox), Warfarin (Coumadin), Apixaban (Eliquis)**

Used especially if stroke is caused by atrial fibrillation (irregular heartbeat).
These medications help prevent new clots.

### Cholesterol Medications

**Example: Atorvastatin, Rosuvastatin, Ezetimibe**

Lower cholesterol and stabilize plaque. Recommended for most stroke patients, even if cholesterol is normal.

### Blood Pressure and Diabetes Control

Blood pressure medications reduce stroke risk. Diabetes medications help protect blood vessels. Controlling these conditions is one of the most important prevention steps.

### Medication Safety Tips

- Take medications exactly as prescribed
- Do not stop or double doses
- Always check with your doctor before taking vitamins or herbal supplements
- Keep an updated medication list with you

# Rehabilitation and Recovery

***Rehabilitation starts as soon as possible following a stroke, often within 24 to 48 hours.***

## Goals:

- Help stroke patients learn how to do things they did before they experienced their stroke
- Regain independence
- Improve strength, speech, and daily function
- Prevent further complications that may be associated with the stroke

## Types of Therapy:

- Physical Therapy – walking, strength, balance, helping muscles work better
- Occupational Therapy – daily activities (dressing, eating), making tasks easier and safer
- Speech Therapy – speaking, swallowing, improving communication and thinking skills

### 1. EARLY STAGE
**IN HOSPITAL**

Begin as soon as you are medically stable. Focus on preventing complications and early movement.

### 2. EARLY RECOVERY
**WEEKS TO MONTHS**

Intensive therapy to regain abilities and build independence. Most improvement happens in this phase.

### 3. CONTINUED RECOVERY
**MONTHS TO YEARS**

Ongoing therapy, practice and patience leads to continued gains and adaptation.

### 4. LONG-TERM WELLNESS

Maintain an active lifestyle, stay socially connected and keep challenging your brain and body.

# Stroke Prevention and Follow-Up Care

If a patient has a TIA or a CVA, their chances for another occurrence are increased. To reduce risk, patients should follow their doctor's instructions to prevent and control high blood pressure, heart disease, diabetes, and other chronic conditions.

**Up to 80% of recurrent strokes are preventable.**

**1 in 4 stroke survivors will have another stroke.**

**Start planning and scheduling your follow-up visits with your primary care physician, neurologist, and other recommended specialists while you are still in the hospital.**

## CONTROL BLOOD PRESSURE


Goal: <130/80 mmHg

Check BP at home regularly

## EAT A HEART-HEALTHY DIET

Fruits/vegetables: ≥5/day

Sodium: < 1,500-2,300 mg/day

Fish: 2 times/week

Limit saturated fat to <6% of daily calories

## STAY PHYSICALLY ACTIVE

150 min/week moderate activity (or 75 min vigorous activity)

Strength training 2 days/week

## MAINTAIN A HEALTHY WEIGHT

Target BMI: 18.5-24.9

Losing 5%-10% of body weight helps

## STOP SMOKING

Smoking doubles stroke risk

Risk starts decreasing within 2-5 years after quitting

## LIMIT ALCOHOL

Women: ≤ 1 drink/day

Men: ≤ 2 drinks/day

## TAKE MEDICATIONS AS PRESCRIBED


Blood pressure meds

Statins (LDL goal <70 mg/dL)

Blood thinners if prescribed

## MANAGE OTHER CONDITIONS

Diabetes (A1c <7%)

High colesterol (LDL <70mg/dL)

Atrial fibrillation (causes 15% of strokes)

# Community Resources

## Holy Redeemer Hospital

**Primary Stroke Center**
1648 Huntingdon Pike
Meadowbrook, PA 19046
*redeemerhealth.org/stroke-education*

## Redeemer Health Resources

**Nutritional Counseling**
215-938-4335

**Diabetes Education Class**
215-938-5700

**Redeemer Health Health & Fitness Center**
1648 Huntingdon Pike
Meadowbrook, PA 19046
215-938-5710

**Decrease risk factors for stroke by making lifestyle changes. Let us show you how!**

**American Stroke Association (ASA)**
*stroke.org*
1-888-4-STROKE

**ASA Support Group**
Find a support group near you.
*stroke.org/SupportGroup*

**Stroke Family Warmline**
Call 1-888-4-STROKE
(1-888-478-7653) or visit
*stroke.org/SpeakWithUs*

**American Lung Association**
*lungusa.org*
Free online smoking cessation program

**Pennsylvania Free Smoking Quitline**
1-800-QUIT-NOW

**National Institute of Neurological Disorders and Stroke**
*ninds.nih.gov*
1-800-352-9424

# My Medical Information

Keep this information up-to-date and bring it to every visit.

## My Personal Information

Name: _____ Date of Birth: _____

Address: _____

Phone Number: _____

Emergency Contact: _____ Relationship: _____

Emergency Contact Phone: _____

## My Doctors

### PRIMARY CARE PROVIDER

Name: _____

Phone: _____

Address: _____

_____

### SPECIALISTS

| SPECIALTY | DOCTOR NAME | PHONE NUMBER |
|---|---|---|
| **Neurology** | | |
| **Cardiology** | | |
| **Rehabilitation** | | |
| **Other** | | |

## My Medical Condition(s)

- ☐ Stroke / TIA
- ☐ High Blood Pressure
- ☐ Diabetes
- ☐ High Cholesterol
- ☐ Atrial Fibrillation
- ☐ Heart Disease
- ☐ Depression / Anxiety
- ☐ Other: _____

_____

## Allergies

Medication Allergies:

_____

_____

Food / Other Allergies:

_____

_____

### IMPORTANT HEALTH NUMBERS

| MEASURE | GOAL | MY LAST VALUE | DATE |
|---|---|---|---|
| **Blood Pressure** | <130/80 mmHg | | |
| **LDL Cholesterol** | <70 mg/dL | | |
| **Total Cholesterol** | <200 mg/dL | | |
| **A1c (if diabetic)** | <7% | | |
| **Weight** | | | |

## Other Important Information

_____

_____

# My Medications and Appointments

Take your medications as prescribed and keep all follow-up appointments.

## My Medication List

Include prescription and over-the-counter medications, vitamins, and supplements

| MEDICATION NAME | DOSE/STRENGTH | HOW OFTEN/TIME TAKEN | PURPOSE/REASON | PRESCRIBING DOCTOR |
|---|---|---|---|---|
| | | | | |
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**Take all medications as prescribed. Do not stop or change any medication without talking to your doctor.**

## My Upcoming Appointments

| DATE | TIME | DOCTOR/PROVIDER | LOCATION | REASON/NOTES |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

## My Health Goals

1. _____
2. _____
3. _____
4. _____

## Questions for My Doctor

1. _____
2. _____
3. _____
4. _____

# You're not alone.

## We're here to help you every step of the way.

**Every small step you take today can help prevent another stroke and build a healthier tomorrow.**

**You Matter**
Your health and well-being are our priority.

**You Have a Plan**
Follow your care plan and take your medications.

**Small Steps**
Healthy choices every day make a big difference.

**We're Here for You**
Your care team is here to support and encourage you.

**Keep Looking Forward**
There is hope.
There is progress.
There is life ahead.

## You are strong.
## You are making progress.

**Together we can reduce your risk and help you live your best life.**

## Thank you for taking an active role in your recovery.

**Contact your care team with any questions or concerns.**
**You are not alone.**

To share a copy of this educational booklet, scan the QR code below.

Redeemer Health

**redeemerhealth.org/stroke-education**