

# Stroke / TIA Patient Education Guide Book



CAPE COD HEALTHCARE



# What is a Stroke? (aka Cerebrovascular Accident or CVA)

## Ischemic Stroke (lack of blood):

This occurs when a blood clot blocks a blood vessel in the brain. The clot may form in the blood vessel or travel from somewhere else in the bloodstream. This stops oxygen and nutrients from getting to the brain and cells begin to die within minutes.

OR

## Hemorrhagic (bleeding) Stroke (excess blood):

This occurs when an artery ruptures and blood leaks into the brain, causing that part of the brain not to function.

**Stroke** occurs when a blood vessel bringing blood and oxygen to the brain gets blocked or ruptures. When this happens, brain cells don't get the blood and oxygen that they need to survive. This causes nerve cells stop working and die within minutes. Then, the part of the body they control can't function either. The effects of stroke may be permanent depending on how many cells are lost, where they are in the brain, and other factors. Stroke is the No. 5 cause of death and a leading cause of serious, long-term disability in America.

# What is a TIA?

**TIA**, or **Transient Ischemic Attack**, is a "minor or mini-stroke" that occurs when a blood clot blocks an artery for a short time. The symptoms of a TIA are the same as those of a stroke, but they usually last only a few minutes. About 15 percent of major strokes are preceded by TIAs, so don't ignore a TIA. **Call 9-1-1 or seek emergency medical attention immediately!**

# What are warning signs of stroke?

You and your family should recognize the warning signs of stroke. You may have some or all of these signs. Note the time when symptoms start and call 9-1-1 or the emergency medical number in your area.

**Stroke is a medical emergency!**

Don't ignore these warning signs, even if they go away.  
Timing is important.

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden severe headache with no known cause

**F.A.S.T.**  
is an easy way to remember  
how to recognize  
a stroke and what to do.

**Spot a stroke FAST.**

**F**ace drooping.

**A**rm weakness.

**S**peech difficulty.

**T**ime to call **9-1-1**

**TPA (clot-busting medicine)  
can only be given within 3 hours of your stroke.  
Hurry to the Emergency Room!**

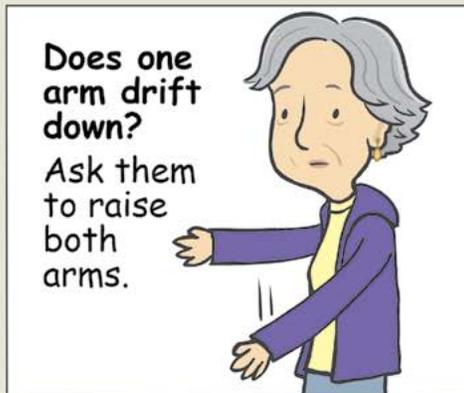
**If you think you or someone else is having a stroke:**

- Do not call your doctor first – **CALL 9-1-1**
- The fastest way to be seen in the ER is to come in by ambulance

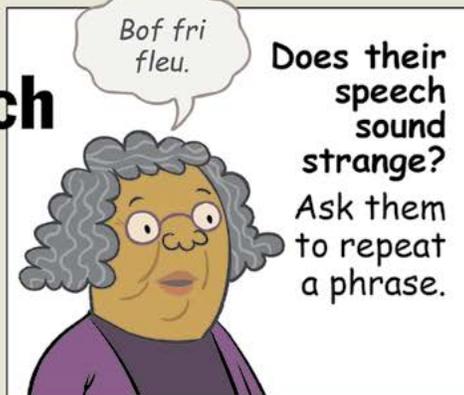
**F**ace



**A**rm



**S**peech

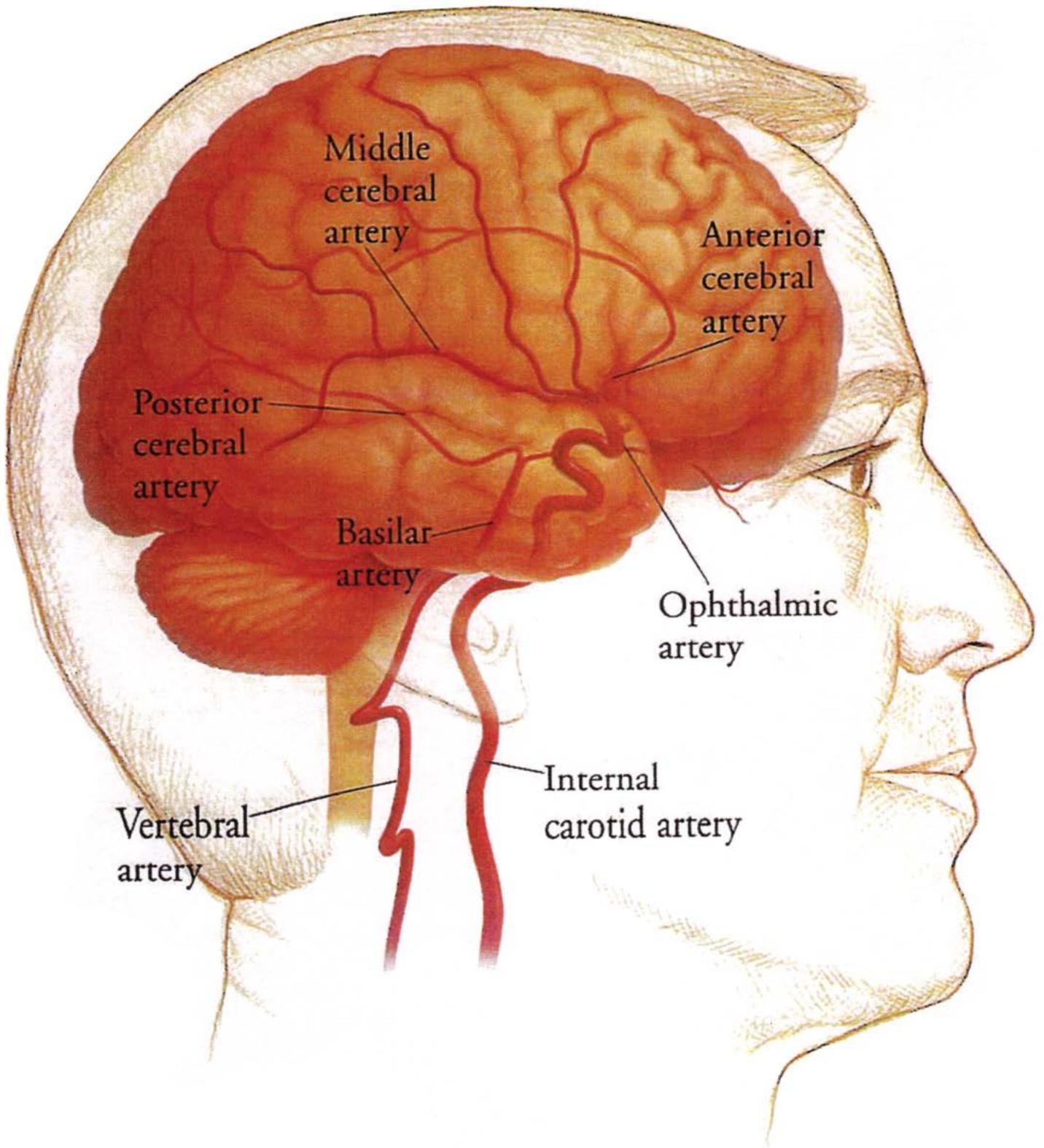


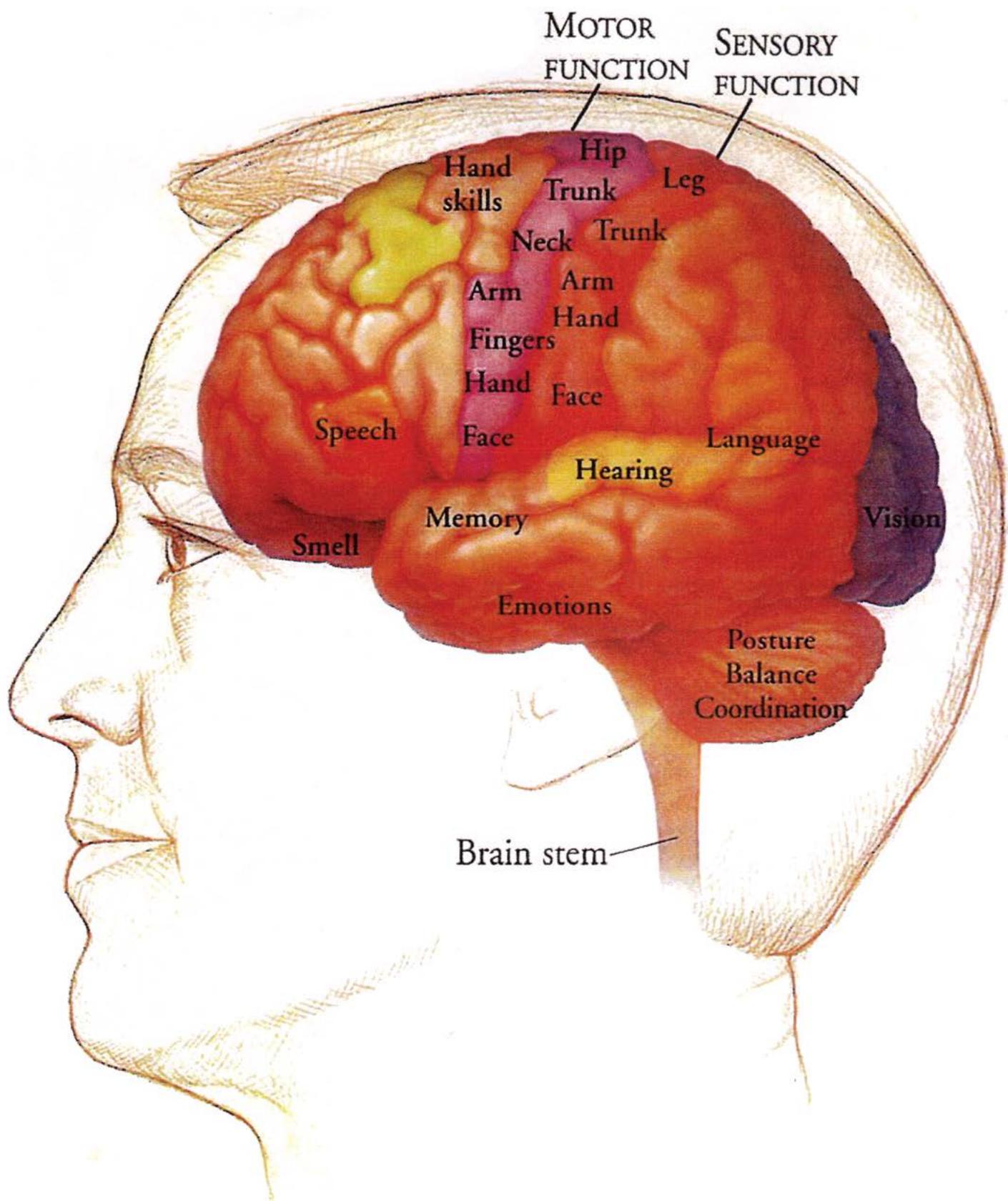
**T**ime



**Is it a stroke?  
Check these signs  
FAST!**

**Call 9-1-1 at any sign of stroke.**





# Your Hospital Stay

- You will be observed for any changes in your condition.
- The doctors will be doing tests to help find the cause of your stroke.\*
- The cause of the stroke helps determine what medication you will need to prevent another stroke.
- Be aware, there are many cases in which a cause of stroke cannot be determined.
- Your stroke risk factors will be identified and treated, if necessary.
- You will be assessed by our rehabilitation team to determine what therapies, if any, you will need after discharge, including location (inpatient or outpatient).
- Most patients improve after a stroke; the fastest improvement is in the first three months.



## **\*Common Diagnostic Tests in the Hospital**

- CT Scan or MRI Scan
- Echocardiogram
- Carotid Ultrasound
- Heart Monitoring – further monitoring may be recommended upon discharge

# Rehabilitation

## Recovery from your stroke can begin right away

In rehabilitation (or “rehab”), stroke patients participate in therapy to help them regain control of their bodies through exercise, education and emotional support.

Stroke rehabilitation begins right away. Stroke patients often recover at a faster rate in the first three months and may continue to improve for years. Daily rehabilitation exercises should continue when the patient returns home.

An important part of the rehabilitation is taking the steps to prevent a future stroke. This may mean following through with taking prescribed medicine and making some lifestyle changes.

## How long does rehabilitation take?

- For many people, rehabilitation is an ongoing process.
- The road to recovery can be long and frustrating.
- Keeping a positive outlook is important.
- The support of family and friends is also important.

## Active participation speeds recovery

Tips for successful recovery:

- Be involved as much as possible in your care
- Participate in a stroke rehabilitation program as soon as possible
- Have at least one family member go to therapy sessions with you
- Ask for help if you are feeling sad, depressed or helpless

The rehabilitation team may include staff with different skills working together to help you.

# Dysphagia

Dysphagia is difficulty swallowing food, liquids and/or saliva. Dysphagia can lead to food, liquids and saliva entering the lungs (aspiration.) This can cause further problems such as aspiration pneumonia. All patients will be screened for dysphagia by the nursing staff.

## Causes of Dysphagia

Dysphagia often occurs in stroke. When brain damage occurs in a particular area, it can lead to muscle weakness and trouble swallowing.

### Signs/Symptoms of Dysphagia:

- Coughing
- Throat clearing
- Wet vocal quality (even on saliva)
- Drooling
- Eyes watering
- Nose running
- Pocketing food inside of mouth
- Increased breathing rate



## Evaluation and Treatment

The speech-language pathologist (SLP) may evaluate the patient's swallowing when admitted to the hospital for a stroke. The evaluation includes a bedside swallow evaluation and may be followed by a modified barium swallow. A modified barium swallow is an x-ray of the patient's swallowing. It will show a picture of how the muscles of the mouth and throat work.

One role of the SLP is to determine what type of food and liquid would be safest for patients to have. Another role is teaching swallowing strategies. These may include small bites/sips, no straw, double swallow or changes in posture such as tucking the chin down against the chest. The SLP may recommend additional therapy after the patient is discharged from the hospital.

# Stroke Risk Factors

It is important to know your individual risk factors, to carefully follow the instructions of your doctor or healthcare provider and make positive changes in your lifestyle.

**High Blood Pressure** – High blood pressure is the most important controllable risk factor for stroke. Treatment of high blood pressure is critical to reducing your risk for stroke or death.

**High Blood Cholesterol** – People with high blood cholesterol have an increased risk of stroke. Your LDL should be under 100.

**Diabetes Mellitus** – diabetes is another risk factor for stroke. It is important to monitor your blood sugar.

**Atrial Fibrillation** – This irregular heart rhythm raises the risk for stroke by forming clots within the heart. These clots may travel to the brain, resulting in a TIA or stroke.

**Carotid Artery or Other Artery Disease** – The carotid artery supplies blood to your brain. Any artery narrowed by fatty deposits may become blocked by a blood clot.

**Physical Inactivity and Obesity** – Being inactive, obese or both can increase risk of high blood pressure, high blood cholesterol, diabetes, heart disease and stroke.

**Cigarette Smoking** – The nicotine and carbon monoxide in cigarette smoke damage the cardiovascular system in many ways.

**Excess Alcohol / Illegal Drug Use** – Taxes the cardiovascular system in many ways, leading to the fragility of blood vessels.

# Stroke Risk Factors

## Some Risk Factors Cannot be Changed

**Age** – Stroke can happen at any age. The chance of having a stroke more than doubles for each decade of life after age 55.

**Heredity** (family history) – Your stroke risk is greater if a parent, grandparent, sister or brother had a stroke.

**Sex** (gender) – Stroke is more common in men than in women. In most age groups, more men than women will have a stroke in a given year. However, more than half of total stroke deaths occur in women. Use of birth control pills and pregnancy pose special stroke risks for women.

**Prior Stroke, TIA or Heart Attack** – Between two and 10 percent of stroke survivors will have another stroke or TIA each year.

## Hidden Risk Factors for Women

**Migraines** – Recent research shows that women who suffer from migraines with aura can be up to 10 times more likely to suffer a stroke, depending on other risk factors.

**Birth Control Pills** – Women who take even a low-estrogen birth control pill may be twice as likely to have a stroke as those who don't.

**Hormone Replacement Therapy** – Women who take hormone replacement therapy may have a slightly increased stroke risk.

**Clotting Disorders** – Women who have had more than one miscarriage may be at higher risk for blood clots, which can increase their chance of stroke.

# Stroke Risk Factors

## Control your Stroke Risk Factors

### High Blood Pressure:

#### How can you lower your blood pressure?

- Lose weight if you are overweight
- Eat a healthy diet that is low in salt and fat
- Be more active
- Take medications as prescribed by a physician – never stop taking your blood pressure medication (anti-hypertensive) without speaking to a physician



### High Cholesterol:

#### How do you lower your cholesterol?

- Eat low-fat, low-cholesterol foods like: fruits and vegetables, whole grains like cereal, rice and pasta
- Make recipes or egg dishes with egg whites, not yolks
- Serve smaller portions of higher-fat dishes (no bigger than your palm) and serve bigger portions of no-fat dishes like pasta, rice, beans and vegetables
- Take medications as prescribed by a physician – never stop taking your cholesterol medication (statins) without speaking to a physician

### Diabetes:

#### How can you control your diabetes?

- Limit your carbohydrate and sugar intake
- Monitor your glucose level

### Alcohol

- Heavy drinkers should eliminate or reduce alcohol consumption



# Stroke Prevention

## Smoking Cessation

### You can quit smoking:

- Quitting is hard, but don't give up
- Each time you try to quit, the more likely you will be to succeed

### Tips to help you quit:

- Get rid of all cigarettes and ashtrays in your home, car or workplace
- Ask your family, friends and coworkers for support
- Avoid smoking areas
- Keep yourself busy and reward yourself often
- Ask your doctor about options like hypnosis and/or medication and stop-smoking classes

### The good news:

- Within 20 minutes after you smoke that last cigarette, your body begins a series of changes that continue for years
- Twelve hours after quitting, the carbon monoxide level in your body drops to normal
- Two weeks to three months after quitting, your heart attack risk begins to drop and your lung function begins to improve. Your coughing and shortness of breath decrease
- One year after quitting, your added risk of coronary heart disease is cut in half
- Five years after quitting, your risk of stroke is reduced
- Ten years after quitting, your lung cancer death rate is about half that of a smoker and your risk of cancer of the mouth, throat, esophagus, bladder, kidney and pancreas decreases
- Fifteen years after quitting, your risk of coronary heart disease is back to that of a non-smoker



# Stroke Prevention

## Goals to Reduce Risk Factors

### High blood pressure:

- Follow your physician's advice to manage your blood pressure

### High cholesterol:

- For stroke prevention, lower your LDL or as specified by a physician or healthcare provider.

### Diabetes control:

- A HgA1C level as specified by a physician or healthcare provider

### Smoking control:

- **NO** smoking

### Obesity control:

- BMI between 18.5 and 24.9 kg/m<sup>2</sup>  
[BMI=weight in pounds/(height in inches)<sup>2</sup>x703]

### Exercise:

- 20 minutes a day, 5 days a week

### Alcohol:

- If male, less than 2 drinks/day
- If female, less than 1 drink/day
- If alcoholic, no drinks



# Medications

## Medications and Stroke

Most patients who survive a stroke are prescribed medications by their healthcare provider. For some patients, this may be the first time they have ever had to take medications regularly. Other patients may find that now they must take many more medications than before the event.

### **It is important that you and your family understand each of the medications prescribed:**

- What is it for?
- When and how often should I take it?
- What kinds of side effects could it cause?
- What should I do if I have a problem taking the medication?

### **There are several places you can go for answers to these questions.**

- First, ask your healthcare provider at your visit.
- Second, call your healthcare provider's office. You may need to leave a message, but someone will call you back.
- Third, ask your pharmacist or read the drug information sheet that he or she gives you with the prescription.

It is also important that you know which medications you are taking, how often you taken them and what their doses are. When you go to a healthcare provider's appointment or to the hospital, they will need to know this information to take care of you. Some patients find that it helps to keep a card in their wallet or purse with all their medications and doses listed. For patients who must take several medications, it may help to keep track of them with a chart.

# Medications

## Medications for Stroke Patients

### Medications to prevent clotting:

- Aspirin
- Clopidogrel (e.g., Plavix)
- Dipyridamole and aspirin combination (Aggrenox)
- Heparin (e.g., Calciparine)
- Warfarin (e.g., Coumadin or other oral anticoagulants)

### Medications to reduce cholesterol:

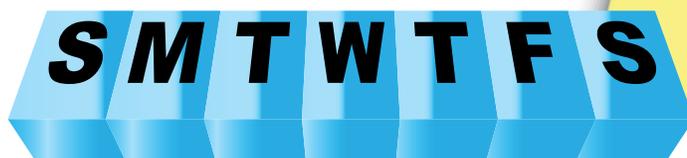
- If not contraindicated, a statin drug may be prescribed

### Medications to reduce high blood pressure

- Beta Blockers (Lopressor, Metoprolol/Toprol)
- Diuretics (Lasix/Furosemide, Hydrochlorothiazide)
- ACE Inhibitors (Lisinopril, Captopril)
- Calcium Channel Blockers (Norvasc, Amlodipine)
- Angiotensin Receptor Blockers (Losartan, Valsartan)

### Tips for remembering to take your medications

- Take medications at the same time each day (with meals or brushing your teeth or other daily events)
- Use a weekly pill box with separate compartments for each day or time of day
- Use a calendar or drug reminder chart
- Wear a wristwatch with an alarm
- Set an alarm on a cell phone
- Leave note for yourself
- Send yourself an e-mail reminder
- Have a family member or friend remind you



# Key Points – Review List

- 1. At the first sign of stroke: Call 9-1-1 immediately!**  
**Time lost is brain lost!**
- 2. Any one of the warning signs is a reason to call 9-1-1.**  
**The faster you call for help, the better your chances for a full recovery.**
  - Sudden weakness or numbness of the face, arm or leg, especially on one side of the body
  - Sudden confusion, trouble speaking or understanding
  - Sudden trouble seeing in one or both eyes
  - Sudden trouble walking, dizziness, loss of balance or coordination
  - Sudden severe headaches with no known cause
- 3. Know your risk factors:**
  - High Blood Pressure
  - Diabetes
  - Smoking
  - Excessive Alcohol Use
  - Obesity
  - History of stroke, TIA or heart attack
  - Atrial Fibrillation
  - Elevated lipids/cholesterol
  - Physical inactivity
- 4. Take your medications as prescribed.**

# Know the Sudden Signs of Stroke

If you see someone experiencing any of these stroke symptoms, call **911** immediately. Getting treatment within **60 minutes** can prevent disability.



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES  
National Institutes of Health  
National Institute of Neurological Disorders and Stroke



[www.stroke.ninds.nih.gov](http://www.stroke.ninds.nih.gov)  
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