



American Stroke Association®

A division of the American Heart Association.

Together to End Stroke®

Preventing Stroke

American Stroke Association





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The Human Brain

- The central organ of the human nervous system
- Controls both motor and sensory functions throughout your body
- Helps you receive and interpret information from your senses (eyes, ears, nose, etc.)
- Responsible for thinking, remembering, understanding, planning, reasoning and problem-solving
- Despite its small size, it's the most complex organ in your body
- Made up of billions of neurons (brain cells) that communicate through synapses
- Reaches its maximum size by 18 years of age
- Constantly changes and adapts to new experiences and challenges

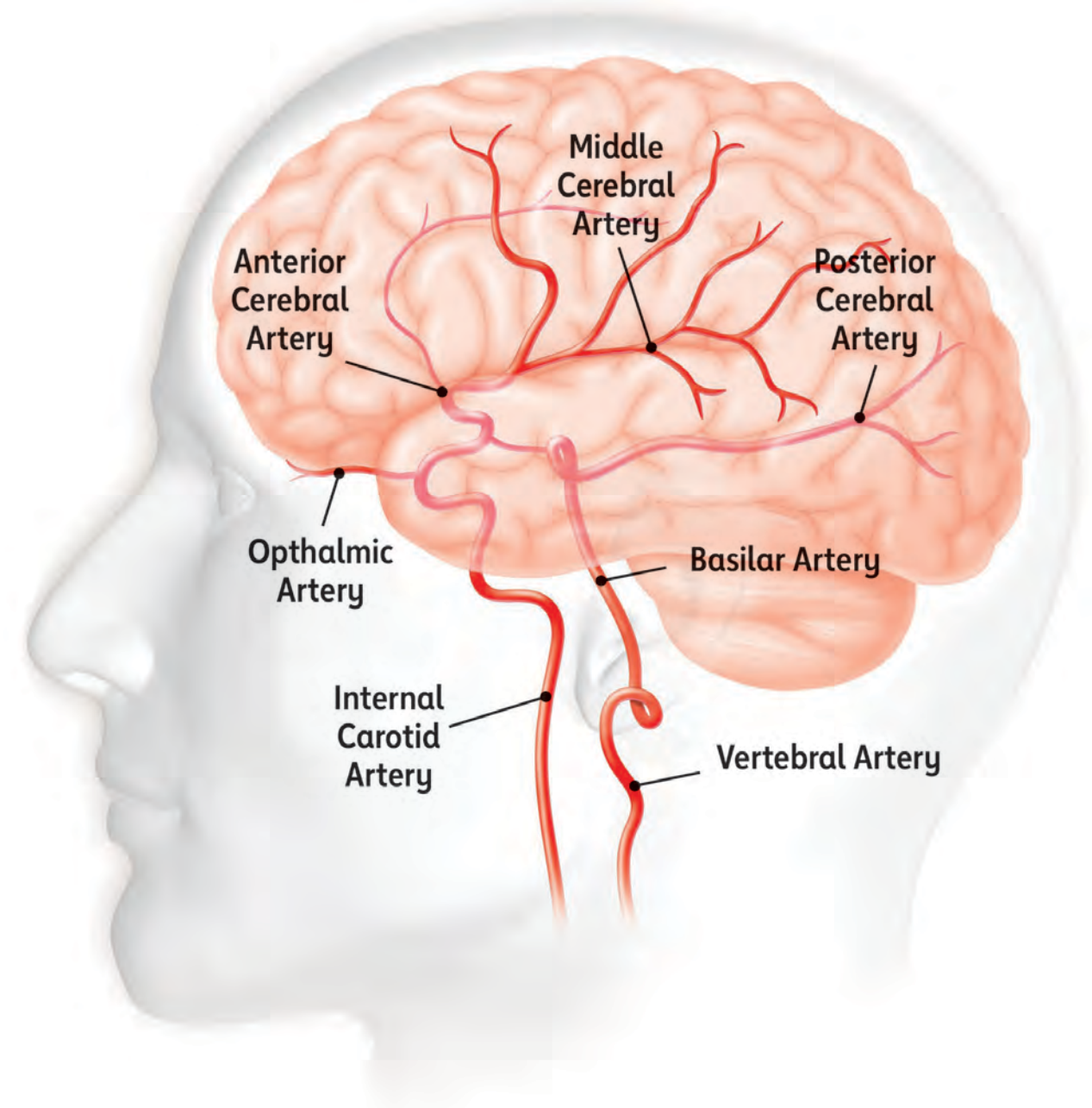


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What is a Stroke?

- Stroke is a disease that affects the arteries of the brain.
- A stroke occurs when a blood vessel bringing blood to the brain gets blocked or ruptures (bursts).
- The affected part of the brain doesn't get the oxygen and nutrients it needs, causing brain cells to die.
- Brain injury from stroke can affect any of the following functions: ability to move, feel, think and behave.
- A stroke is a medical emergency. Immediate treatment may minimize the long-term effects of a stroke and even prevent death.





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Stroke Facts



Stroke is a
“brain attack.”



Although stroke is
**more common
after age 55,**
it can also happen
at any age and at
any time.



**Leading cause of
adult disability:**

- Some people who have a stroke will make a full recovery.
- But more than 2/3s of survivors will have some type of disability.



**Every 40
seconds,**
someone in
the U.S. has
a stroke.



**Two million
brain cells**
die every
minute during
a stroke.



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How Common is Stroke?

Stroke has a large impact on society, with **more than 9 million** stroke survivors in the U.S.

Every year, about **800,000 people** in the U.S. have a stroke, with about **185,000** being recurrent strokes.

Stroke is the **5th leading** cause of death in the U.S.
(3^d leading cause of death in women)

About **55,000 more** women than men have a stroke each year.

Black people are **twice as likely** as white people to have a first-time stroke.

Treatment may **reduce the effects of stroke** if administered soon after the onset of symptoms.

Up to 80% of strokes may be prevented with lifestyle changes.



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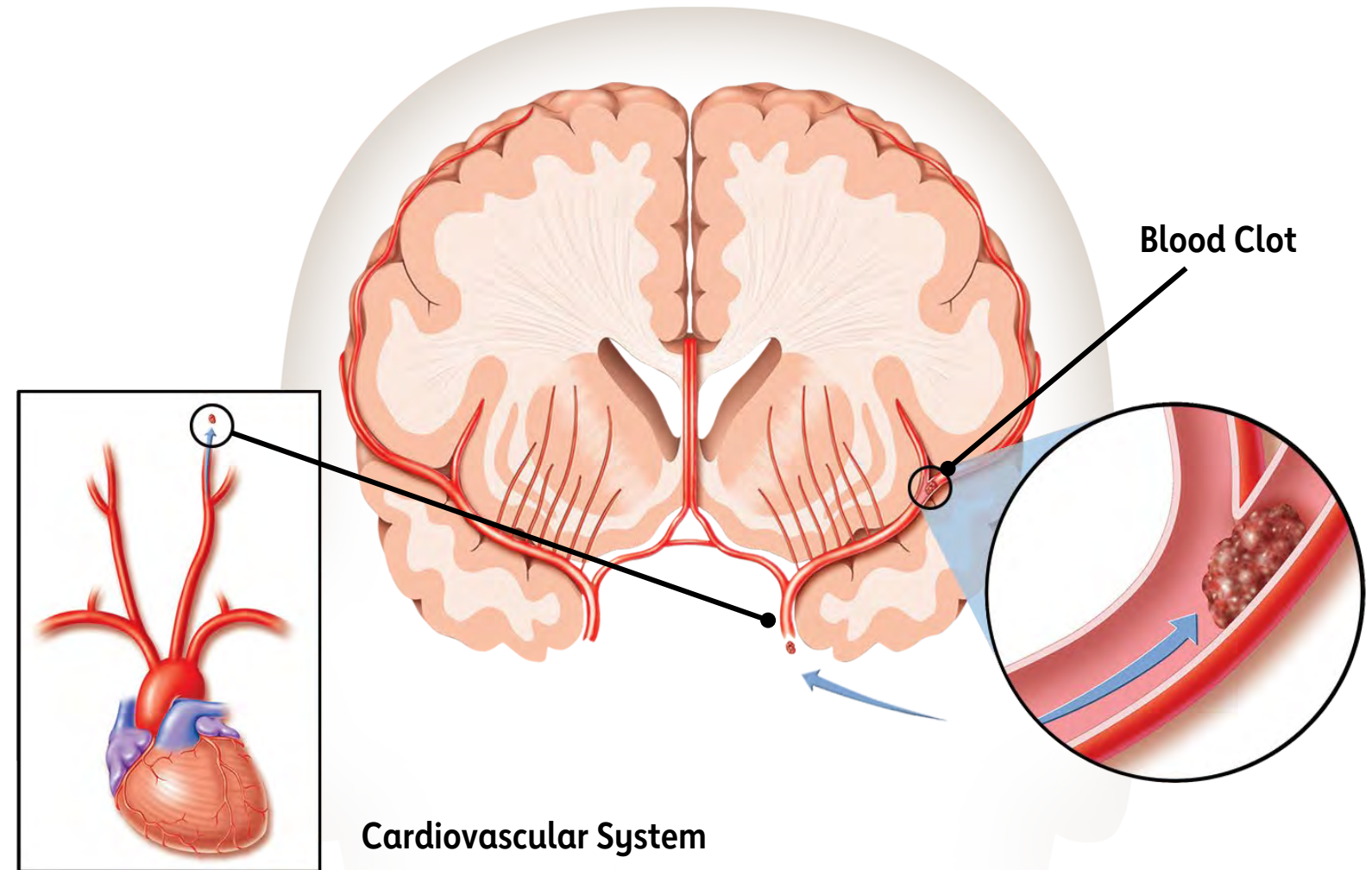
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Types of Stroke

Ischemic Stroke

Ischemic stroke is the most common type of stroke, accounting for about 87% of strokes.

An ischemic stroke occurs when a clot blocks a vessel supplying blood to the brain. The artery becomes narrowed or clogged, cutting off blood flow to brain cells.





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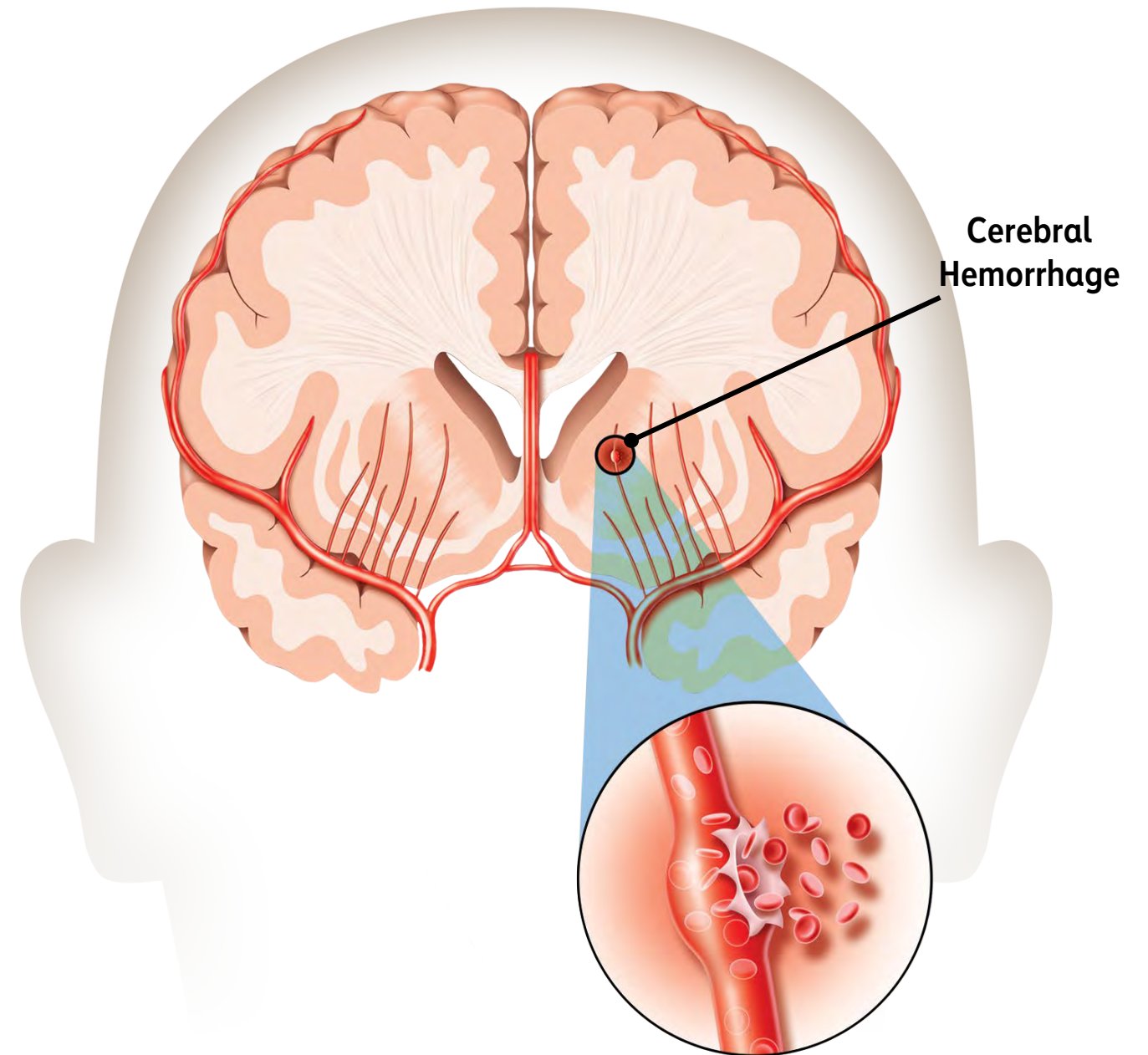
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Types of Stroke

Hemorrhagic Stroke

A hemorrhagic stroke happens when a blood vessel bursts (ruptures) in the brain. This type of stroke may affect large arteries in the brain or the small blood vessels deep within the brain. The rupture keeps the surrounding areas of the brain from getting oxygen.

Hemorrhagic strokes are less common than ischemic strokes, accounting for about 13% of strokes. However, they are associated with a higher risk of death.





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Types of Stroke

Transient Ischemic Attack

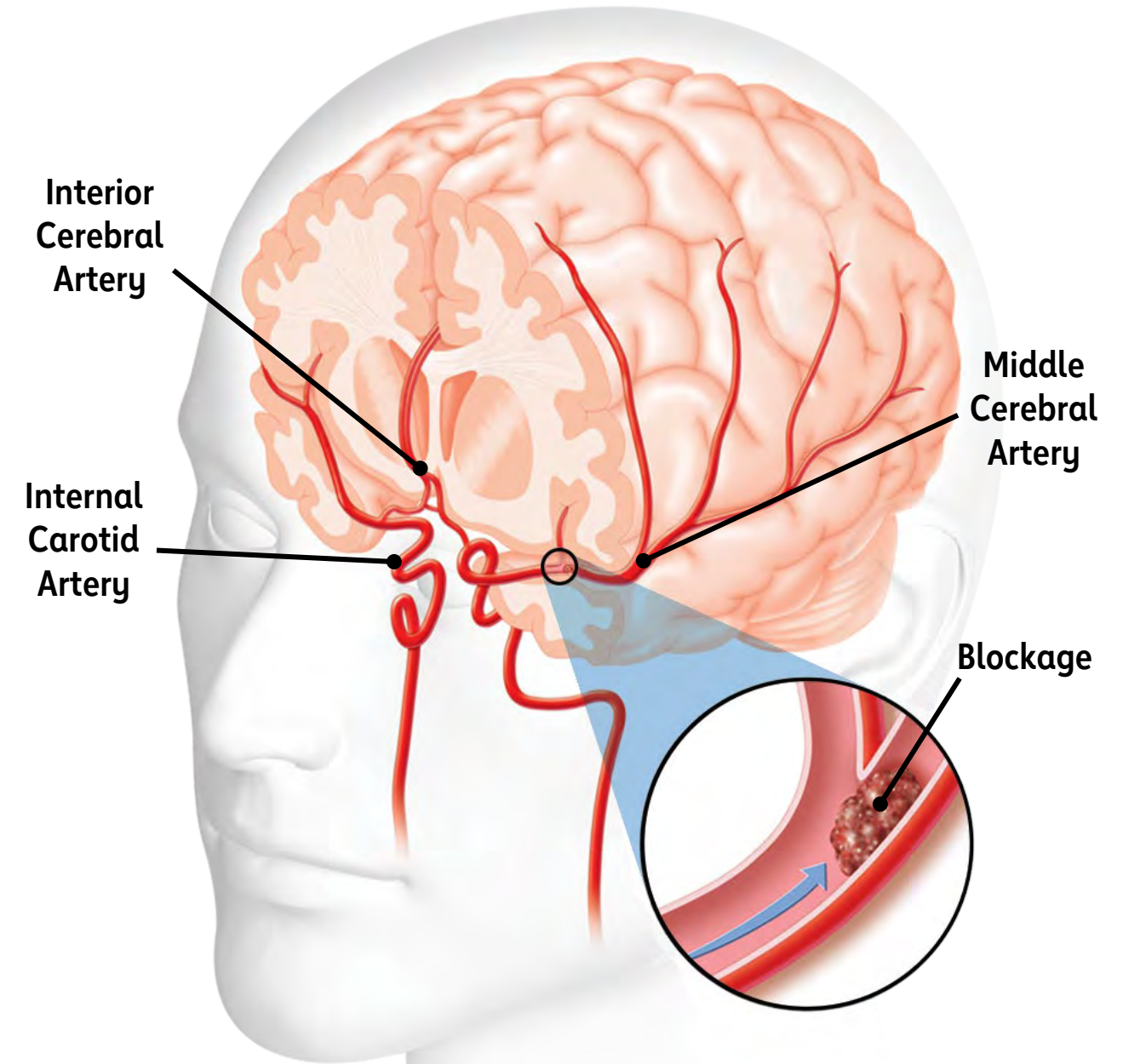
A transient ischemic attack, or TIA, is a temporary blockage of blood flow to the brain. The clot usually dissolves on its own or gets dislodged. TIAs produce symptoms just like a stroke, but typically last a shorter amount of time.

While a TIA doesn't cause permanent damage, it's a "warning stroke" signaling a possible full-blown stroke ahead.

A TIA's temporary symptoms make diagnosis challenging. Stroke symptoms that disappear in under an hour need emergency assessment, and a comprehensive evaluation should be done within 24 hours of when symptoms begin. Here is what you can expect:

- Assessment for symptoms and medical history
- Imaging of the blood vessels in the head and neck
- Other testing such as head CT, angiography and MRI

Once TIA is diagnosed, a follow-up visit with a neurologist is recommended to assess your risk of future stroke.





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F.A.S.T. Warning Signs

Use the letters in F.A.S.T. to spot a stroke:



F = FACE

Does one side of the face droop or is it numb?

Ask the person to smile.

Is the person's smile uneven?



A = ARMS

Is one arm weak or numb?

Ask the person to raise both arms.

Does one arm drift downward?



S = SPEECH

Ask the person to repeat a simple phrase.

Is their speech slurred or strange?



T = TIME

If you observe any of these signs – **call 911 IMMEDIATELY!**

Note the time when any of the symptoms first appear.



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Other Symptoms of Stroke

Watch for Sudden:



NUMBNESS

or weakness of the face, arm or leg, especially on one side of the body



CONFUSION,

trouble speaking or understanding speech



TROUBLE SEEING

in one or both eyes



TROUBLE WALKING,

dizziness, loss of balance or coordination



SEVERE HEADACHE

with no known cause



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Act Quickly

If you experience one or more of these symptoms or notice them in someone else, even for a short time, call 911 immediately.

- Medical options may reduce the effects of stroke
- Time is of great importance, as treatment must be administered soon after the onset of symptoms
- Stroke strikes quickly. You should too!
- Why you must learn to recognize stroke symptoms — F.A.S.T.
 - To save lives
 - Easy to remember
 - Easy to teach
 - Requires quick action





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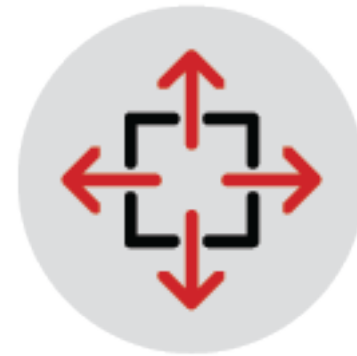
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Effects of Stroke

The effects of stroke depend on various factors:



Region of the
brain that is
affected



Size of the area
that is damaged
by the stroke



Functions that
the damaged
area controls



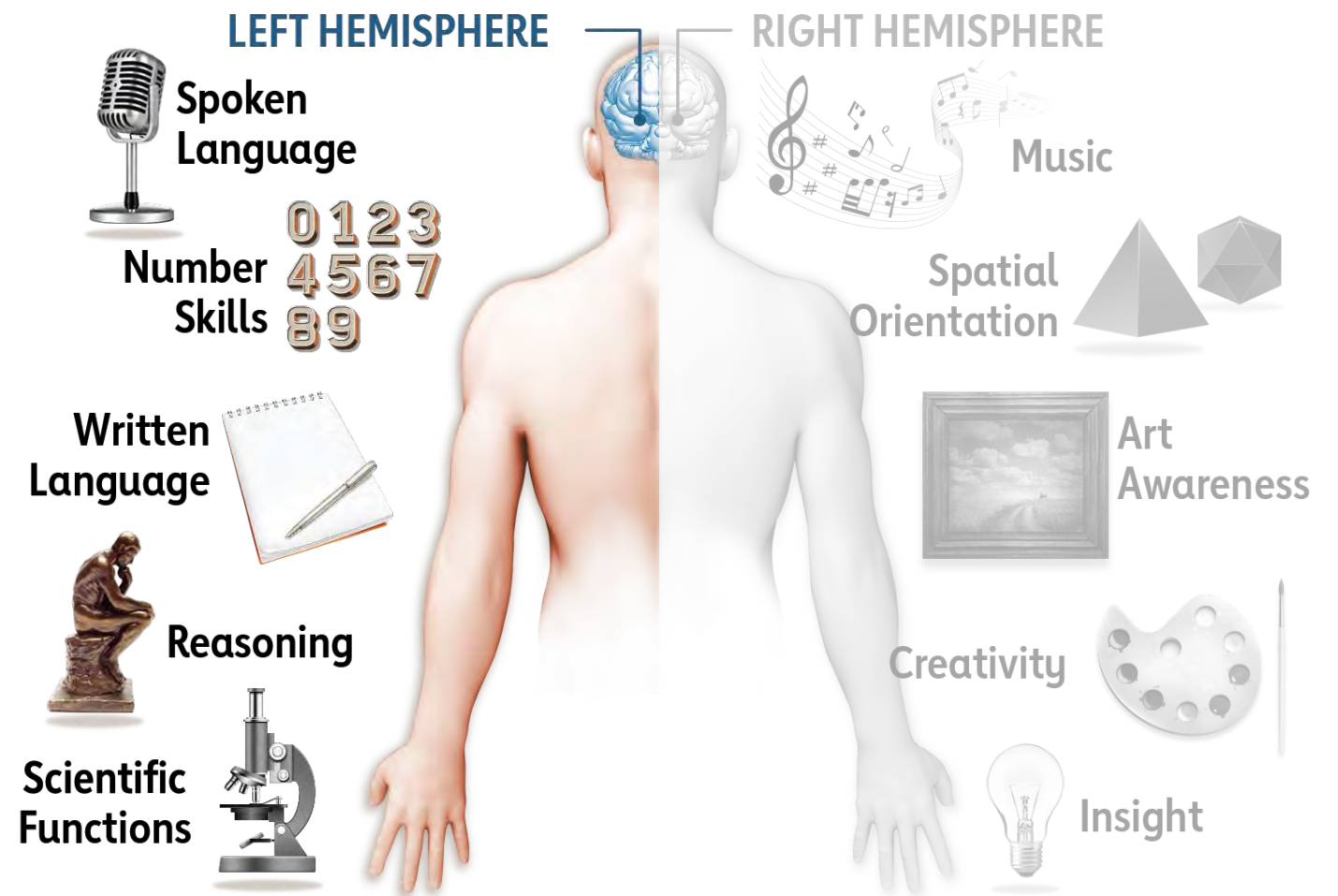
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How a Stroke Can Affect You

A stroke on the **left side of the brain** affects the right side of the body and you may experience some difficulties with:

- Weakness and loss of sensation on the right side of the body
- Speech and language difficulties (aphasia)
- Inability to read, write and learn new information
- Slow, cautious behavioral style
- Reduced ability to do math, reason and analyze things
- Memory loss

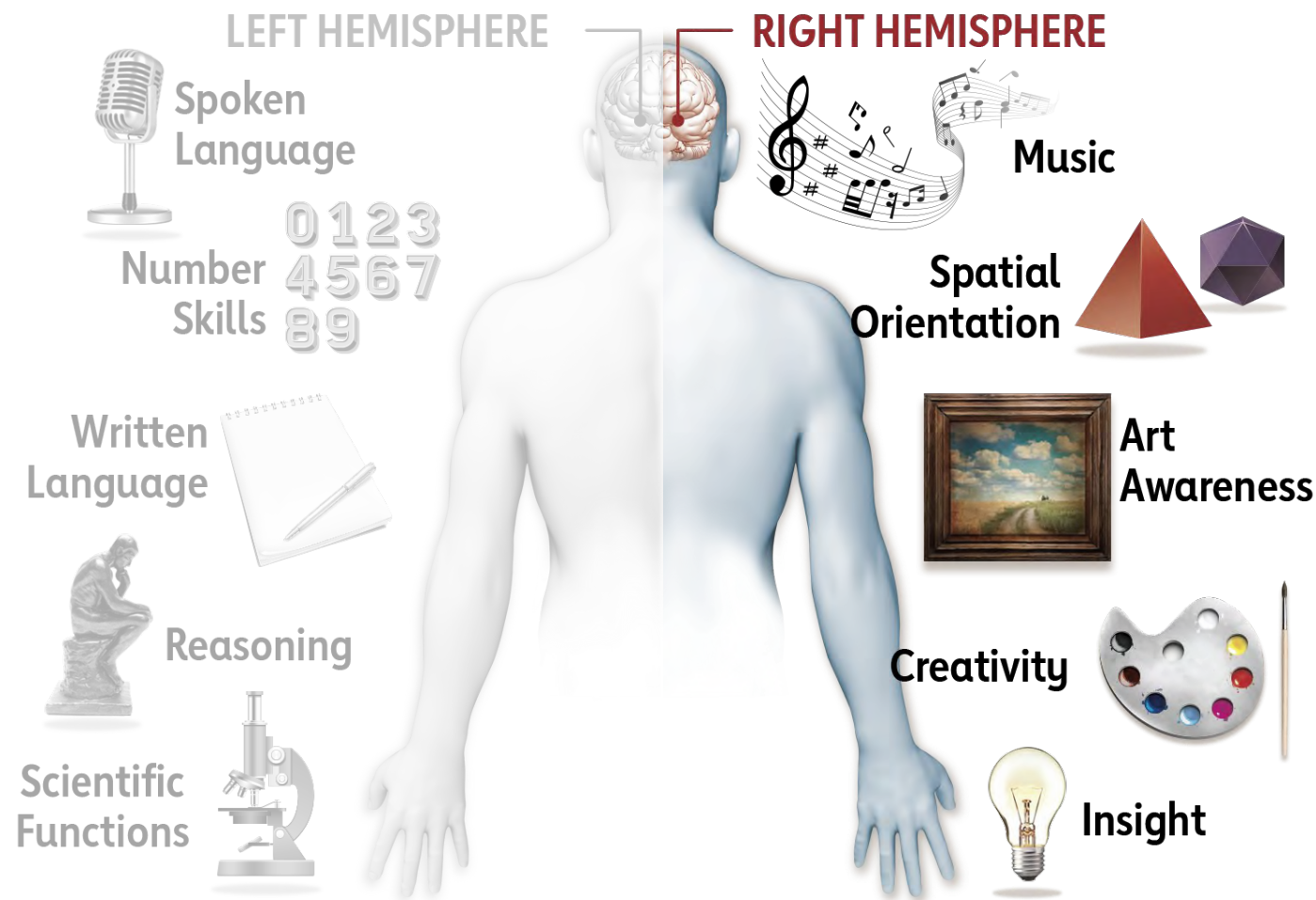




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How a Stroke Can Affect You



A stroke on the **right side of the brain** affects the left side of the body and you may experience some difficulties with:

- Weakness and loss of sensation on the left side of the body
- Depth perception or directions
- Vision problems
- Quick, inquisitive behavioral style
- Inability to paint or appreciate art and music
- Lack of ability to recognize emotions in someone's voice
- Memory loss



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Stroke Risk Factors

Risk Factors that cannot be controlled:



Age:

While strokes can occur at any age, risk increases after age 55.



Gender:

Women have a lower risk than men before menopause, but more women than men die of stroke.



Family history:

Strokes appear to have a genetic link. You face a higher risk if an immediate family member has had a stroke.



Prior stroke or transient ischemic attack (TIA)

- A person who's had TIA has a one in three more likelihood of having a stroke than someone of the same age and sex who hasn't.
- If you had a stroke, it means you are at a greater risk for another stroke. Almost 1 in 4 will experience a recurrent stroke in the next 5 years.



Race and Ethnicity:

Black people have a higher prevalence of stroke and a higher death rate from stroke than any other racial group.



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Stroke Risk Factors

Medical Risk Factors



High Blood Pressure:

Measurement of 120/80 mm Hg and above is considered high blood pressure. You need to work with your health care professional to manage your blood pressure. Talk to your doctor as your number may be different for someone over 65.



Diabetes:

Having diabetes more than doubles your risk of stroke. High blood glucose increases plaque buildup and damage in your arteries.



Cholesterol:

Buildup of fatty deposits and other cells in artery walls.



Circulation Problems:

Strokes can be caused by blockage in your arteries and veins that carry blood through your heart to your brain.



Atrial Fibrillation (AFib):

AFib increases stroke risk fivefold.



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Stroke Risk Factors

Lifestyle Risk Factors



Quit Tobacco Use and Vaping:

Current smokers have a 2 to 4 times increased risk of stroke compared with nonsmokers or those who have quit smoking more than 10 years ago.



Eliminate or Reduce Alcohol Use:

Heavy drinking can increase your risk for stroke. Recommendation is no more than two drinks per day for men and no more than one drink per day for non-pregnant women. Pregnant people should not drink alcohol.



Maintain a Healthy Weight:

Obesity and excessive weight can put a strain on the entire circulatory system.



Increased Physical Activity:

Physical activity can help reduce stroke risk. A brisk 30 minute walk each day can improve daily health (that's just 15 minutes each way!). Aim for at least 150 minutes of moderate to vigorous-intensity physical activity per week.



Eat a Healthy Diet:

- Rich in fresh fruit, vegetables and whole grains
- Include a variety of proteins (lean meats, fish, beans, tofu)
- Minimally processed foods
- Limit salt intake
- Limit intake of added sugars
- Avoid fried foods



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Stroke Diagnosis

In case of a stroke, diagnosis will help determine the type of stroke and its treatment. In the emergency room, the stroke team may:

Ask you when the symptoms of the stroke started. This is critical in determining the best treatment.

- Ask you about your medical history.
- Do a physical and neurological examination.
- Have certain lab (blood) tests done.
- Do a CT (computed tomography) or MRI (magnetic resonance imaging) brain scan. This determines what kind of stroke a person has had.
- Study the results of other diagnostic tests that might be done.





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Life's Essential 8™

Life's Essential 8 is your checklist or lifelong good health. Better cardiovascular health helps lower the risk for heart disease, stroke and other major health problems.

- 1. Eat Better:** Aim for an overall healthy eating pattern that includes whole foods, lots of fruits and vegetables, lean protein, nuts, seeds, and cooking in non-tropical oils such as olive and canola.
- 2. Be More Active:** Adults should get 2 ½ hours of moderate or 75 minutes of vigorous physical activity per week.
- 3. Quit Tobacco:** Use of inhaled nicotine delivery products, which includes traditional cigarettes, e-cigarettes and vaping, is the leading cause of preventable death in the U.S.



heart.org/lifes8



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- 4. Get Healthy Sleep:** Most adults need 7-9 hours of sleep each night. Adequate sleep promotes healing, improves brain function and reduces the risk for chronic diseases.
- 5. Manage Weight:** Achieving and maintaining a healthy weight has many benefits. Losing as little as 5 to 10 pounds can make a significant difference in your risk for stroke or heart disease.
- 6. Control Cholesterol:** High levels of LDL, or “bad”, cholesterol can lead to heart disease. Large amounts of cholesterol in the blood can build up and cause blood clots – leading to a stroke.

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Life's Essential 8™





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- 7. Manage Blood Sugar:** Most of the food we eat is turned into glucose (or blood sugar) that our bodies use as energy. Over time, high levels of blood sugar can damage your heart, kidneys, eyes and nerves.
- 8. Manage Blood Pressure:** Level less than 120/80 mm Hg are optimal. High blood pressure is defined as 130-139/80-89 mm Hg. High blood pressure, or hypertension, is a leading cause of stroke and the most significant controllable risk factor.

Life's Essential 8™





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More Tips to be Healthier and Reduce Your Risk of Stroke



Take your medications
as directed.



Reduce stress,
which may contribute to behaviors such as overeating, lack of physical activity, unhealthy diet and smoking.



Have regular medical checkups,
including assessment of your risk for stroke.



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Group Discussion



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**Do you know someone
who has survived a stroke?**





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How can you recognize a stroke when it happens?





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Why is timing so important when responding to and treating a stroke?





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Which medical conditions should be treated to reduce the risk of stroke?





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What types of small changes can you implement to reduce your risk for stroke?





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For more information and
resources on preventing a stroke,
visit **stroke.org**

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