



STROKE RESOURCE TOOLKIT
A COMPILATION OF STROKE RESOURCES

Brought to you by the Heart Disease and Stroke Taskforce
Through the Chronic Disease Prevention and Health Promotion Section of the Nevada Division of Public and Behavioral Health



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Stroke Resource Toolkit: Preventing and Educating Patients about Stroke and Lifestyle Changes

The Nevada Heart Disease and Stroke Taskforce, comprised of clinicians, providers, organization leadership, public health professionals, and local health authorities has developed a stroke resource toolkit.

As a health care provider you are well positioned to advise and educate your patients about high blood pressure/ stroke prevention, management and control. We invite you and your staff to incorporate the materials included in this toolkit when caring for patients who are at-risk or who have hypertension, heart disease and/or suffered a stroke.

The Taskforce researched, reviewed, and identified key material to include in the toolkit. These materials were chosen based on quality of information, effectiveness, and evidence-based best practices. The information included within this toolkit aims to meet the needs of providers and clinicians to supply quality reference materials for patients. All materials are copyrighted by the source organizations and are reprinted with permission.

Please follow the links below to download the materials for providers, staff, and patients. If you wish to add a resource or request additional materials, please contact the Heart Disease and Stroke Prevention Coordinator, Lisa Sheretz, at (775) 687-7581 or lsheretz@@health.nv.gov.

Stroke Risk Assessment for Patients



Each yes or no answer receives 1 point, the column with the greater total identifies the risk level.

Risk Question	High Risk	Low Risk
1. Does the patient exhibit blood pressures above 120/80 mmHg?	Yes	No
2. Does the patient have atrial fibrillation?	Yes	No
3. Is the patient's fasting blood sugar greater than 100mg/dL?	Yes	No
4. Is the patient's BMI greater than 25kg/m ² ?	Yes	No
5. Is the patient's total cholesterol greater than 180mg/dL?	Yes	No
6. Does the patient have diabetes mellitus?	Yes	No
7. Does the patient partake in moderate physical activity at least 40 minutes a day/ 3-4 days a week?	Yes	No
8. Does the patient have a history of stroke?	Yes	No
9. Does the patient use tobacco products?	Yes	No
	Total _____	_____

Overview of Toolkit Resources

Resource	Overview
Provider/Clinician Resources	
New Guidelines for Post-Acute Stroke Patients	AHA/ASA guidelines for acute-care providers.
Stroke Risk Quiz – English & Spanish	Help your patients know their risk with these stroke risk assessment quizzes.
NIH Stroke Scale	The evidence-based best practice acute stroke evaluation tool.
Stroke Discharge Checklist for Providers	A checklist for providers to review with stroke patients concerned about leaving the hospital.
Post-Stroke Care Checklist for <u>Providers</u>	An assessment tool for providers to evaluate post-stroke patients.
Obtaining a Blood Pressure Accurately	Follow these steps to measure blood pressure accurately.
Fast poster	A great resource to hang in any office to educate patients.
Patient Handouts	
Daily home care guide (editable)	A comprehensive care record for patients at home.
FAST and CPR handout English Spanish	A unique tool for patients and families to educate on stroke emergencies.
Let's Talk About Stroke Diagnosis	An informational fact sheet for patient stroke education.
Let's Talk About Anticoagulants and Platelets	This sheet provides valuable information to patients about their anticoagulants and platelets.
Let's Talk About Carotid Endarterectomy	This source will compliment conversations with your patients regarding carotid endarterectomies.
Let's Talk About Changes Caused By a Stroke	This resource will help you discuss the effects of stroke on the body with your patients.
Let's Talk About Complications after Stroke	Stroke complications can be scary. This fact sheet will help start the discussion with your patients.
Let's Talk About Emotional Changes after a Stroke	A great sheet to help patients understand what is happening to their emotional state post-stroke.
Let's Talk About Hemorrhagic Stroke	13% of strokes are hemorrhagic. This sheet will help educate patients on this uncommon type of stroke.
Let's Talk About High Blood Pressure and Stroke	This resource addresses the risks and effects high blood pressure can have on the body including causing strokes.
Let's Talk About Ischemic Stroke	A patient resource discussing the most common source of strokes.
Let's Talk About Living At Home after a Stroke	This valuable resource will help patients understand lifestyle changes and returning home after an acute stroke.
Let's Talk About Risk Factors of Stroke	Educate your patients about the preventable risk factors and how to make lifestyle changes to prevent strokes.
Let's Talk About Stroke and Rehab	Help your patients understand rehabilitation options after suffering a stroke.
Let's Talk About Stroke, TIA and Warning	Educate your patients about warning signs and when to call for help.
Let's Talk About the Stroke Family Caregiver	Family often becomes a caregiver to stroke patients. This information sheet will help start important conversations.
Lifestyle Changes to Prevent Stroke	Help your at-risk patients change their lifestyle.
Stroke Patient Education	A fact sheet aimed to help educate patients on strokes and risk factors.
Blood Pressure tracker	A blood pressure pocket record.
Stroke Prevention – English & Spanish	Prevention is key. Help your patients understand what they can do.
Stroke Support Group Finder	Support group locations for Las Vegas, Henderson, and Reno

PREVENTABLE DEATHS FROM HEART DISEASE & STROKE

MANY DEATHS FROM HEART DISEASE AND STROKE CAN BE PREVENTED

1 IN 3

Nearly 1 in 3 deaths in the US each year is caused by heart disease and stroke.



200,000

At least 200,000 deaths from heart disease and stroke each year are preventable.



YOUR CHANCES OF DYING FROM HEART DISEASE AND STROKE ARE RELATED TO MANY THINGS

AGE



- 6 in 10: More than half of preventable heart disease and stroke deaths happen to people under age 65.
- While the number of preventable deaths has declined in people ages 65–74, it has remained virtually unchanged in people under 65.

RACE/ETHNICITY

2X

Blacks are nearly twice as likely as whites to die early from heart disease and stroke.



SEX



Men have a higher risk of death across all races and ethnic groups. Black men are most at risk.

LOCATION

- Risk of preventable death from heart disease and stroke varies by county, even within the same state.
- Counties in southern states have the greatest risk overall.

IMPROVING HEALTH HABITS CAN SAVE MORE LIVES

THE ABCS OF HEART HEALTH

- A** Aspirin when appropriate
- B** Blood pressure control
- C** Cholesterol management
- S** Smoking cessation

COMMUNITIES CAN CREATE HEALTHIER LIVING SPACES

- Promote smoking quitlines
- Create tobacco-free areas
- Improve access to healthy food
- Make safe walking areas

INDIVIDUALS CAN TAKE STEPS TO REDUCE THEIR RISK

- Eat a heart-healthy diet with more fruits and vegetables and less sodium and trans fat.
- Talk with your health care provider about the ABCS of heart health.
- Know the signs and symptoms of heart attack and stroke, and get help as needed.
- Get help to stop smoking. If you don't smoke, don't start.
- Try going for a brisk 10-minute walk, 3 times a day, 5 days a week.

Vital^{CDC}**signs**TM
www.cdc.gov/vitalsigns

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



Provider/Clinician Resources



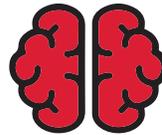
High blood pressure equals **HIGHER RISK OF STROKE.**



**NORMAL
BLOOD PRESSURE
IS BELOW
120/80**

**STROKE HAPPENS
WHEN A CLOT
OR RUPTURE
INTERRUPTS BLOOD
FLOW TO THE
BRAIN. WITHOUT
OXYGEN-RICH BLOOD,
BRAIN CELLS DIE.**

Most people who have a
first **STROKE** have
**HIGH BLOOD
PRESSURE.¹**



80%
of strokes can be
PREVENTED.²

Nearly
1 IN 6
American adults with
high blood pressure
DON'T KNOW.³



At age 50, people without
high blood pressure have a

**LIFE EXPECTANCY
5 YEARS
LONGER**
than people with high blood pressure.³



Have your
blood pressure
checked
and keep it
in check to

REDUCE
your **RISK OF STROKE.**

¹ Neal B et al; Lancet. 2000;356:1955-64 // ² D'Agostino, R.B. et al. Stroke. 1994;25:40-43 // ³ Mozaffarian D et al. Circulation. 2017;135:e135-139

Preventing Stroke Deaths

Progress Stalled

After decades of decline, progress has slowed in preventing stroke deaths. Almost 800,000 people have a stroke each year, more than 140,000 die and many survivors face disability. This is disturbing because about 80% of strokes are preventable. High blood pressure is the single most important treatable risk factor for stroke. Preventing, diagnosing and controlling it through lifestyle changes and medicine is critical to reducing strokes. Health systems (hospitals, doctors, rehabilitation specialists, emergency medical technicians [EMTs], pharmacists) can help address stroke risk factors and improve patient outcomes if a stroke occurs. When stroke happens, minutes count. Call 911 right away. Health systems can treat strokes fast if patients get to the hospital in time. Reducing stroke risk factors and improving the quality of stroke care are needed to continue the decline in stroke deaths.

Health systems can:

Use system-wide approaches to find patients with undiagnosed or unmanaged stroke risk factors.

Work with community members and emergency medical technicians (EMTs) to quickly identify strokes and get patients to the hospital fast.

Implement a coordinated system of care that effectively treats patients from the first symptom of a stroke through recovery.

40 seconds

Every 40 seconds someone has a stroke in the US.

3 out of 4

Stroke death declines have stalled in 3 out of every 4 states.

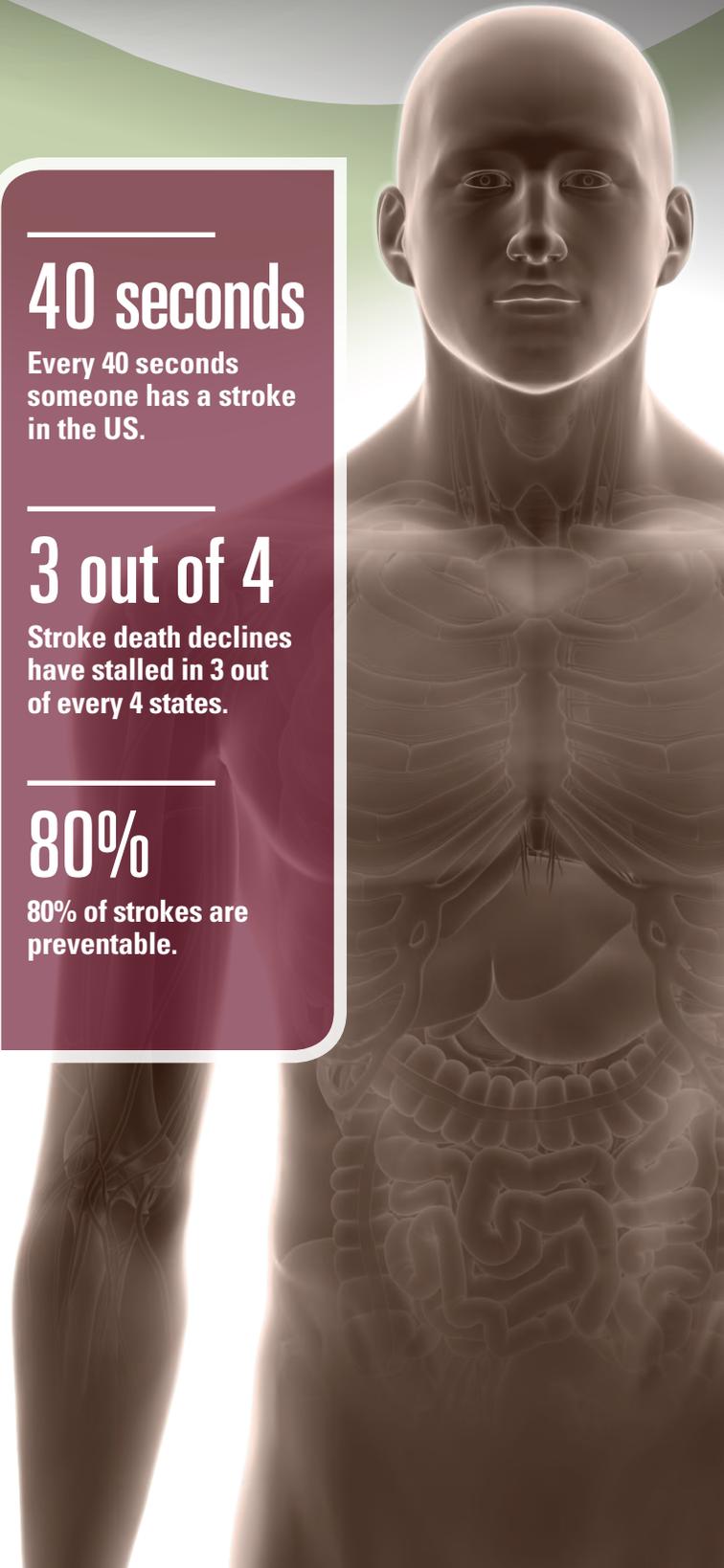
80%

80% of strokes are preventable.

Want to learn more? www.cdc.gov/vitalsigns/stroke



Centers for Disease Control and Prevention
National Center for Chronic Disease Prevention and Health Promotion



Problem:



Stroke deaths have stopped declining.

Strokes are common and preventable.

Stroke is the 5th leading cause of death and a leading cause of serious, long-term disability, with an estimated cost of \$34 billion annually.

1 in 20 adult deaths are due to stroke. Many of these deaths are preventable.

When stroke happens, parts of the brain become damaged and can start to die within minutes.

Strokes happen more in some populations and geographic areas.

Stroke death declines have stalled in 3 out of every 4 states.

Blacks have the highest stroke death rates among all races/ethnicities.

Stroke death rates among Hispanics have increased by 6% each year from 2013 to 2015.

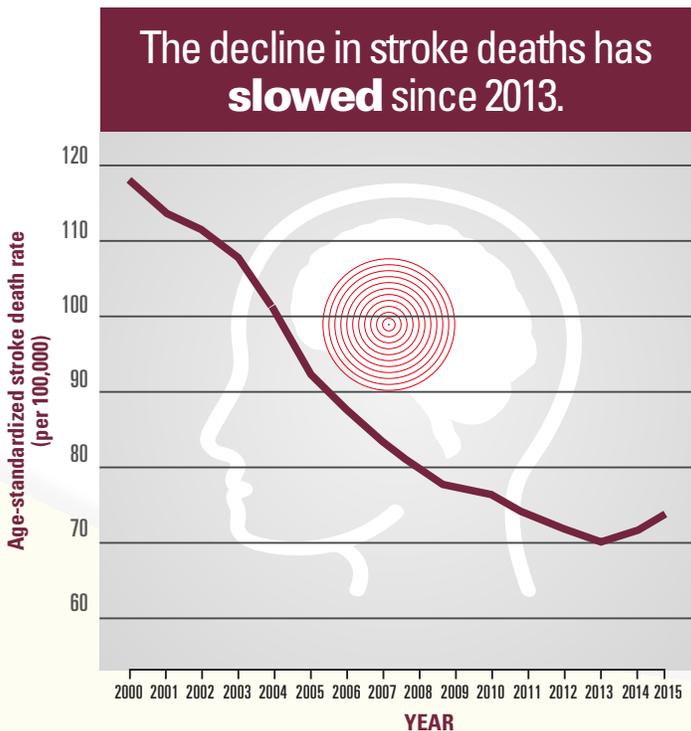
Stroke deaths increased in southern states.

Strokes are happening at younger ages.

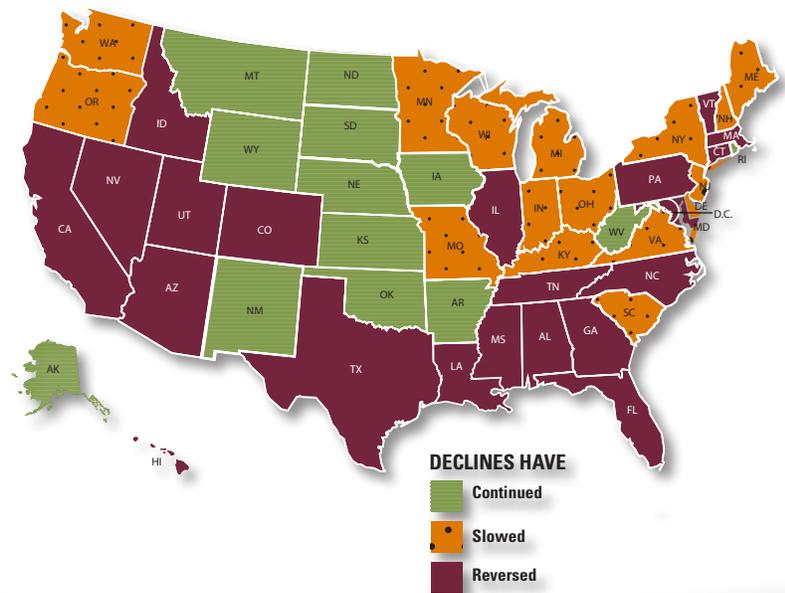
Risk factors like high blood pressure, high cholesterol, obesity, and diabetes are happening at younger ages.

Risk factors may not be recognized and treated in middle-aged adults (35-64 years old).

Recent studies also suggest that over the last 15 years younger adults (ages 18-54) have had increases in stroke hospitalizations, along with increases in stroke risk factors among those hospitalized with stroke.



Stroke death declines have **STALLED** in 3 out of every 4 states.



CONTINUED = death rates continued to decrease steadily from 2000-2015 in adults 35 years and older

SLOWED = the decrease in death rates slowed down over time

REVERSED = the death rates reversed from decreasing to increasing

What's needed to decrease stroke deaths?

RISK FACTORS FOR STROKE

Knowing and managing your risks for stroke are key.



HIGH BLOOD PRESSURE
a leading cause of
STROKE



TOBACCO USE



DIABETES



HIGH CHOLESTEROL



OBESITY & PHYSICAL
INACTIVITY

Recognize the signs of stroke **F.A.S.T.**



FACE

Ask the person to **smile**. Does one side droop?



ARMS

Ask the person to **raise both arms**. Does one arm drift downwards?



SPEECH

Ask the person to **repeat a simple sentence**. Are the words slurred?



TIME

If the person shows any of these symptoms, call **911** immediately.

Learning the signs of a stroke can **HELP SAVE LIVES**

SOURCE: Adapted from the Cincinnati Pre-hospital Stroke Scale, University of Cincinnati, 1997.

Stroke Systems of Care

			
Community	Pre-Hospital	Hospital	Post-Hospital
Detection	Delivery	Decision	Discharge Coordination
Everyone knows the signs of stroke and the need to call 911 immediately.	Fast emergency medical services (EMS) transport to the hospital with pre-hospital notification that they are on the way.	Identify stroke, quickly decide on and provide appropriate treatment.	Patient rehabilitates, recovers, and returns home.

SOURCES: Paul Coverdell National Acute Stroke Program, CDC; Guidelines for the Early Management of Adults with Ischemic Stroke, Circulation, May 22, 2007.



The **STROKE SYSTEMS OF CARE** depends on coordinated partnerships among health systems and professionals, smooth transitions from one care setting to the next, data-driven quality improvement programs that provide the best care to every patient every time, consistent hospital discharge processes with all of the patient's healthcare professionals, and continued actions that improve patient care and save lives.

What Can Be Done?



The Federal government is

Managing the Paul Coverdell National Acute Stroke Program (Coverdell Program) that partners with state health departments, emergency medical services (EMS), and hospitals to implement data driven quality improvement programs for stroke care.

<https://go.usa.gov/xRNm5>



Leading the Million Hearts® initiative to prevent 1 million heart attacks and strokes by 2022.

Millionhearts.hhs.gov



Providing resources to all 50 states to address chronic disease prevention, including heart disease and stroke.



Funding stroke research in treatment, recovery, and prevention, and supporting the Mind Your Risks public education campaign. Mindyourrisks.nih.gov



Health systems can

Use system-wide approaches to find patients with undiagnosed or unmanaged stroke risk factors.

Work with community members and emergency medical technicians (EMTs) to quickly identify strokes and get patients to the hospital fast.

Implement a coordinated system of care that effectively treats patients from the first symptom of a stroke through recovery.



Doctors, nurses, and healthcare professionals can

Identify and treat high blood pressure, obesity, diabetes, high cholesterol, smoking, and other risk factors for stroke.

Help patients control their blood pressure, cholesterol, and diabetes by taking medicines as directed and making lifestyle changes that can help prevent stroke.

Refer patients to community resources such as smoking quit lines and obesity and diabetes prevention programs that will support their lifestyle behavior changes.



Educate patients on the signs and symptoms of stroke and the importance of calling 911 if someone is having a stroke.

State health departments can

Prioritize coordinated stroke systems of care and adopt successful strategies of the Coverdell Program.

Use data to identify and improve gaps in stroke care to drive quality improvements.

Train community members and emergency medical technicians (EMTs) to identify the signs of stroke and understand the importance of getting patients to the hospital quickly.

Increase awareness of risk factors for stroke and lifestyle changes needed among high-risk populations.

Conduct public education campaigns on the importance of calling 911.

Everyone can

Recognize the signs and symptoms of stroke and call 911 if someone is having a stroke.

Control blood pressure and cholesterol by taking medicines as prescribed.

Manage other medical conditions, such as obesity and diabetes.

Avoid smoking and secondhand smoke, which increase your risk for stroke.

Eat a healthy diet low in salt and sugar with lots of fresh fruits and vegetables, increase physical activity, and maintain a healthy weight.

1-800-CDC-INFO (232-4636)

TTY: 1-888-232-6348

Accessible version – www.cdc.gov/vitalsigns/stroke

Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30329

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Stroke Risk Quiz



American Heart Association | American Stroke Association®

Together to End Stroke™

Directions

- For each risk factor, select the box (higher risk or lower risk) that applies to you.
Select only one box per risk factor.
- Enter a 1 on the blank line next to each checked box.
- Add up your total for each vertical column.

Risk Factors*	Higher Risk	Lower Risk
Is your blood pressure greater than 120/80 mm/Hg?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Have you been diagnosed with atrial fibrillation	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Is your fasting blood sugar greater than 100 mg/dL?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Is your body mass index greater than 25kg/m ² ?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Is your diet high in saturated fat, trans fat, sweetened beverages, salt, excess calories?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Is your total blood cholesterol greater than 180 mg/dL?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Have you been diagnosed with diabetes mellitus?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Do you participate in 40 minutes of moderate to vigorous physical activity 3-4 days a week?	<input type="checkbox"/> No or Unknown _____	<input type="checkbox"/> Yes _____
Do you have a family history of stroke?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
Do you smoke?	<input type="checkbox"/> Yes or Unknown _____	<input type="checkbox"/> No _____
TOTAL SCORE (add your points for each column)	_____	_____

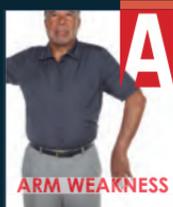
Stroke Risk Results

*Some stroke risk factors cannot be changed such as age, family history, race, gender, and prior stroke.

**Higher
Risk**

Did you score higher in the “higher risk” column or are you unsure of your risk? Talk to your healthcare provider about how you can reduce your risk.

Learn How to Spot a Stroke



Call 9-1-1 Immediately

May is American Stroke Month. Help us end stroke and share this with your loved ones.

[StrokeAssociation.org/strokemonth](https://www.strokeassociation.org/strokemonth)

Prueba de Riesgo de un Ataque Cerebral (Stroke)

Instrucciones:

1. Por cada factor de riesgo, seleccione la casilla (riesgo alto o riesgo bajo) que le aplique. Solo seleccione una casilla por cada factor de riesgo.
2. Ponga un 1 en el espacio en blanco al lado de cada casilla marcada.
3. Suma el total de cada columna verti al.

Factores de Riesgo*	Riesgo Alto	Riesgo Bajo
¿Es su presión arterial más de 120/80 mm / Hg?	<input type="checkbox"/> Si o Desconocido _____	<input type="checkbox"/> No _____
¿Ha sido diagnosti ado con la fibrilación auricular?	<input type="checkbox"/> Si o Desconocido _____	<input type="checkbox"/> No _____
¿Es su nivel de azúcar de sangre en ayunas más de 100 mg / dl?	<input type="checkbox"/> Si o Desconocido _____	<input type="checkbox"/> No _____
¿Es su índice de masa corporal más de 25kg/m2?	<input type="checkbox"/> Si o Desconocido _____	<input type="checkbox"/> No _____
¿Es su dieta alta en grasas saturadas, grasas trans, bebidas endulzadas, sal, y/o en exceso en calorías?	<input type="checkbox"/> Si o Desconocido _____	<input type="checkbox"/> No _____
¿Es su nivel de colesterol total más de 180 mg / dl?	<input type="checkbox"/> Si o Desconocido _____	<input type="checkbox"/> No _____
¿Ha sido diagnosti ado con diabetes mellitus?	<input type="checkbox"/> Si o Desconocido _____	<input type="checkbox"/> No _____
¿Tiene antecedentes familiares de ataque cerebral (stroke)?	<input type="checkbox"/> Si o Desconocido _____	<input type="checkbox"/> No _____
¿Fuma?	<input type="checkbox"/> Si o Desconocido _____	<input type="checkbox"/> No _____
¿Participacion 40 minutos de actividad fís a moderada a vigorosa 3-4 días a la semana?	<input type="checkbox"/> No _____	<input type="checkbox"/> Si o Desconocido _____
PUNTUACIÓN TOTAL (suma los puntos de cada columna)	_____	_____

Resultados de Riesgo de un Ataque Cerebral (Stroke)

**RIESGO
ALTO**

¿Sabía usted que anota más alto en la columna de "riesgo alto" o no está seguro de sus riesgos? Hable con su proveedor de atención médica acerca de cómo reducir su riesgo.

D75A@AL53 g` 3F3CG7 57D74D3> 83ZFz

F **A** **S** **T**

8357 ROSTRO CAÍDO 3D? BRAZO DÉBIL EB775: DIFICULTAD PARA HABLAR F: 7 TIEMPO DE LLAMAR AL 911

Efcb] VBeaU[Sf[a` žad!VdS` a^

*Algunos de los factores de riesgos de un ataque cerebral (stroke) no se pueden modificar, como la edad, los antecedentes familiares, la raza, el género, y ataque cerebral (stroke) previo.

N I H STROKE SCALE

Patient Identification. _____-_____-_____

Pt. Date of Birth ____/____/____

Hospital _____(____-____)

Date of Exam ____/____/____

Interval: Baseline 2 hours post treatment 24 hours post onset of symptoms ±20 minutes 7-10 days
 3 months Other _____(____)

Time: ____:____ []am []pm

Person Administering Scale _____

Administer stroke scale items in the order listed. Record performance in each category after each subscale exam. Do not go back and change scores. Follow directions provided for each exam technique. Scores should reflect what the patient does, not what the clinician thinks the patient can do. The clinician should record answers while administering the exam and work quickly. Except where indicated, the patient should not be coached (i.e., repeated requests to patient to make a special effort).

Instructions	Scale Definition	Score
<p>1a. Level of Consciousness: The investigator must choose a response if a full evaluation is prevented by such obstacles as an endotracheal tube, language barrier, orotracheal trauma/bandages. A 3 is scored only if the patient makes no movement (other than reflexive posturing) in response to noxious stimulation.</p>	<p>0 = Alert; keenly responsive. 1 = Not alert; but arousable by minor stimulation to obey, answer, or respond. 2 = Not alert; requires repeated stimulation to attend, or is obtunded and requires strong or painful stimulation to make movements (not stereotyped). 3 = Responds only with reflex motor or autonomic effects or totally unresponsive, flaccid, and areflexic.</p>	_____
<p>1b. LOC Questions: The patient is asked the month and his/her age. The answer must be correct - there is no partial credit for being close. Aphasic and stuporous patients who do not comprehend the questions will score 2. Patients unable to speak because of endotracheal intubation, orotracheal trauma, severe dysarthria from any cause, language barrier, or any other problem not secondary to aphasia are given a 1. It is important that only the initial answer be graded and that the examiner not "help" the patient with verbal or non-verbal cues.</p>	<p>0 = Answers both questions correctly. 1 = Answers one question correctly. 2 = Answers neither question correctly.</p>	_____
<p>1c. LOC Commands: The patient is asked to open and close the eyes and then to grip and release the non-paretic hand. Substitute another one step command if the hands cannot be used. Credit is given if an unequivocal attempt is made but not completed due to weakness. If the patient does not respond to command, the task should be demonstrated to him or her (pantomime), and the result scored (i.e., follows none, one or two commands). Patients with trauma, amputation, or other physical impediments should be given suitable one-step commands. Only the first attempt is scored.</p>	<p>0 = Performs both tasks correctly. 1 = Performs one task correctly. 2 = Performs neither task correctly.</p>	_____
<p>2. Best Gaze: Only horizontal eye movements will be tested. Voluntary or reflexive (oculocephalic) eye movements will be scored, but caloric testing is not done. If the patient has a conjugate deviation of the eyes that can be overcome by voluntary or reflexive activity, the score will be 1. If a patient has an isolated peripheral nerve paresis (CN III, IV or VI), score a 1. Gaze is testable in all aphasic patients. Patients with ocular trauma, bandages, pre-existing blindness, or other disorder of visual acuity or fields should be tested with reflexive movements, and a choice made by the investigator. Establishing eye contact and then moving about the patient from side to side will occasionally clarify the presence of a partial gaze palsy.</p>	<p>0 = Normal. 1 = Partial gaze palsy; gaze is abnormal in one or both eyes, but forced deviation or total gaze paresis is not present. 2 = Forced deviation, or total gaze paresis not overcome by the oculocephalic maneuver.</p>	_____

N I H STROKE SCALE

Patient Identification. _____-_____-_____

Pt. Date of Birth ____/____/____

Hospital _____(____-____)

Date of Exam ____/____/____

Interval: Baseline 2 hours post treatment 24 hours post onset of symptoms ±20 minutes 7-10 days
 3 months Other _____(____)

<p>3. Visual: Visual fields (upper and lower quadrants) are tested by confrontation, using finger counting or visual threat, as appropriate. Patients may be encouraged, but if they look at the side of the moving fingers appropriately, this can be scored as normal. If there is unilateral blindness or enucleation, visual fields in the remaining eye are scored. Score 1 only if a clear-cut asymmetry, including quadrantanopia, is found. If patient is blind from any cause, score 3. Double simultaneous stimulation is performed at this point. If there is extinction, patient receives a 1, and the results are used to respond to item 11.</p>	<p>0 = No visual loss. 1 = Partial hemianopia. 2 = Complete hemianopia. 3 = Bilateral hemianopia (blind including cortical blindness).</p>	<p>_____</p>
<p>4. Facial Palsy: Ask – or use pantomime to encourage – the patient to show teeth or raise eyebrows and close eyes. Score symmetry of grimace in response to noxious stimuli in the poorly responsive or non-comprehending patient. If facial trauma/bandages, orotracheal tube, tape or other physical barriers obscure the face, these should be removed to the extent possible.</p>	<p>0 = Normal symmetrical movements. 1 = Minor paralysis (flattened nasolabial fold, asymmetry on smiling). 2 = Partial paralysis (total or near-total paralysis of lower face). 3 = Complete paralysis of one or both sides (absence of facial movement in the upper and lower face).</p>	<p>_____</p>
<p>5. Motor Arm: The limb is placed in the appropriate position: extend the arms (palms down) 90 degrees (if sitting) or 45 degrees (if supine). Drift is scored if the arm falls before 10 seconds. The aphasic patient is encouraged using urgency in the voice and pantomime, but not noxious stimulation. Each limb is tested in turn, beginning with the non-paretic arm. Only in the case of amputation or joint fusion at the shoulder, the examiner should record the score as untestable (UN), and clearly write the explanation for this choice.</p>	<p>0 = No drift; limb holds 90 (or 45) degrees for full 10 seconds. 1 = Drift; limb holds 90 (or 45) degrees, but drifts down before full 10 seconds; does not hit bed or other support. 2 = Some effort against gravity; limb cannot get to or maintain (if cued) 90 (or 45) degrees, drifts down to bed, but has some effort against gravity. 3 = No effort against gravity; limb falls. 4 = No movement. UN = Amputation or joint fusion, explain: _____</p> <p>5a. Left Arm 5b. Right Arm</p>	<p>_____ _____</p>
<p>6. Motor Leg: The limb is placed in the appropriate position: hold the leg at 30 degrees (always tested supine). Drift is scored if the leg falls before 5 seconds. The aphasic patient is encouraged using urgency in the voice and pantomime, but not noxious stimulation. Each limb is tested in turn, beginning with the non-paretic leg. Only in the case of amputation or joint fusion at the hip, the examiner should record the score as untestable (UN), and clearly write the explanation for this choice.</p>	<p>0 = No drift; leg holds 30-degree position for full 5 seconds. 1 = Drift; leg falls by the end of the 5-second period but does not hit bed. 2 = Some effort against gravity; leg falls to bed by 5 seconds, but has some effort against gravity. 3 = No effort against gravity; leg falls to bed immediately. 4 = No movement. UN = Amputation or joint fusion, explain: _____</p> <p>6a. Left Leg 6b. Right Leg</p>	<p>_____</p>

N I H STROKE SCALE

Patient Identification. _____-_____-_____

Pt. Date of Birth ____/____/____

Hospital _____(____-____)

Date of Exam ____/____/____

Interval: Baseline 2 hours post treatment 24 hours post onset of symptoms ±20 minutes 7-10 days
 3 months Other _____(____)

<p>7. Limb Ataxia: This item is aimed at finding evidence of a unilateral cerebellar lesion. Test with eyes open. In case of visual defect, ensure testing is done in intact visual field. The finger-nose-finger and heel-shin tests are performed on both sides, and ataxia is scored only if present out of proportion to weakness. Ataxia is absent in the patient who cannot understand or is paralyzed. Only in the case of amputation or joint fusion, the examiner should record the score as untestable (UN), and clearly write the explanation for this choice. In case of blindness, test by having the patient touch nose from extended arm position.</p>	<p>0 = Absent.</p> <p>1 = Present in one limb.</p> <p>2 = Present in two limbs.</p> <p>UN = Amputation or joint fusion, explain: _____</p>	<p>_____</p>
<p>8. Sensory: Sensation or grimace to pinprick when tested, or withdrawal from noxious stimulus in the obtunded or aphasic patient. Only sensory loss attributed to stroke is scored as abnormal and the examiner should test as many body areas (arms [not hands], legs, trunk, face) as needed to accurately check for hemisensory loss. A score of 2, "severe or total sensory loss," should only be given when a severe or total loss of sensation can be clearly demonstrated. Stuporous and aphasic patients will, therefore, probably score 1 or 0. The patient with brainstem stroke who has bilateral loss of sensation is scored 2. If the patient does not respond and is quadriplegic, score 2. Patients in a coma (item 1a=3) are automatically given a 2 on this item.</p>	<p>0 = Normal; no sensory loss.</p> <p>1 = Mild-to-moderate sensory loss; patient feels pinprick is less sharp or is dull on the affected side; or there is a loss of superficial pain with pinprick, but patient is aware of being touched.</p> <p>2 = Severe to total sensory loss; patient is not aware of being touched in the face, arm, and leg.</p>	<p>_____</p>
<p>9. Best Language: A great deal of information about comprehension will be obtained during the preceding sections of the examination. For this scale item, the patient is asked to describe what is happening in the attached picture, to name the items on the attached naming sheet and to read from the attached list of sentences. Comprehension is judged from responses here, as well as to all of the commands in the preceding general neurological exam. If visual loss interferes with the tests, ask the patient to identify objects placed in the hand, repeat, and produce speech. The intubated patient should be asked to write. The patient in a coma (item 1a=3) will automatically score 3 on this item. The examiner must choose a score for the patient with stupor or limited cooperation, but a score of 3 should be used only if the patient is mute and follows no one-step commands.</p>	<p>0 = No aphasia; normal.</p> <p>1 = Mild-to-moderate aphasia; some obvious loss of fluency or facility of comprehension, without significant limitation on ideas expressed or form of expression. Reduction of speech and/or comprehension, however, makes conversation about provided materials difficult or impossible. For example, in conversation about provided materials, examiner can identify picture or naming card content from patient's response.</p> <p>2 = Severe aphasia; all communication is through fragmentary expression; great need for inference, questioning, and guessing by the listener. Range of information that can be exchanged is limited; listener carries burden of communication. Examiner cannot identify materials provided from patient response.</p> <p>3 = Mute, global aphasia; no usable speech or auditory comprehension.</p>	<p>_____</p>
<p>10. Dysarthria: If patient is thought to be normal, an adequate sample of speech must be obtained by asking patient to read or repeat words from the attached list. If the patient has severe aphasia, the clarity of articulation of spontaneous speech can be rated. Only if the patient is intubated or has other physical barriers to producing speech, the examiner should record the score as untestable (UN), and clearly write an explanation for this choice. Do not tell the patient why he or she is being tested.</p>	<p>0 = Normal.</p> <p>1 = Mild-to-moderate dysarthria; patient slurs at least some words and, at worst, can be understood with some difficulty.</p> <p>2 = Severe dysarthria; patient's speech is so slurred as to be unintelligible in the absence of or out of proportion to any dysphasia, or is mute/anarthric.</p> <p>UN = Intubated or other physical barrier, explain: _____</p>	<p>_____</p>

N I H STROKE SCALE

Patient Identification. ____-____-____

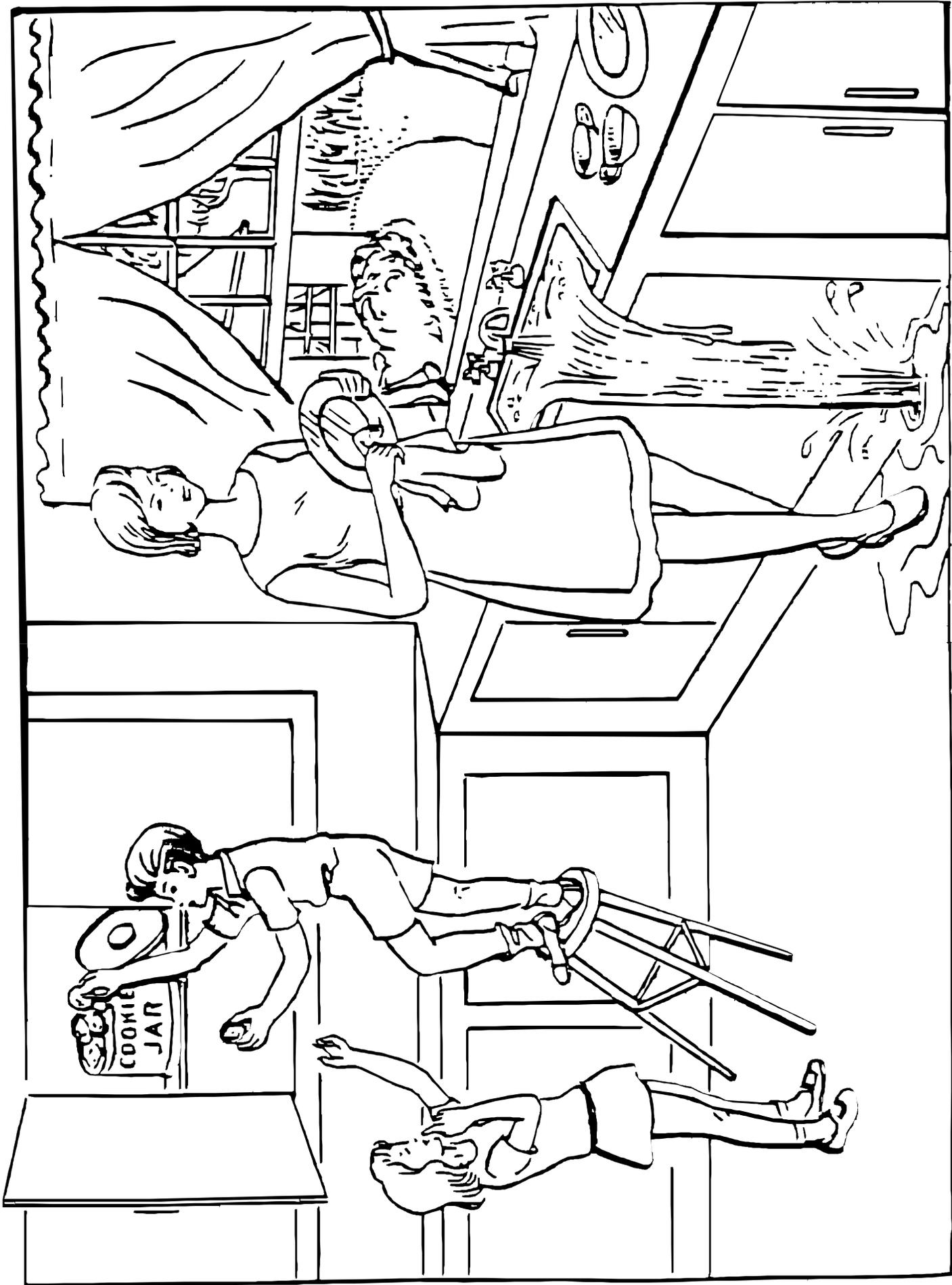
Pt. Date of Birth ____/____/____

Hospital _____(____-____)

Date of Exam ____/____/____

Interval: Baseline 2 hours post treatment 24 hours post onset of symptoms ±20 minutes 7-10 days
 3 months Other _____(____)

<p>11. Extinction and Inattention (formerly Neglect): Sufficient information to identify neglect may be obtained during the prior testing. If the patient has a severe visual loss preventing visual double simultaneous stimulation, and the cutaneous stimuli are normal, the score is normal. If the patient has aphasia but does appear to attend to both sides, the score is normal. The presence of visual spatial neglect or anosagnosia may also be taken as evidence of abnormality. Since the abnormality is scored only if present, the item is never untestable.</p>	<p>0 = No abnormality.</p> <p>1 = Visual, tactile, auditory, spatial, or personal inattention or extinction to bilateral simultaneous stimulation in one of the sensory modalities.</p> <p>2 = Profound hemi-inattention or extinction to more than one modality; does not recognize own hand or orients to only one side of space.</p>	<p>_____</p>
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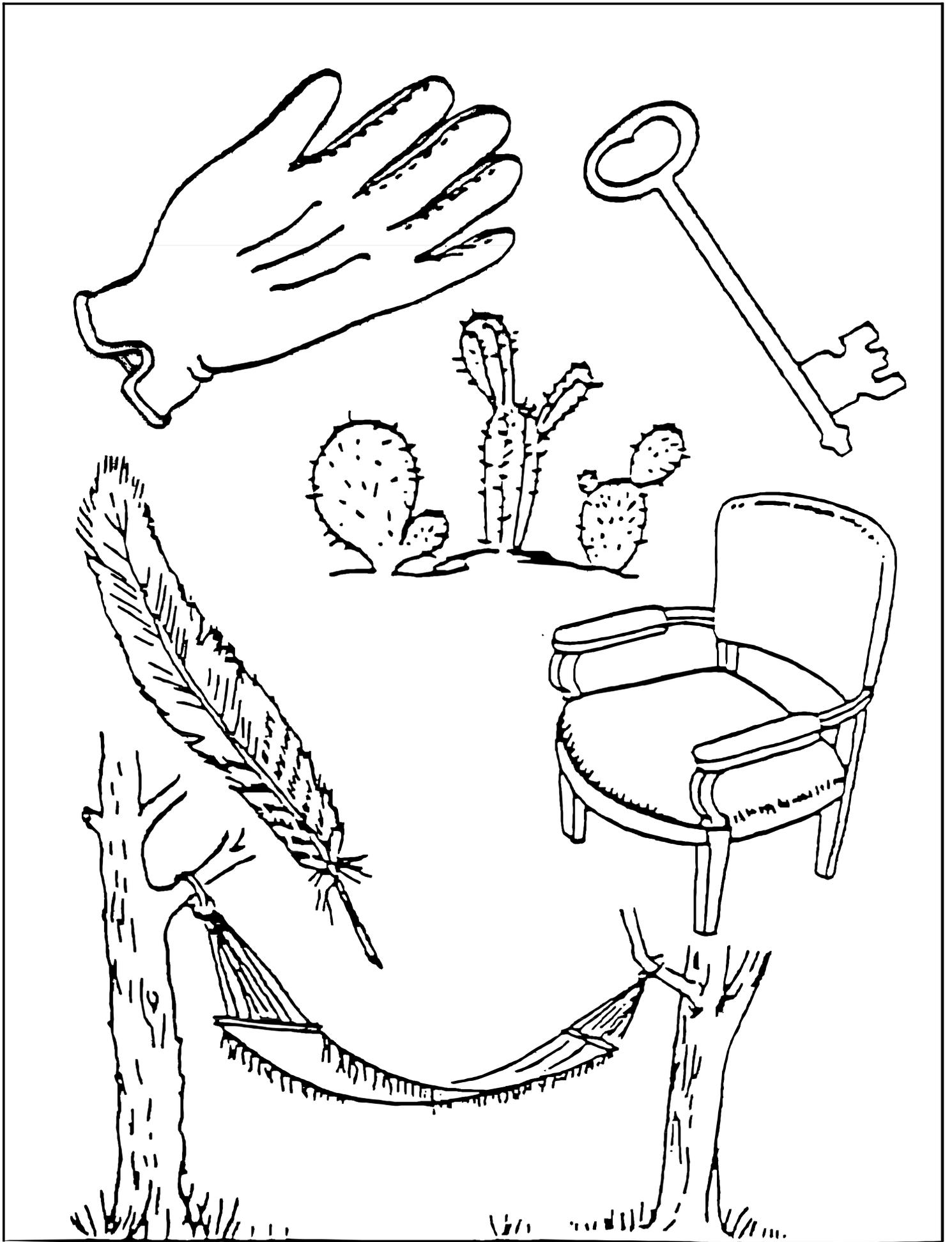
You know how.

Down to earth.

I got home from work.

**Near the table in the dining
room.**

**They heard him speak on the
radio last night.**



MAMA

TIP – TOP

FIFTY – FIFTY

THANKS

HUCKLEBERRY

BASEBALL PLAYER



YOUR STROKE DISCHARGE CHECKLIST



Together
to End Stroke™

Leaving the hospital after your stroke can be scary and overwhelming. To help you prepare for what's next in your recovery, hospital staff will speak with you and the person helping to care for you about what you can expect. Use the checklist below to help guide your conversations and to make sure your questions are answered.

INSTRUCTIONS:

1. You and the loved ones helping you should talk with your medical staff throughout your stay about the questions below.
2. Check the questions that you have asked and have gotten answers for, skip any that aren't applicable. Make sure you fully understand the answer before checking the box.
3. Write down the answers to your questions and any important information (e.g., names, phone numbers, etc.) in the spaces that follow.
4. Bring the checklist home and make copies for friends and family who may help you with your post-stroke care.

UNDERSTAND WHAT HAPPENED

What was the diagnosis?

What caused the stroke?

Patient's Name: _____

WHAT'S NEXT?

Am I at risk for another stroke? If so, what can I do to reduce that risk?

What can I expect in terms of my recovery and rehabilitation?

What physical, emotional, behavioral and communication challenges can I expect? How should I address these challenges?

What do you suggest in regards to diet and exercise?

- Are any follow-up appointments, tests or rehabilitation needed? If so, will you help me complete the Appointment Tracker below?

Appointment Tracker:

<i>Appointment</i>	<i>Date/Time</i>	<i>Physician/Professional's Name</i>	<i>Phone Number</i>

LIVING ARRANGEMENTS

- What living arrangement do you recommend?

- If I can go home, how should I be transferred from the hospital?

- What safety precautions should we take to prepare the home?

What tasks will I need help with? Can you show my caregiver how to do the tasks that require special skills?

If you can't answer these questions yet, who will I talk to who can help answer them?

MEDICATIONS

What medications do I need to take, what are they for and how often do I need to take them? Can you help me complete the medicine tracker below?

Medicine Tracker:

<i>Name of Medicine</i>	<i>What is it for?</i>	<i>How Often & What Time</i>	<i>Instructions</i>	<i>Prescribing Doctor</i>	<i>Pharmacy Phone No.</i>

Patient's Name: _____

What kind of equipment and supplies will I need? What are they used for and how do I order them?

How can I determine what my insurance will cover and how much I will have to pay? Do you know of possible ways to get help with these costs?

FURTHER INFORMATION & HELPFUL RESOURCES

Is a caregiver or stroke support group available in my community?

What other resources are available?

- What are the names and phone numbers of the physicians, nurses, social worker, etc.?

Name:_____	Phone:_____
Specialty:_____	
Name:_____	Phone:_____
Specialty:_____	
Name:_____	Phone:_____
Specialty:_____	
Name:_____	Phone:_____
Specialty:_____	
Name:_____	Phone:_____
Specialty:_____	

Additional Notes:

Patient's Name:_____

StrokeAssociation.org
1-888-4-STROKE



Post-Stroke Checklist: Improving Life After Stroke



Together
to End Stroke™

Adapted from the work of the Global Stroke Community Advisory Panel (GSCAP) and endorsed by the World Stroke Organization.

This Post-Stroke Checklist has been developed to help healthcare professionals identify decline or changes in post-stroke function and cognition that may respond well to treatment and/or referral. It is a brief and easy-to-use tool, intended for completion with the patient and the help of a caregiver, if necessary. Post-Stroke Checklist administration provides a standardized approach for the identification of long-term problems in stroke survivors and facilitates appropriate referral for treatment.

INSTRUCTIONS: Please ask the patient each numbered question and indicate whether the answer is “YES” or “NO.” Take the indicated action based on your best judgment. In general, if the response is NO, update the patient record and review at next assessment. If the response is YES, follow up with the appropriate action. Keep the checklist on file and use it to follow up on previous issues/concerns and identify any new post-stroke problems. The Post-Stroke Checklist should be administered after the initial stroke event, in the next appointment after discharge, and in additional appointments as you deem appropriate.

1. SECONDARY PREVENTION

Since your stroke or last assessment, have you received any advice on health-related lifestyle changes or medications for preventing another stroke?	NO →	If NO, refer to appropriate healthcare professional, such as the patient’s neurologist, primary care physician or home health care nurse
	YES →	If YES, observe progress

2. ACTIVITIES OF DAILY LIVING

Since your stroke or last assessment, are you finding it more difficult to take care of yourself?	NO →	If NO, observe progress	
	YES →	If YES, do you have difficulty dressing, washing and/or bathing? Do you have difficulty preparing hot drinks and/or meals? Do you have difficulty getting outside? Do you have difficulty feeding yourself?	If YES, refer to appropriate healthcare professional, such as the patient’s neurologist or primary care physician If NO, update patient record and review at next assessment

3. MOBILITY

Since your stroke or last assessment are you finding it more difficult to walk, move safely from bed to chair and/or are you falling more frequently?	NO →	If NO, observe progress	
	YES →	If YES, are you continuing to receive rehabilitation therapy?	If YES, update patient record and review at next assessment If NO, refer to appropriate healthcare professional, such as the patient’s neurologist, primary care physician or home health care nurse

4. SPASTICITY

Since your stroke or last assessment, do you have increasing stiffness in your arms, hands and/or legs?	NO →	If NO, observe progress	
	YES →	If YES, is this interfering with activities of daily living, sleep and/or causing pain?	If YES, refer to the appropriate healthcare professional, such as the patient's neurologist, rehabilitation physician or primary care physician
		If NO, update patient record and review at next assessment	

5. PAIN

Since your stroke or last assessment, do you have any new pain?	NO →	If NO, observe progress	
	YES →	If YES, refer to appropriate healthcare professional, such as the patient's neurologist or primary care physician	

6. INCONTINENCE

Since your stroke or last assessment, are you having more problems controlling your bladder and/or bowels?	NO →	If NO, observe progress	
	YES →	If YES, refer to appropriate healthcare professional, such as the patient's neurologist, urologist, primary care physician or home health care nurse	

7. COMMUNICATION

Since your stroke or last assessment, are you finding it more difficult to communicate with others?	NO →	If NO, observe progress	
	YES →	If YES, refer to appropriate healthcare professional, such as the patient's neurologist, primary care physician or speech-language pathologist	

8. MOOD

Since your stroke or last assessment, do you feel more anxious and/or depressed?	NO →	If NO, observe progress	
	YES →	If YES, refer to appropriate healthcare professional, such as the patient's neurologist, primary care physician or psychologist for further assessment and treatment	

9. COGNITION

Since your stroke or last assessment, are you finding it more difficult to think, concentrate and/or remember things?	NO →	If NO, observe progress	
	YES →	If YES, does this interfere with activity and/or participation?	If YES, refer to appropriate healthcare professional, such as the patient's neurologist or primary care physician
		If NO, update patient record and review at next assessment	

10. LIFE AFTER STROKE

Since your stroke or last assessment, are you finding things important to you more difficult to carry out (e.g. leisure activities, hobbies, work, going out in public)?	NO →	If NO, observe progress
	YES →	If YES, refer to appropriate healthcare professional, such as the patient's neurologist or primary care physician

11. ACTIVITIES OF DAILY LIVING

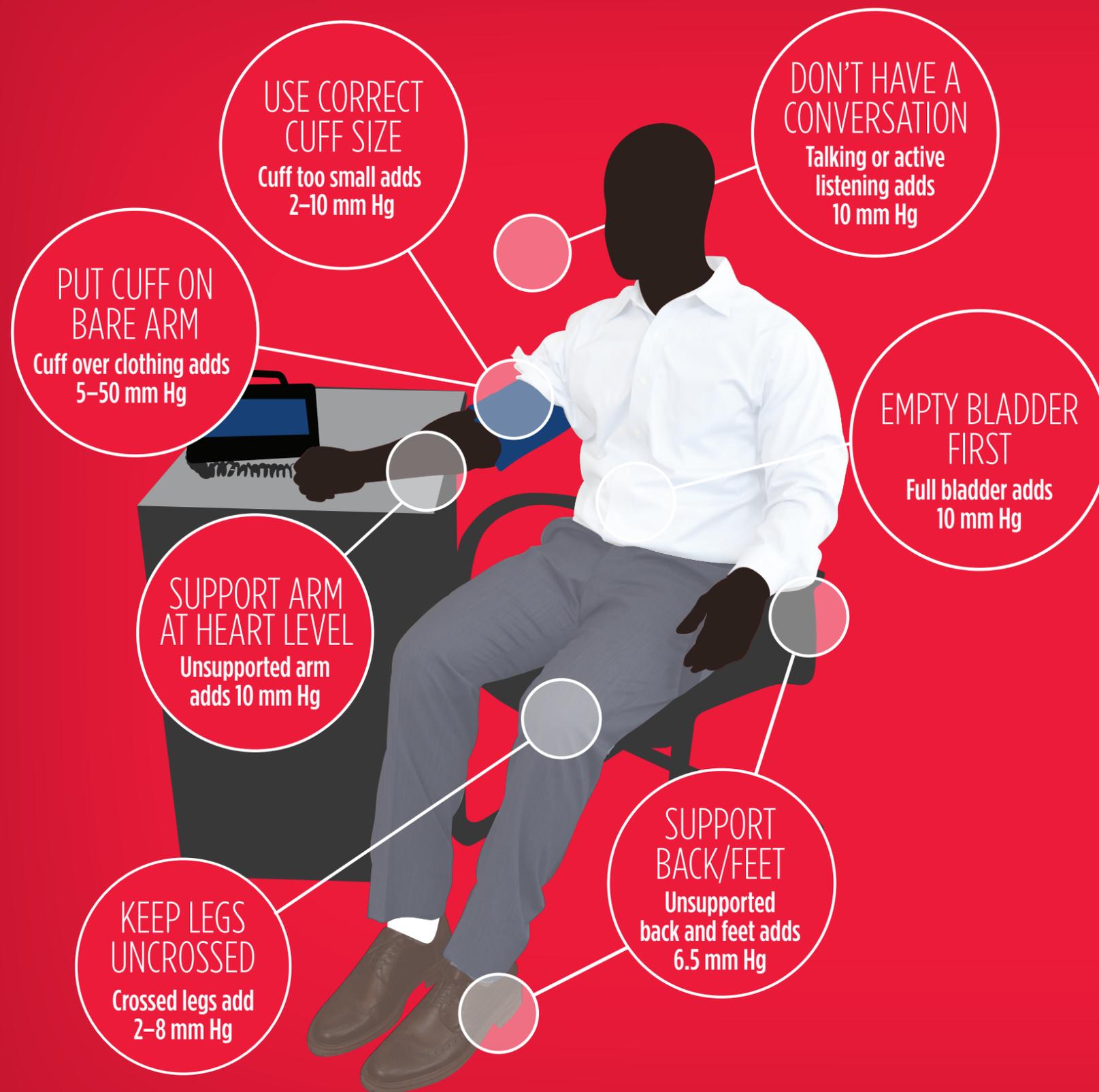
Since your stroke or last assessment, are you finding it more difficult to perform daily tasks such as using the phone, paying bills, managing medications and/or driving a car?	NO →	If NO, observe progress
	YES →	If YES, refer to appropriate healthcare professional, such as the patient's neurologist or primary care physician and refer to StrokeAssociation.org/tips for helpful advice

12. RELATIONSHIP WITH FAMILY

Since your stroke or last assessment, has your relationship with your family become more difficult and/or stressed?	NO →	If NO, observe progress
	YES →	If YES, refer to appropriate healthcare professional, such as the patient's neurologist or primary care physician

13. FOLLOW-UP APPOINTMENTS

If you were referred to a healthcare professional after your last assessment, did you schedule an appointment?	NOT APPLICABLE	
	NO →	If NO, advise that patient sets up an appointment and explain the importance of the appointment
	YES →	If YES, ask how the appointment went and if the patient has any questions or concerns



7 SIMPLE TIPS TO GET AN ACCURATE BLOOD PRESSURE READING

The common positioning errors can result in inaccurate blood pressure measurement. Figures shown are estimates of how improper positioning can potentially impact blood pressure readings.

Sources:

1. Pickering, et al. Recommendations for Blood Pressure Measurement in Humans and Experimental Animals Part 1: Blood Pressure Measurement in Humans. *Circulation*. 2005;111: 697-716.
2. Handler J. The importance of accurate blood pressure measurement. *The Permanente Journal*/Summer 2009/Volume 13 No. 3 51

This 7 simple tips to get an accurate blood pressure reading was adapted with permission of the American Medical Association and The Johns Hopkins University. The original copyrighted content can be found at <https://www.ama-assn.org/ama-johns-hopkins-blood-pressure-resources>.

Updated December 2016
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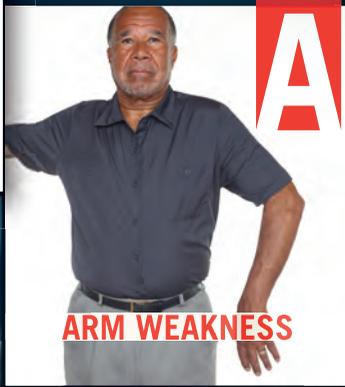


Body language can tell you all sorts of things. Like someone is having a **stroke**.



F

FACE DROOPING



A

ARM WEAKNESS



S

SPEECH DIFFICULTY



T

TIME TO CALL 911



 American Heart Association |  American Stroke Association

Together to End Stroke™

Know the sudden signs. Spot a stroke **F.A.S.T.**



strokeassociation.org

Ad Council

Caregivers/Survivors Handouts





Together
to End Stroke™



DAILY HOME CARE GUIDE

Courtesy of Lori Ramos Cavallo

AHA/ASA Volunteer, Former Caregiver and Founder of Care Partners Resource

INTRODUCTION

Caring for a stroke survivor can be overwhelming. If you can't always care for your loved one, you'll need a temporary caregiver. Use this Daily Home Care Guide to record your loved one's daily needs so a temporary caregiver will know what to do. This will help ensure that your loved one gets proper care when you aren't there.

INSTRUCTIONS

Complete the fields in the guide as described in the instructions below, print and staple pages 1-9 of the guide and give it to anyone who cares for your loved one when you're away. Also give it to friends and/or family members who may need it in an emergency.

Background Information (Page 1)

1. Fill in your loved one's name and your name.
2. Make copies of your loved one's driver's license, insurance card, Social Security card and Advance Directive/5 Wishes/DNR documentation.
3. Enclose the copies with this guide and keep copies in your possession, in the stroke survivor's possession and in your car in case of emergency.

Emergency Contact Information (Page 2)

1. Fill in your contact information as well as the information for other individuals who can provide assistance if you are not available.

Physician Information (Page 3)

1. Fill in the physicians your loved one works with, such as his/her Primary Care Physician, Nurse Case Manager or Social Worker, Neurologist, Cardiologist, Speech Therapist, Occupational Therapist, etc.

Medical Conditions (Page 4)

1. List all of your loved one's medical conditions, the date he/she was diagnosed if you know (general time frame is OK if you don't), and how the diagnosis is treated/managed.

INSTRUCTIONS

Allergies (Page 4)

1. List all of your loved one's allergies and how each is treated/managed.

Medications (Page 5)

1. In the chart, list all the medications your loved one takes.
2. Enter the dosage and the day(s) and time(s) he/she takes them. Be sure to include the medication time and day in the Daily Activities section (page 10) as well.
3. Enter the purpose of the medication and any additional information the temporary caregiver may need.
4. At the bottom, enter your loved one's pharmacist, the pharmacist's direct number and the pharmacy name, address and number.

Therapy Log (Page 6)

1. Make a copy of your therapy sheet(s) from the physical therapist, speech therapist and/or occupational therapist.
2. Include the copies with this sheet and/or complete the fields in the table.
3. Be sure to enter these exercises in the Daily Activities section (page 7) as well.

Daily Activities (Pages 7-8)

1. Enter the time, day(s), activity and activity details in the boxes. Be sure to include everything your loved one does/needs each day, including dressing, eating, medications, exercise activities, etc. Also include any assistance he/she may need with each task, what his/her preferences are, time limits, etc.

Additional Notes (Page 9)

1. Record any additional notes the temporary caregiver may need in your absence.

BACKGROUND INFORMATION

Daily Home Care Guide for: _____
Stroke Survivor's Name

See Enclosed Copies of:

Primary Caregiver: _____
Caregiver's Name

- *Driver's license*
- *Insurance card (Include Medicare & Supplemental, if applicable)*
- *Social Security card (or place in safe location where temporary caregiver could get it in an emergency)*
- *Advance Directive/5 Wishes/DNR documentation*

EMERGENCY CONTACT INFORMATION _____

Home Phone: _____

Address: _____

City: _____ State: _____ Zip: _____

1st Contact: _____

Name

Home Phone: _____ Cell: _____

Work: _____

2nd Contact: _____

Name

Home Phone: _____ Cell: _____

Work: _____

3rd Contact: _____

Name

Home Phone: _____ Cell: _____

Work: _____

PHYSICIAN INFORMATION

Name: _____

Specialty: _____ Phone Number: _____

MEDICAL CONDITIONS

<i>Medical Conditions</i>	<i>Date</i>	<i>Treatment</i>
<i>Example: Type 2 Diabetes</i>	<i>Diagnosed 1/2/10</i>	<i>Managed with medications.</i>

ALLERGIES

<i>Allergies</i>	<i>Treatment</i>
<i>Example: Peanut allergy</i>	<i>Example: Avoid all foods containing peanuts–look at ingredients on all product labels (everything in house is peanut-free). Use EpiPen in case of allergic reaction.</i>

MEDICATIONS

<i>Medications</i>	<i>Dosage</i>	<i>Day(s)</i>	<i>Time(s)</i>	<i>Purpose</i>	<i>Comments</i>
<i>Example: Aspirin</i>	<i>325 mg</i>	<i>Daily</i>	<i>8:00 am</i>	<i>Prevent blood clots.</i>	<i>Take one daily.</i>

Pharmacist: _____

Direct Number: _____

Pharmacy Name: _____

Pharmacy Address: _____ City: _____

State: _____ Zip: _____

THERAPY LOG

<i>Day/Time</i>	<i>Diagnosis</i>	<i>Purpose</i>	<i>Exercise/Activity Description</i>	<i>Therapist</i>
<i>Example: M, W 7 p.m.</i>	<i>Example: Aphasia</i>	<i>Example: Practice vocalization and exercise weak muscles.</i>	<i>Example: Take the picture cards (on Bob's bedside table) and sit down with Bob. Show him each card and let him sound out the name of the object. Go through the cards at least twice.</i>	<i>Example: Jeremy Johnson</i>

DAILY ACTIVITIES

<i>Time</i>	<i>Day(s)</i>	<i>Activity</i>	<i>Details</i>
8:00–8:15 a.m.	<i>Example: Every Day</i>	<i>Example: Wake Up</i>	<i>Example: Bob wakes up at 8:00 a.m. every morning when his alarm clock sounds. He does not need any help getting out of bed, but it takes him about 10 minutes to get up. Make sure he goes straight to the bathroom after he wakes up. He does not need assistance, but ensure that he takes no more than 5 minutes.</i>

(1 of 2)

DAILY ACTIVITIES (cont'd)

<i>Time</i>	<i>Day(s)</i>	<i>Activity</i>	<i>Details</i>

(2 of 2)

ADDITIONAL NOTES



StrokeAssociation.org/caregiver
1-888-4-STROKE

POST-STROKE CHECKLIST (PSC): For Survivors and Caregivers



Many stroke survivors live with problems that could be treated but aren't, because they never tell their doctor about those problems. Fill out this checklist and use it to talk with your doctor about problems you might be having. Read each item and circle the most correct answer.

1. RECURRENT STROKE PREVENTION Since your stroke, have you made lifestyle changes to prevent another stroke?	Do you monitor your blood pressure? Never 1-2 x/Month 1-2 x/Week Always (at least daily)
	Do you take medication(s) as prescribed Never 1-2 x/Month 1-2 x/Week Always
	If overweight, have you lost weight? No Yes N/A
	Do you exercise regularly? Never 1-2 x/Month 1-2 x/Week Always (at least daily)
	Have you stopped smoking? No Yes N/A
2. ACTIVITIES OF DAILY LIVING Since your stroke, is it harder to:	Dress? Always 1-2 x/Week 1-2 x/Month Never
	Bathe? Always 1-2 x/Week 1-2 x/Month Never
	Eat or prepare meals? Always 1-2 x/Week 1-2 x/Month Never
	Go outside? Always 1-2 x/Week 1-2 x/Month Never
3. MOBILITY AND MOVEMENT Since your stroke, is it harder to:	Walk? Always 1-2 x/Week 1-2 x/Month Never
	Move between bed and chair? Always 1-2 x/Week 1-2 x/Month Never
	Do you fall more easily? Always 1-2 x/Week 1-2 x/Month Never
	Get in and out of a car? Always 1-2 x/Week 1-2 x/Month Never
	Balance? Always 1-2 x/Week 1-2 x/Month Never
4. SPASTICITY OR TIGHTNESS Since your stroke, do you have more stiffness in your:	Arms? Always 1-2 x/Week 1-2 x/Month Never
	Hands? Always 1-2 x/Week 1-2 x/Month Never
	Legs? Always 1-2 x/Week 1-2 x/Month Never

COMPLETED BY: Stroke Survivor Caregiver

5. PAIN Since your stroke:	Do you have any new pain? Always 1-2 x/Week 1-2 x/Month Never
	Do you have pain more often? Always 1-2 x/Week 1-2 x/Month Never
	Is your pain more severe? Always 1-2 x/Week 1-2 x/Month Never
6. INCONTINENCE Since your stroke, are you having trouble controlling your:	Bowels? Always 1-2 x/Week 1-2 x/Month Never
	Bladder? Always 1-2 x/Week 1-2 x/Month Never
7. COMMUNICATION Since your stroke, are you having trouble:	Communicating with others? Always 1-2 x/Week 1-2 x/Month Never
	Speaking? Always 1-2 x/Week 1-2 x/Month Never
	Reading? Always 1-2 x/Week 1-2 x/Month Never
	Using numbers? Always 1-2 x/Week 1-2 x/Month Never
8. MOOD Since your stroke, are you feeling:	Anxious? Always 1-2 x/Week 1-2 x/Month Never
	Moody or having mismatched and/or unstable emotions? Always 1-2 x/Week 1-2 x/Month Never
	Depressed? Always 1-2 x/Week 1-2 x/Month Never
	Like a different person? Has your behavior changed? Always 1-2 x/Week 1-2 x/Month Never
9. COGNITION Since your stroke, is it harder to:	Think? Always 1-2 x/Week 1-2 x/Month Never
	Concentrate? Always 1-2 x/Week 1-2 x/Month Never
	Remember things? Always 1-2 x/Week 1-2 x/Month Never
10. LIFE AFTER STROKE Since your stroke, is it harder to:	Work? Always 1-2 x/Week 1-2 x/Month Never
	Participate in social and leisure activities or hobbies? Always 1-2 x/Week 1-2 x/Month Never
11. SEXUALITY Since your stroke, are you unhappy with:	Your sexual and intimate relationship? Always 1-2 x/Week 1-2 x/Month Never
	Your sexual functioning? Always 1-2 x/Week 1-2 x/Month Never
12. RELATIONSHIP WITH FAMILY	Have your relationships with your family or friends become more difficult or stressed since your stroke? Always 1-2 x/Week 1-2 x/Month Never

COMPLETED BY: Stroke Survivor Caregiver

TWO STEPS TO STAYING ALIVE

with **HANDS-ONLY™**
CPR



Call 911



Push hard and fast
in the center of the chest
*to the beat of
"Stayin' Alive" by the Bee Gees*

Hustle to www.heart.org/handsonlycpr to watch
a 60-second video to learn how to save a life.



American Heart Association | American Stroke Association®

www.heart.org/handsonlycpr



Find us on

BE PREPARED IN AN EMERGENCY:

LEARN **HANDS-ONLY™ CPR** AND HOW TO **SPOT A STROKE F.A.S.T.**

SPOT A STROKE **F.A.S.T.**

It could save a life, possibly yours.



FACE DROOPING — Does one side of the face droop or is it numb? Ask the person to smile. Is the person's smile uneven?

ARM WEAKNESS — Is one arm weak or numb? Ask the person to raise both arms. Does one arm drift downward?

SPEECH DIFFICULTY — Is speech slurred? Is the person unable to speak or hard to understand? Ask the person to repeat a simple sentence, like "The sky is blue." Is the sentence repeated correctly?

TIME TO CALL 911 — If someone shows any of these symptoms, even if the symptoms go away, call 911 and get the person to the hospital immediately. Check the time so you'll know when the first symptoms appeared.

BEYOND F.A.S.T. — OTHER SYMPTOMS YOU SHOULD KNOW — Sudden numbness or weakness of the leg, sudden confusion or trouble understanding, sudden trouble seeing in one or both eyes, sudden trouble walking, dizziness, loss of balance or loss of coordination and/or sudden severe headache with no known cause.

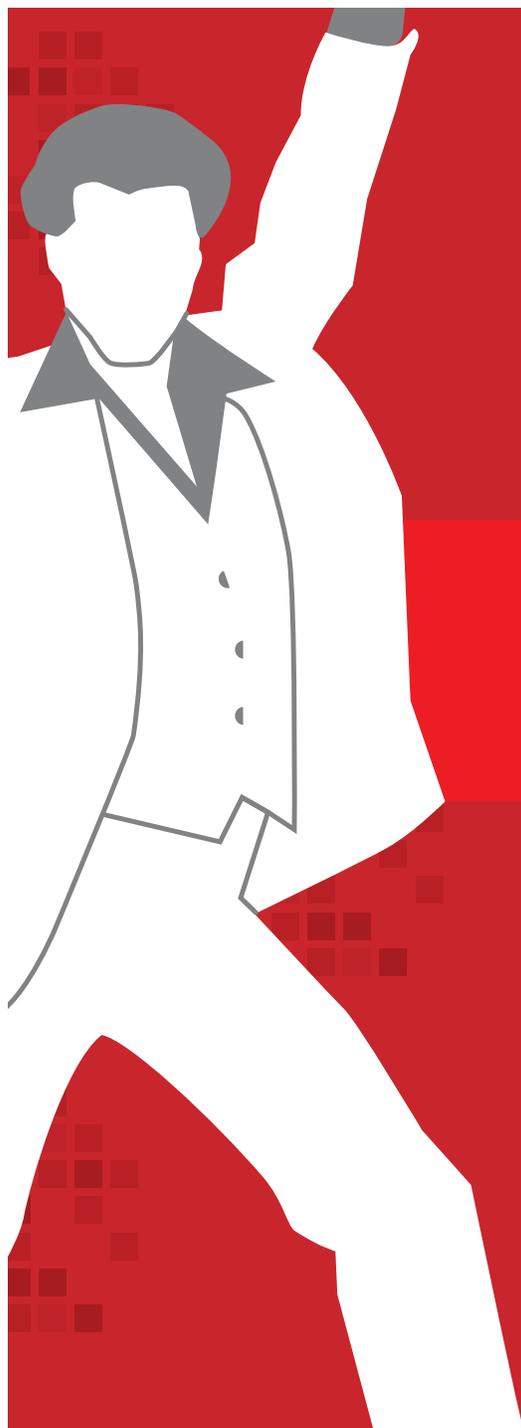
StrokeAssociation.org/WarningSigns

1-888-4-STROKE



To help you remember F.A.S.T., download this free mobile application for your phone today.

DOS PASOS PARA SALVAR UNA VIDA



RCP

usando **SOLO LAS MANOS**



Llamar al 911
*[su número de
emergencia local]*



Comprimir fuerte y rápido
en el centro del pecho
*al ritmo de la canción
"Stayin' Alive" de los Bee Gees*

Apresúrate y visita www.heart.org/handsonlycpr para ver
un video de 60 segundos para aprender a salvar una vida

ESTE PREPARADO EN CASO DE UNA EMERGENCIA:

RECONOCER UN ATAQUE CEREBRAL F.A.S.T. Y APRENDA REANIMACIÓN CARDIOPULMONAR (RCP) USANDO SÓLO LAS MANOS

RECONOZCA un ATAQUE CEREBRAL F.A.S.T.

Al aprender F.A.S.T., la vida que salve puede ser la suya o la de un ser querido



F (FACE) ROSTRO CAÍDO — ¿Está caída o adormecida un lado de la cara? Pídale a la persona que sonría. ¿La sonrisa es irregular?

A (ARM) BRAZO DÉBIL — ¿Siente un brazo débil or adormecido? Pídale a la persona que levante ambos brazos. ¿Uno de los brazos se desvía hacia abajo?

S (SPEECH) DIFICULTAD PARA HABLAR — ¿Muestra trastorno del habla y las palabras son mal pronunciadas? Pídale a la persona que repita una simple frase como “El cielo es azul.” ¿La frase es repetida correctamente?

T (TIME) TIEMPO DE LLAMAR AL 911 — Si alguien muestra alguno de estos síntomas, incluso si los síntomas desaparecen, llame al 911 y lleve a la persona al hospital inmediatamente. Revise el tiempo para que sepa cuando aparecieron los primeros síntomas.

MÁS ALLÁ DE F.A.S.T. — OTROS SÍNTOMAS QUE USTED DEBE SABER — Entumecimiento repentino o debilidad en la pierna, confusión repentina o dificultad para comprender, dificultad repentina para ver por uno o ambos ojos, dificultad repentina para caminar, mareos, pérdida del equilibrio o pérdida de la coordinación y dolor de cabeza intenso y repentino sin causa conocida.

StrokeAssociation.org/espanol

1-888-4-STROKE



Para ayudarle a recordar F.A.S.T., descargue esta aplicación móvil gratuita en su teléfono hoy.

La aplicación móvil F.A.S.T. está disponible sólo en inglés.



let's talk about

Stroke Diagnosis

It's critical to diagnose a stroke in progress because the treatment for stroke depends on the type of stroke, and, in some cases, the location of the injury to the brain.

Other conditions with similar symptoms to stroke and transient ischemic attack (TIA) will need to be ruled out to diagnose stroke. Some of these include seizures, fainting, migraine headaches, drug overdose, heart problems or other general medical conditions.



A CT or "CAT" scan is usually one of the first tests used to diagnose stroke.

How is a stroke diagnosed?

The type of stroke must be determined. Ischemic strokes are caused by a blocked artery in the brain. A ruptured blood vessel causes a hemorrhagic stroke. Treatment for ischemic stroke is different than it is for a hemorrhagic stroke.

Ischemic strokes may be treated with a clot-busting drug, called IV Alteplase (tPA). So, it's important to receive a correct diagnosis before treatment begins. To receive IV Alteplase, a doctor must diagnose your stroke as an ischemic stroke and treat you within 3 to 4.5 hours of the onset of stroke symptoms. This treatment usually takes place in the hospital emergency department. If more than 4.5 hours passes, it can't be given.

For people with blood clots in larger arteries, Alteplase may not dissolve them completely. In this case, a procedure, called mechanical thrombectomy, should be done within six to 24 hours of the first symptoms of stroke. Patients must meet certain criteria to be eligible for this procedure.

In the emergency room, your doctor or stroke emergency team may:

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

What are the types of diagnostic tests?

Diagnostic tests examine how the brain looks, works and gets its blood supply. Most are safe and painless. These tests fall into two categories: 1) imaging tests and 2) blood flow tests.

(continued)



IMAGING TESTS:

- **CT (computed tomography) or CAT scan.** It uses radiation to create a picture (like an X-ray) of the brain. It's usually one of the first tests given to a patient with stroke symptoms. CT test results give valuable information about the cause of stroke and the location and extent of brain injury.
- **MRI (magnetic resonance imaging).** This test uses a large magnetic field to produce an image of the brain. Like the CT scan, it shows the location and extent of brain injury. The image produced by MRI is sharper and more detailed than a CT scan, so it's often used to diagnose small, deep injuries.
- **CTA (computed tomographic angiography).** In CTA, a special contrast material (dye) is injected into a vein and images are taken of the blood vessels to look for abnormalities such as an aneurysm.
- **MRA (magnetic resonance angiography).** In this test, the blood vessels are imaged through a magnetic resonance scanner to locate a cerebral aneurysm.

Additional advanced tests that may be done include CT perfusion, diffusion-weighted MRI or MRI perfusion.



BLOOD FLOW TESTS:

These tests give information about the condition of arteries in your head and neck that supply blood to your brain.

- **Cerebral angiography (or cerebral arteriography).** Special substances are injected into the blood vessels and an X-ray is taken. This test gives a picture of the blood flow through the vessels. This allows the size and location of blockages to be reviewed. This test is very valuable in diagnosing aneurysms and malformed blood vessels.

HOW CAN I LEARN MORE?

- 1 Call **1-888-4-STROKE** (1-888-478-7653) to learn more about stroke or find local support groups, or visit **StrokeAssociation.org**.
- 2 Sign up to get *Stroke Connection* magazine, a free magazine for stroke survivors and caregivers at **strokeconnection.org**.
- 3 Connect with others sharing similar journeys with stroke by joining our Support Network at **strokeassociation.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

Do these tests cause any complications?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **strokeassociation.org/letstalkaboutstroke** to learn more.

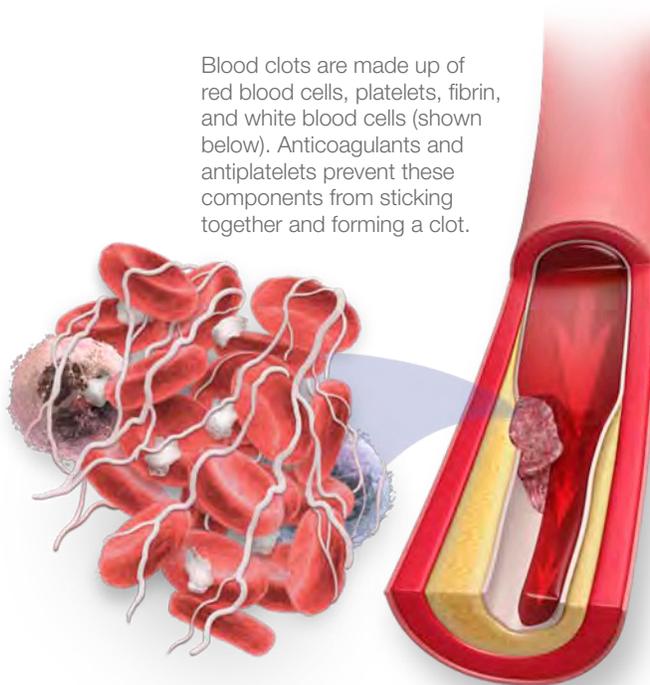


let's talk about

Anticoagulants and Antiplatelet Agents

Anticoagulants and antiplatelet agents are medicines that reduce blood clotting in an artery, vein or the heart. Blood clots can block the blood flow to your heart muscle and cause a heart attack. They can also block blood flow to your brain, causing a stroke. Doctors use these medicines to help patients prevent strokes caused by a blood clot.

Blood clots are made up of red blood cells, platelets, fibrin, and white blood cells (shown below). Anticoagulants and antiplatelets prevent these components from sticking together and forming a clot.



What should I know about anticoagulants?

Anticoagulants (sometimes known as “blood thinners”) are medicines that delay the clotting of blood. Examples are heparin, warfarin, dabigatran, apixaban, and rivoraxaban.

Anticoagulants make it harder for clots to form or keep existing clots from growing in your heart, veins or arteries. Treatment should be managed by your healthcare provider.

- Follow your doctor’s (or other healthcare provider’s) instructions.
- If you take warfarin or heparin, have regular blood tests so your doctor can tell how the medicine is working.
 - The test for people on warfarin is called a prothrombin time (PT) or International Normalized Ratio (INR) test.
 - The test for persons on heparin is called an activated partial thromboplastin time (PTT) test.
- Never take aspirin with anticoagulants unless your doctor tells you to.
- You must tell other healthcare providers that you’re taking anticoagulants.

- Always check with your doctor before taking other medicines or supplements, such as aspirin, vitamins, cold medicine, pain medicine, sleeping pills or antibiotics. These can affect the way anticoagulants work by strengthening or weakening them.
 - Let your doctor know if you have been started on any new medications that might interfere with the action of warfarin.
- Discuss your diet with your healthcare providers. Foods rich in Vitamin K can reduce the effectiveness of warfarin. Vitamin K is found in leafy, green vegetables, fish, liver, lentils, soybeans, and some vegetable oils.
- Tell your family that you take anticoagulant medicine and carry your emergency medical ID card with you.

Could anticoagulants cause problems?

If you do as your doctor tells you, there probably won’t be problems. But you must tell your doctor right away if:

- Your urine turns pink or red. This could be a sign of urinary tract bleeding.

(continued)



- Your stools turn red, dark brown or black. This could be a sign of intestinal bleeding.
- You bleed more than normal when you have your period.
- Your gums bleed.
- You have a very bad headache or stomach pain that doesn't go away.
- You get sick or feel weak, faint or dizzy.
- You think you're pregnant.
- You often find bruises or blood blisters.
- You have an accident of any kind.

What should I know about antiplatelet agents?

Antiplatelet medicines keep blood clots from forming by preventing blood platelets from sticking together. They are used to treat patients with atherosclerosis or with increased clotting tendencies. In atherosclerosis deposits of cholesterol (plaque) form along inner walls of blood vessels, creating the conditions for blood clots to form on top of the plaque, blocking the blood vessel.

Many heart attack and stroke patients — and people seeking to avoid these events — are treated with two types of antiplatelet agents to prevent blood clotting; aspirin and a P2Y₁₂ inhibitor. This is called dual antiplatelet therapy (DAPT).

Almost everyone with coronary artery disease, including those who have had a heart attack, stent, or CABG, are treated with aspirin for the rest of their lives. Aspirin can help prevent an ischemic stroke. It can also help if you have had a TIA or if you have heart problems.

P2Y₁₂ inhibitors are usually prescribed for months or years in addition to the aspirin therapy. You may be prescribed one of three of these medications — clopidogrel, prasugrel, or ticagrelor. Prasugrel should not be prescribed if you have had a stroke or a transient ischemic attack (TIA). Which one of these your doctor prescribes will be based on what he or she feels is best for you, based on your risk of blood clots and bleeding.

HOW CAN I LEARN MORE?

- 1 Call **1-888-4-STROKE** (1-888-478-7653) to learn more about stroke or find local support groups, or visit **StrokeAssociation.org**.
- 2 Sign up to get *Stroke Connection* magazine, a free magazine for stroke survivors and caregivers at **strokeconnection.org**.
- 3 Connect with others sharing similar journeys with stroke by joining our Support Network at **strokeassociation.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What kind of aspirin or other antiplatelet agent should I take?

What is the right dose for me?

My Questions:

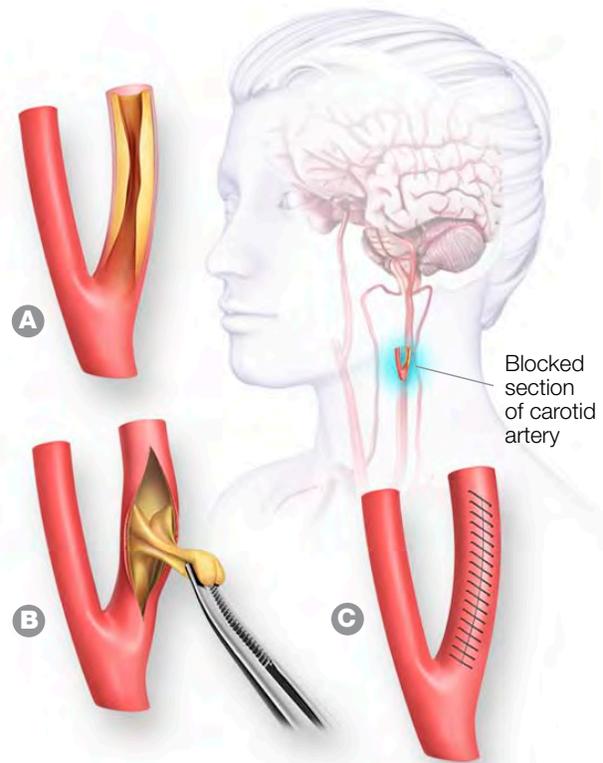
We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **strokeassociation.org/letstalkaboutstroke** to learn more.



let's talk about

Carotid Endarterectomy

Carotid endarterectomy is a surgery to remove fatty deposits (plaque) that are narrowing the arteries in your neck. These are called the carotid arteries. They supply blood and oxygen to the front part of your brain. If plaque and other fatty materials block an artery, it slows or blocks the blood flow, and you could have a stroke.



- A:** The blocked section of the carotid artery is identified.
B: The artery is opened and the plaque is removed.
C: The cleaned artery is sutured shut.

Why do I need it?

Your doctor has given you one or more tests that show there is blockage of one or both of your carotid arteries. You may have had transient ischemic attacks (TIAs). A TIA is caused by a blood clot that lasts only a few minutes and usually causes no permanent injury. TIAs can serve as warning signs of a major stroke. About 15 percent of these are followed by a stroke in the following year. If you need this operation, it can stop TIAs from reoccurring and can reduce your risk for a stroke.

How is it done?

- You'll get medicine to make you sleep and prevent pain. In some cases the doctors may do this surgery while you are awake.
- The doctor makes a small cut in your neck at the spot where your carotid artery is blocked or narrowed.

- The doctor opens up the narrowed artery and removes the plaque.
- The doctor will make the artery as smooth and clean as possible.
- The artery and the cut will be closed up (sutured).
- The surgery usually takes about one or two hours.

What about afterwards?

- You'll wake up in the hospital and may feel confused at first.
- Your neck may be sore or will hurt for a couple of days.
- You may have a bruise where the surgery was done.
- Your doctor may prescribe medication for control of any pain you might have.
- It may be hard to swallow at first. Your doctor may ask you to eat a soft diet at first and then move you to a normal diet.

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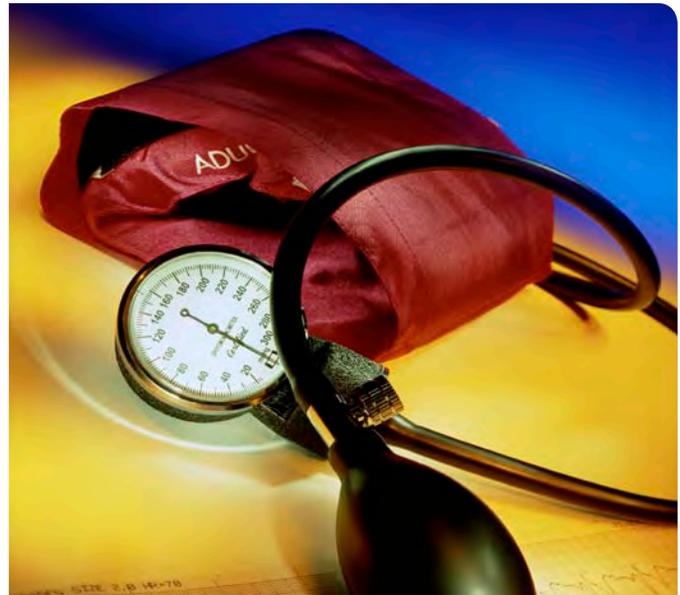


- You'll probably go home in a day or two.
- Your doctor will give you instructions on what you can and cannot do after the surgery. For example, you may be told not to lift anything heavy for a few weeks after the surgery.
- Ask your doctor when you can to return to work.
- Your doctor will prescribe medications to prevent blood clotting such as aspirin, clopidogrel or the combination of aspirin and dipyridamole.
- You should make healthy lifestyle changes to help reduce the chance of new plaque deposits and to lower your risk of stroke.

How can I reduce my risk of stroke?

- Have your blood pressure checked often and manage high blood pressure.
- Don't smoke, and avoid second-hand smoke.
- Reach and maintain a healthy weight.
- Get regular physical activity.
- Have your blood sugar tested, and control diabetes if you have it.

- Eat less salt, saturated fat and *trans* fat.
- Limit alcohol to no more than two drinks a day for men, one drink a day for women.
- Take your medications exactly as prescribed.



Managing your blood pressure is a great way to reduce your risk of stroke.

HOW CAN I LEARN MORE?

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- 2 Sign up to get **Stroke Connection** magazine, a free magazine for stroke survivors and caregivers at **strokeconnection.org**
- 3 Connect with others sharing similar journeys with stroke by joining our Support Network at **strokeassociation.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

Could I have a stroke during surgery?

Will I need a surgery again?

My Questions:

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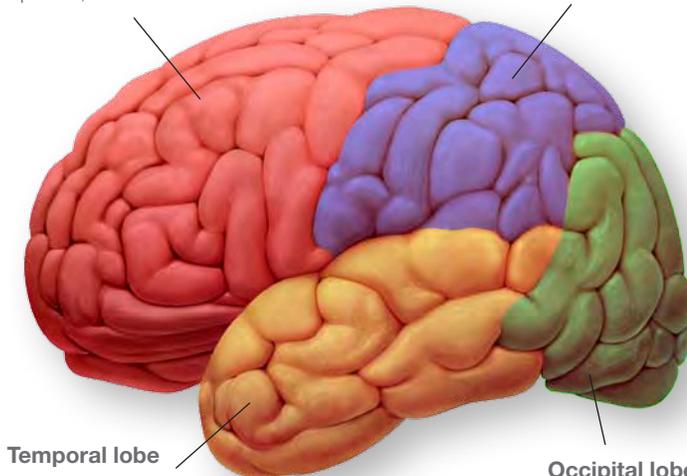
let's talk about

Changes Caused by Stroke

Your brain controls how you move, feel, communicate, think and act. Brain injury from a stroke may affect any of these abilities. Some changes are common no matter which side of the brain the injury is on. Others are based on which side of the brain the stroke injures.

Frontal lobe
controls personality, reasoning, parts of speech, and muscles

Parietal lobe
controls speech and sensation (touch and pressure)



Temporal lobe
controls hearing, speech, and short-term memory

Occipital lobe
controls vision

What are the most common general effects of stroke?

- Hemiparesis (weakness on one side of the body) or hemiplegia (paralysis on one side of the body)
- Dysarthria (difficulty speaking or slurred speech), or dysphagia (trouble swallowing)
- Fatigue
- Loss of emotional control and changes in mood
- Cognitive changes (problems with memory, judgment, problem-solving or a combination of these)
- Behavior changes (personality changes, improper language or actions)
- Decreased field of vision (inability to see peripheral vision) and trouble with visual perception

What are common changes with a left-brain injury?

- Paralysis or weakness on the right side of the body.
- Aphasia (difficulty getting your words out or understanding what is being said)
- Behavior that may be more reserved and cautious than before.

What are common changes with a right-brain injury?

- Paralysis or weakness on the left side of the body.
- One-sided neglect which is a lack of awareness of the left side of the body. It may also be a lack of awareness of what is going on to the survivor's left. For example, they may only eat from the right side of their plate, ignoring the left side.
- Behavior may be more impulsive and less cautious than before.
- It may be harder for the survivor to understand facial expressions and tone of voice. They also may have less expression in their own face and tone of voice when communicating.

What are common emotional effects of stroke?

- Depression
- Apathy and lack of motivation
- Frustration, anger and sadness
- Pseudobulbar affect, also called reflex crying or emotional lability (emotions may change rapidly)

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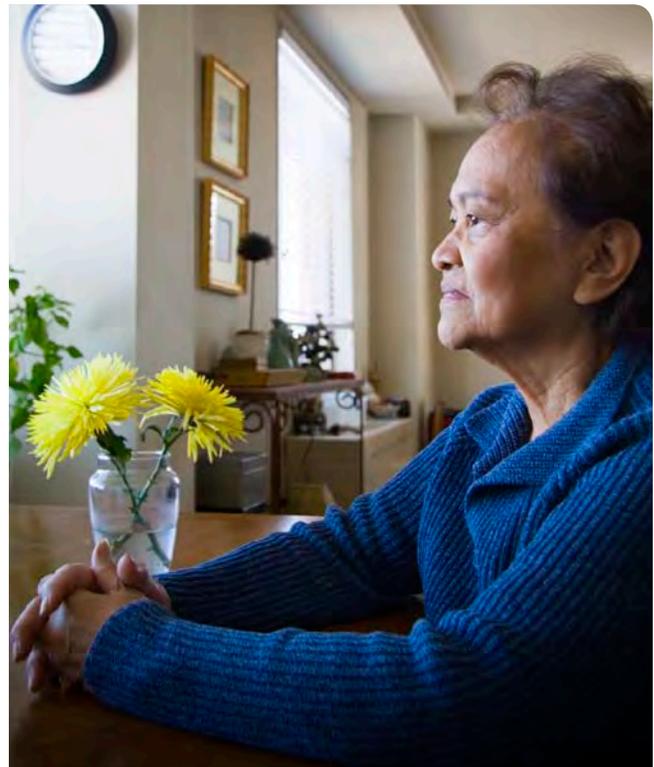
and sometimes not match the mood)

- Denial of the changes caused by the brain injury

Will I get better?

In most cases people do get better over time. The effects of a stroke are greatest right after the stroke. From then on, you may start to get better. How fast and how much you improve depends on the extent of the brain injury and your rehabilitation.

- Some improvement occurs spontaneously and relates to how the brain works again after it's been injured.
- Stroke rehabilitation (rehab) programs help you improve your abilities and learn new skills and coping techniques.
- Rehab begins after the stroke is over and you're medically stable.
- Depression after stroke can interfere with rehab. It's important to treat depression.
- Improvement often occurs most quickly in the first months after a stroke. Then it continues over years, perhaps at a slower pace, with your continued efforts.



Emotional changes such as depression are common effects of stroke, but most people do get better over time.

HOW CAN I LEARN MORE?

- 1 **Talk to your doctor, nurse or other healthcare professionals.** Ask about other stroke topics.
- 2 Call **1-888-4-STROKE** (1-888-478-7653) or visit us at **StrokeAssociation.org** to learn more about stroke.
- 3 Call the American Stroke Association's "Warmline" at **1-888-4-STROKE** (1-888-478-7653), and:
 - Sign up for *Stroke Connection*, a free magazine for stroke survivors and caregivers.
 - Talk to other stroke survivors and caregivers and find local support groups.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

Can other areas of the brain help the damaged part of the brain?

How has my stroke affected me?

My Questions:

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Knowledge is power, so Learn and Live!

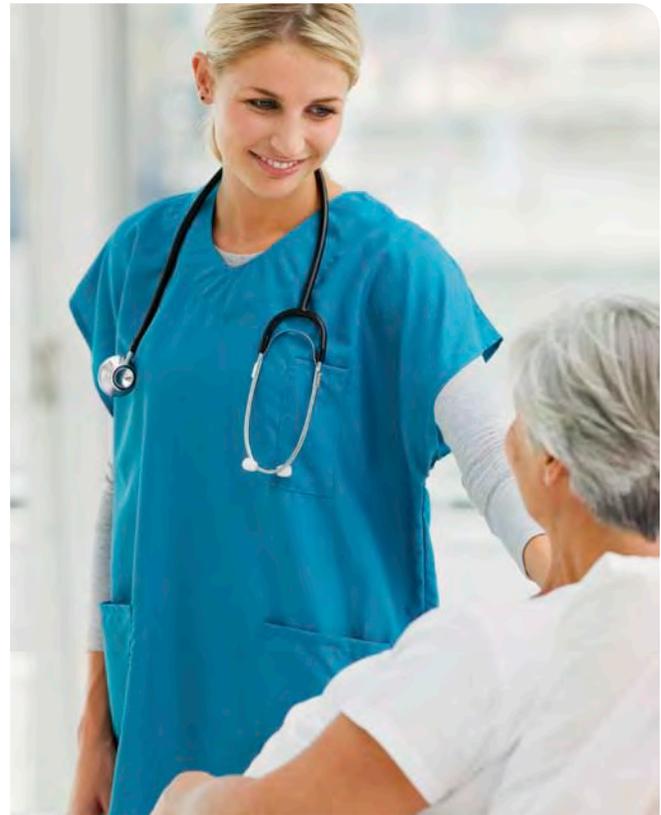


let's talk about

Complications After Stroke

Your doctor's highest priorities after a stroke are to prevent complications from the stroke and to prevent another stroke. Your doctor must determine that you are medically stable and able to resume some self-care activities. This means that all complications must be treated and under control.

Some things happen as a direct result of injury to the brain due to stroke. Others are because of a change in your abilities. For example, being unable to move freely can result in bedsores. Clinical depression can also occur with a stroke.



What are common complications of stroke?

The most common complications of stroke are:

- Brain edema — swelling of the brain after a stroke.
- Pneumonia — causes breathing problems, a complication of many major illnesses. Common swallowing problems after stroke can sometimes result in things 'going down the wrong pipe', leading to aspiration pneumonia.
- Urinary tract infection and/or bladder control.
- Seizures — abnormal electrical activity in the brain causing convulsions.
- Clinical depression — a treatable illness that often occurs with stroke and causes unwanted emotional and physical reactions to changes and losses.
- Bedsores — pressure ulcers that result from decreased ability to move and pressure on areas of the body because of immobility.

- Limb contractures — shortened muscles in an arm or leg from reduced range of motion or lack of exercise.
- Shoulder pain — stems from lack of support of an arm due to weakness or paralysis. This usually is caused when the affected arm hangs resulting in pulling of the arm on the shoulder.
- Deep venous thrombosis — blood clots form in veins of the legs because of immobility from stroke.

What can be done?

If you need medical treatment, your doctor will prescribe it.

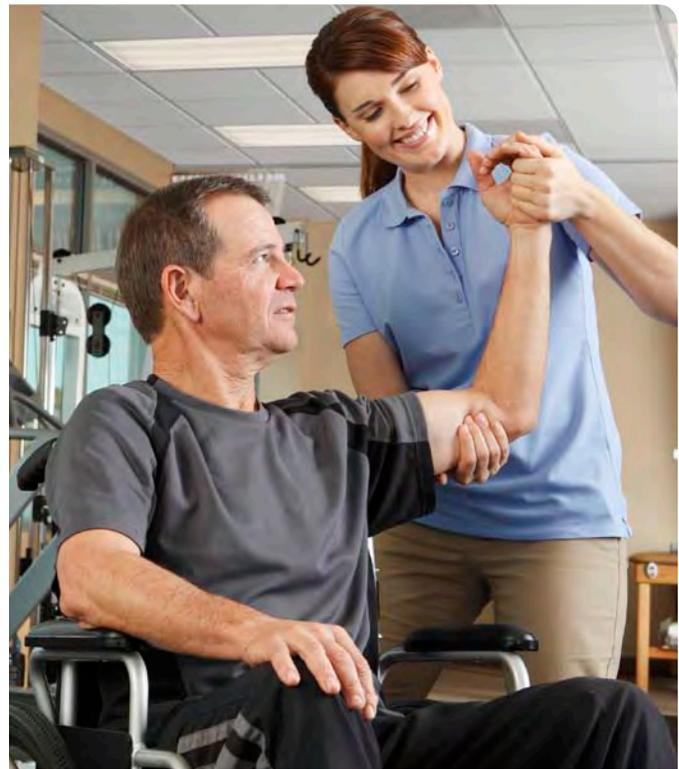
- Medical treatment often involves medical supervision, monitoring and drug therapies.
- Physical treatment usually involves some type of activity that may be done by you, a healthcare provider or by both of you working together.

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Types of treatment may include:

- Range-of-motion exercises and physical therapy to avoid limb contracture, shoulder pain and blood vessel problems.
- Frequent turning while in bed to prevent pressure sores and good nutrition.
- Bladder training programs for incontinence.
- Swallowing and respiratory therapy, and deep-breathing exercises. These all help to decrease the risk of pneumonia.
- Psychological treatment can include counseling or therapy for feelings that result from clinical depression. Types of treatment may include antidepressant medication, psychotherapy or both. You may also be referred to a local stroke support group.



Physical therapy and range-of-motion exercises are effective ways to strengthen limbs and prevent muscular contracture.

HOW CAN I LEARN MORE?

- 1** Talk to your doctor, nurse or other healthcare professionals. Ask about other stroke topics.
- 2** Call **1-888-4-STROKE** (1-888-478-7653) or visit us at **StrokeAssociation.org** to learn more about stroke.
- 3** Call the American Stroke Association's "Warmline" at **1-888-4-STROKE** (1-888-478-7653), and:
 - Sign up for *Stroke Connection*, a free magazine for stroke survivors and caregivers.
 - Talk to other stroke survivors and caregivers and find local support groups.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What complications am I most at risk for?

What can I do to prevent complications?

My Questions:

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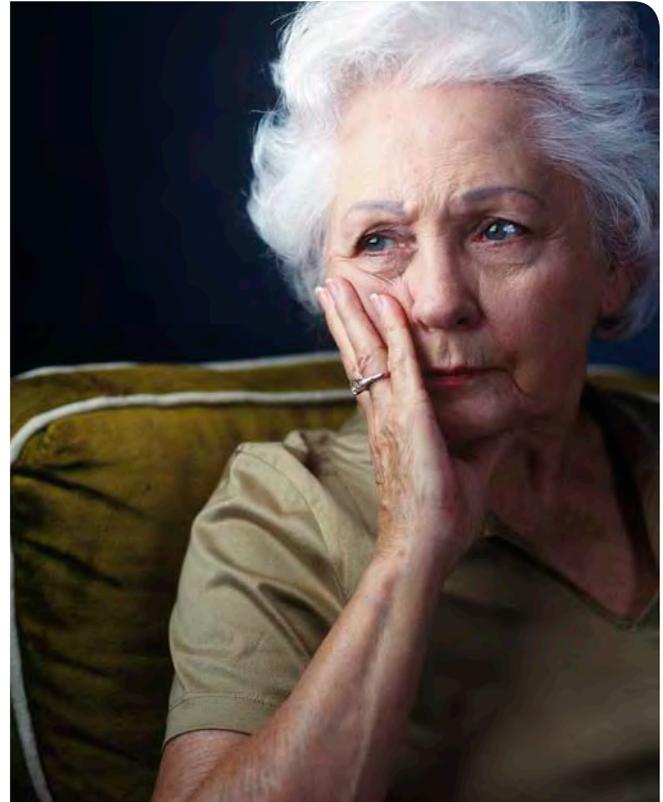
Knowledge is power, so Learn and Live!



let's talk about

Emotional Changes After Stroke

Right after a stroke, a survivor may respond one way, yet weeks later respond differently. Some survivors may react with sadness; others may be cheerful. These emotional reactions may occur because of biological or psychological causes due to stroke. These changes may vary with time and can interfere with rehabilitation.



How does stroke cause emotional changes?

Emotions may be hard to control, especially right after a stroke. Some changes are a result of the actual injury and chemical changes to the brain caused by the stroke.

Others are a normal reaction to the challenges, fears and frustrations that one may feel trying to deal with the effects of the stroke. Often, talking about the effects of the stroke and acknowledging these feelings helps stroke survivors deal with these emotions.

What are some common emotional changes after stroke?

Pseudobulbar Affect, also called “emotional lability,” “reflex crying” or “labile mood,” can cause:

- Rapid mood changes — a person may “spill over into tears” for no obvious reason and then quickly stop crying or start laughing.
- Crying or laughing that doesn't match a person's mood.

- Crying or laughing at unusual times or that lasts longer than seems appropriate.

Post-stroke depression is characterized by:

- Feelings of sadness
- Hopelessness or helplessness
- Irritability
- Changes in eating, sleeping and thinking

Treatment for post-stroke depression may be needed.

If not treated, depression can be an obstacle to a survivor's recovery. Don't hesitate to take antidepressant medications prescribed by your doctor.

Other common emotional reactions include:

- Frustration
- Anxiety
- Anger
- Apathy or not caring what happens

(continued)



- Lack of motivation
- Depression or sadness

How can I cope with my changing emotions?

- Tell yourself that your feelings aren't "good" or "bad." Let yourself cope without feeling guilty about your emotions.
- Find people who understand what you're feeling. Ask about a support group.
- Get enough exercise and do enjoyable activities.
- Give yourself credit for the progress you've made. Celebrate the large and small gains.
- Learn to "talk" to yourself in a positive way. Allow yourself to make mistakes.
- Ask your doctor for help. Ask for a referral to a mental health specialist for psychological counseling and/or medication if needed.
- Stroke may cause you to tire more easily. Rest when you feel fatigued. Make sure you get enough sleep. Sometimes lack of sleep can cause emotional changes and cause you not to cope as well.



Connecting with friends or joining a stroke support group may help you cope with your changing emotions.

HOW CAN I LEARN MORE?

- 1** Talk to your doctor, nurse or other healthcare professionals. Ask about other stroke topics.
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 - Talk to other stroke survivors and caregivers and find local support groups.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What can my family do to help me when I am emotional?

Will these emotional changes improve over time?

My Questions:

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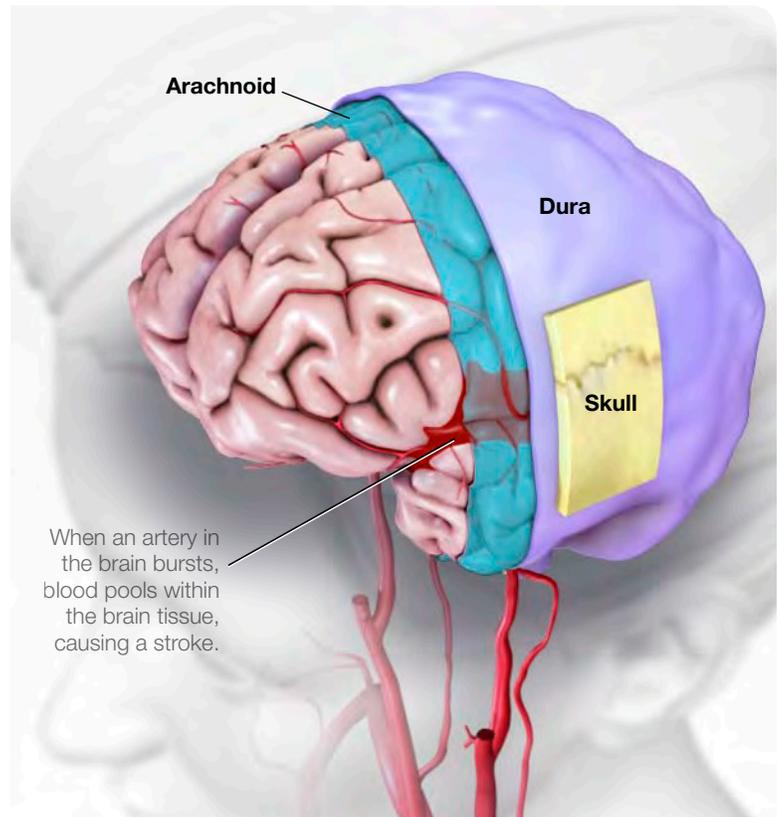


let's talk about

Hemorrhagic Stroke

About 13 percent of strokes happen when a blood vessel ruptures in or near the brain. This is called a hemorrhagic stroke as shown at right.

When a hemorrhagic stroke happens, blood collects in the brain tissue. This is toxic for the brain tissue causing the cells in that area to weaken and die.



A type of hemorrhagic stroke, known as a subarachnoid hemorrhage, can occur when an aneurysm (a blood-filled pouch that balloons out from an artery) on or near the surface of the brain ruptures, flooding the space between the skull and the brain with blood.

Are all hemorrhagic strokes the same?

There are two kinds of hemorrhagic stroke. In both, a blood vessel ruptures, disrupting blood flow to part of the brain.

Intracerebral hemorrhages (most common type of hemorrhagic stroke):

- Occur when a blood vessel bleeds or ruptures into the tissue deep within the brain.
- Are most often caused by chronically high blood pressure or aging blood vessels.
- Are sometimes caused by an arteriovenous malformation (AVM). An AVM is a cluster of abnormally formed blood vessels. Any one of these vessels can rupture, also causing bleeding into the brain.

Subarachnoid hemorrhages:

- Occur when an aneurysm (a blood-filled pouch that balloons out from an artery) on or near the surface of the brain ruptures and bleeds into the space between the brain and the skull.

- Are often caused by high blood pressure.

In addition to high blood pressure, factors that increase the risk of hemorrhagic strokes include:

- cigarette smoking
- use of oral contraceptives (particularly those with high estrogen content)
- excessive alcohol intake
- use of illegal drugs

(continued)



How are hemorrhagic strokes diagnosed?

When someone has shown symptoms of a stroke or a TIA (transient ischemic attack), a doctor will gather information and make a diagnosis. He or she will review the events that have occurred and will:

- get a medical history
- do a physical and neurological examination
- have certain laboratory (blood) tests done
- get a CT or MRI scan of the brain
- study the results of other diagnostic tests that might be needed

Diagnostic tests examine how the brain looks, works and gets its blood supply. They can outline the injured brain area. Diagnostic tests fall into three categories.

- Imaging tests give a picture of the brain similar to X-rays.
- Electrical tests record the electrical impulses of the brain (also called an EEG).
- Blood flow tests show any problem that may cause changes in blood flow to the brain.

How are hemorrhagic strokes treated?

Because hemorrhages may be life-threatening, hospital care is required. Medication is used to control high blood pressure. Other medicine may be given to reduce the brain swelling that follows a stroke.

Surgery may be needed depending on the cause and type of the hemorrhage. Surgery is often recommended to either place a metal clip at the base of an aneurysm or to remove the abnormal vessels that make up an AVM.

Some procedures are less invasive and use of a catheter that goes in through a major artery in the leg or arm. The catheter is guided to the aneurysm or AVM where it places a device, such as a coil, to prevent rupture.

HOW CAN I LEARN MORE?

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- 3 Connect with others sharing similar journeys with stroke by joining our Support Network at **strokeassociation.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What can I do to help prevent another stroke?

How can I control high blood pressure?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **strokeassociation.org/letstalkaboutstroke** to learn more.



let's talk about

High Blood Pressure and Stroke

What is high blood pressure (HBP)?

High blood pressure means that the force of the blood pushing against the sides of your arteries is consistently in the high range. This can lead to stroke, heart attack, heart failure or kidney failure.

Two numbers represent blood pressure. The higher (systolic) number shows the pressure while the heart is beating. The lower (diastolic) number shows the pressure when the heart is resting between beats. The systolic number is always listed first. Blood pressure is measured in millimeters of mercury (mm Hg).

Normal blood pressure is below 120/80 mm Hg. If you're an adult and your systolic pressure is 120 to 129, and your diastolic pressure is less than 80, you have elevated blood pressure. High blood pressure is a pressure of 130 systolic or higher, or 80 diastolic or higher, that stays high over time.

How does high blood pressure increase stroke risk?

High blood pressure is the single most important risk factor for stroke because it's the leading cause of stroke.

HBP adds to your heart's workload and damages your arteries and organs over time. Compared to people whose blood pressure is normal, people with HBP are more likely to have a stroke.

About 87 percent of strokes are caused by narrowed or clogged blood vessels in the brain that cut off the



blood flow to brain cells. This is an **ischemic stroke**. High blood pressure causes damage to the inner lining of the blood vessels. This adds to any blockage that is already within the artery wall.

About 13 percent of strokes occur when a blood vessel ruptures in or near the brain. This is a **hemorrhagic stroke**. Chronic HBP or aging blood vessels are the main causes of this type of stroke. HBP puts more pressure on the blood vessels until they can no longer maintain the pressure and the blood vessel ruptures over time.

Am I at higher risk for HBP?

There are risk factors that increase your chances of developing HBP. Some you can control, and some you can't.

Those that can be controlled are:

- Smoking and exposure to secondhand smoke
- Diabetes
- Being obese or overweight
- High cholesterol
- Unhealthy diet (high in sodium, low in potassium, and drinking too much alcohol)

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- Physical inactivity

Factors that cannot be modified or are difficult to control are:

- Family history of high blood pressure
- Race/ethnicity
- Increasing age
- Gender (males)
- Chronic kidney disease
- Obstructive sleep apnea

Socioeconomic status and psychosocial stress are also risk factors for HBP. These can affect access to basic living necessities, medication, healthcare providers, and the ability to adopt lifestyle changes.

How can I control high blood pressure?

- Don't smoke and avoid secondhand smoke.
- Lose weight if you're overweight.
- Eat a healthy diet that's low in sodium (salt), saturated fat, and *trans* fat.
- Eat fruits and vegetables, whole grains and low-fat dairy products. Include foods rich in potassium.



The only way to know if your blood pressure is high is to check it regularly. Know what your blood pressure should be and try to keep it at that level.

- Enjoy regular physical activity.
- Limit alcohol to no more than two drinks a day if you're a man and one drink a day if you're a woman.
- Take all medicines as prescribed to control your blood pressure.

HOW CAN I LEARN MORE?

- 1 Call **1-888-4-STROKE** (1-888-478-7653) to learn more about stroke or find local support groups, or visit **StrokeAssociation.org**.
- 2 Sign up to get *Stroke Connection* magazine, a free magazine for stroke survivors and caregivers at **strokeconnection.org**.
- 3 Connect with others sharing similar journeys with stroke by joining our Support Network at **strokeassociation.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What should my blood pressure be?

How often should my blood pressure be checked?

My Questions:

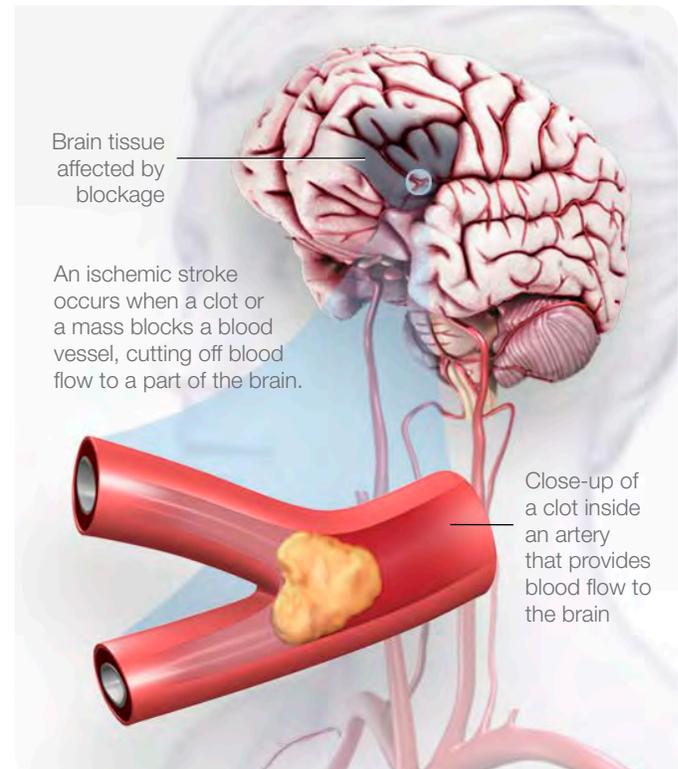
We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **strokeassociation.org/letstalkaboutstroke** to learn more.



let's talk about

Ischemic Stroke

The majority of strokes occur when blood vessels to the brain become narrowed or clogged with fatty deposits called plaque. This cuts off blood flow to brain cells. A stroke caused by lack of blood reaching part of the brain is called an ischemic stroke. High blood pressure is a leading risk factor for ischemic stroke that you can change.



Are all ischemic strokes the same?

There are two types of ischemic strokes.

- **Thrombotic strokes** are caused by a blood clot (thrombus) in an artery going to the brain. The clot blocks blood flow to part of the brain. Blood clots usually form in arteries damaged by plaque.
- **Embolic strokes** are caused by a wandering clot (embolus) that's formed elsewhere (usually in the heart or neck arteries). Clots are carried in the bloodstream and block a blood vessel in or leading to the brain.

How are ischemic strokes diagnosed?

When someone has shown symptoms of a stroke or a TIA (transient ischemic attack), a doctor will gather information and make a diagnosis. He or she will review the events that have occurred and will:

- get a medical history from you or a family member.
- do a physical and neurological examination.
- have certain lab (blood) tests done.
- get a CT (computed tomography) or MRI (magnetic

resonance imaging) scan of the brain.

- study the results of other diagnostic tests that might be needed.

How are ischemic strokes treated?

Acute treatment is the immediate treatment given by the healthcare team when a stroke happens. The goal of acute treatment is to keep the amount of brain injury as small as possible. This is done by restoring blood flow to the part of the brain where the blockage was quickly.

There is a clot-dissolving drug called IV Alteplase (tPA) to treat stroke. It can stop a stroke in progress and reduce disability from stroke by breaking up a blood clot that might be stopping the flow of blood to the brain. To be eligible for Alteplase, you must seek emergency treatment right away and have a clot-caused stroke. It must be given within 3 to 4.5 hours after symptoms start. Medication may also be used to treat brain swelling that sometimes occurs after a stroke.

For people with blood clots in larger arteries, Alteplase may not dissolve them completely. In this case, a

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procedure, called **mechanical thrombectomy**, should be done within six to 24 hours of the first symptoms of stroke. In most cases this is done only after the patient receives IV Alteplase. To remove the clot, doctors thread a catheter (thin tube) with a stent through an artery in the groin up to the blocked artery in the brain. The stent opens and grabs the clot. The doctors then remove the stent with the trapped clot. If necessary, other devices may also be used. Patients must meet certain criteria to be eligible for this procedure.

When someone has a stroke, they are at risk of another. Once the medical team identifies what caused the stroke, they may prescribe treatments or procedures to reduce the risk of a second stroke, such as:

- Antiplatelet agents, such as aspirin and clopidogrel, and anticoagulants interfere with the blood's ability to clot. This can play an important role in preventing a stroke.
- Carotid endarterectomy is a procedure in which blood vessel blockage (blood clot or fatty plaque) is surgically removed from the carotid artery in the neck. This reopens the artery and the blood flow to the brain. This is only done in people who have a large blockage.
- Doctors sometimes use balloon angioplasty and



Aspirin can play an important role in preventing stroke because it helps keep blood from clotting.

implantable steel screens called stents to treat and reduce fatty buildup clogging a vessel that may make it easy for clots to form in the bloodstream.

Sometimes a stroke is the first sign a person has of other health conditions, such as high blood pressure, diabetes, atrial fibrillation (a heart rhythm disorder), or other vascular disease. If any of these are diagnosed, the healthcare team will prescribe appropriate treatment.

HOW CAN I LEARN MORE?

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- 2 Sign up to get *Stroke Connection* magazine, a free magazine for stroke survivors and caregivers at **strokeconnection.org**.
- 3 Connect with others sharing similar journeys with stroke by joining our Support Network at **strokeassociation.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What can I do to help prevent another stroke?

What medications may I be given?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **strokeassociation.org/letstalkaboutstroke** to learn more.



let's talk about

Living at Home After Stroke

Most stroke survivors are able to return home and resume many of the activities they did before the stroke. Leaving the hospital may seem scary at first because so many things may have changed. The hospital staff can help prepare you to go home or to another setting that can better meet your needs.



For your safety, you may need to have handrails installed in your bathroom.

How do I know if going home is the right choice?

Going home poses few problems for people who have had a minor stroke and have few lingering effects. For those whose strokes were more severe, going home depends on these four factors:

- **Ability to care for yourself.** Rehabilitation should be focused on daily activities.
- **Ability to follow medical advice.** It's important to take medication as prescribed and follow medical advice.
- **A caregiver.** Someone should be available who is willing and able to help when needed.
- **Ability to move around and communicate.** If stroke survivors aren't independent in these areas, they may be at risk in an emergency or feel isolated.

What changes do I need to make at home?

Living at home successfully also depends on how well your home can be adapted to meet your needs.

- **Safety.** Take a look around your home and remove anything that might be dangerous. This might be as simple as taking up throw rugs, testing the temperature of bath water or wearing rubber-soled shoes. Or it may be more involved, like installing handrails in your bathroom or other areas.
- **Accessibility.** You need to be able to move freely within the house. Changes can be as simple as moving the furniture or as involved as building a ramp.
- **Independence.** Your home should be modified so you can be as independent as possible. Often this means adding special equipment like grab bars or transfer benches.

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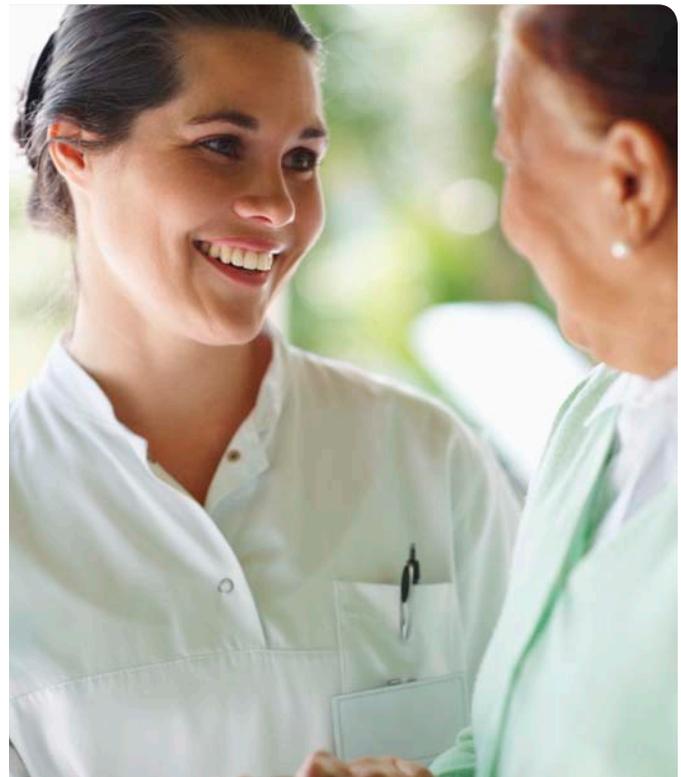


What if I can't go home?

Your doctor may advise a move from the hospital to another type of facility that can meet your needs permanently or for a short time. It's important that the living place you choose is safe and supports your continued recovery. Your social worker and case manager at the hospital can give you information about alternatives that might work for you.

Possibilities include:

- **Nursing facility.** This can be a good option for someone who has ongoing medical problems.
- **Skilled nursing facility.** This is for people who need medical attention, continued therapy and more care than a caregiver can provide at home.
- **Intermediate care facility.** This is for people who don't have serious medical problems and can manage some level of self-care.
- **Assisted living.** This is for people who can live somewhat independently but need some assistance with things like meals, medication and housekeeping.



Many stroke survivors who are unable to immediately return home find the support they need at assisted living or nursing facilities.

HOW CAN I LEARN MORE?

- 1 **Talk to your doctor, nurse or other healthcare professionals.** Ask about other stroke topics.
- 2 Call **1-888-4-STROKE** (1-888-478-7653) or visit us at **StrokeAssociation.org** to learn more about stroke.
- 3 Call the American Stroke Association's "Warmline" at **1-888-4-STROKE** (1-888-478-7653), and:
 - Sign up for *Stroke Connection*, a free magazine for stroke survivors and caregivers.
 - Talk to other stroke survivors and caregivers and find local support groups.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What living arrangement would you recommend for me?

Is there a caregiver or stroke support group available in my community?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit strokeassociation.org/letstalkaboutstroke to learn more.

Knowledge is power, so Learn and Live!



let's talk about

Risk Factors for Stroke

Knowing your risk factors for stroke is the first step in preventing a stroke. You can change or treat some risk factors, but others you can't. By having regular medical checkups and knowing your risk, you can focus on what you can change and lower your risk of stroke.



What risk factors can I change or treat?

- **High blood pressure.** This is the single most important risk factor for stroke because it's the leading cause of stroke. Know your blood pressure and have it checked every year. Normal blood pressure is below 120/80. If you have been told that you have high blood pressure, work with your healthcare provider to reduce it.
 - **Smoking.** Smoking damages blood vessels. This can lead to blockages within those blood vessels, causing a stroke. Don't smoke and avoid second-hand smoke.
 - **Diabetes.** Having diabetes more than doubles your risk of stroke. Work with your doctor to manage diabetes.
 - **High cholesterol.** High cholesterol increases the risk of blocked arteries. If an artery leading to the brain becomes blocked, a stroke can result.
 - **Physical inactivity and obesity.** Being inactive, obese, or both, can increase your risk of heart disease and stroke.
 - **Carotid or other artery disease.** The carotid arteries in your neck supply most of the blood to your brain.
- A carotid artery damaged by a fatty buildup of plaque inside the artery wall may become blocked by a blood clot. This causes a stroke.
- **Transient ischemic attacks (TIAs).** Recognizing and treating TIAs can reduce the risk of a major stroke. TIAs produce stroke-like symptoms but most have no lasting effects. Know the warning signs of a TIA and seek emergency medical treatment immediately.
 - **Atrial fibrillation (AFib) or other heart disease.** In AFib the heart's upper chambers quiver (like a bowl of gelatin) rather than beating in an organized, rhythmic way. This can cause the blood to pool and clot, increasing the risk of stroke. AFib increases risk of stroke five times. People with other types of heart disease have a higher risk of stroke, too.
 - **Certain blood disorders.** A high red blood cell count makes clots more likely, raising the risk of stroke. Sickle cell anemia increases stroke risk because the "sickled" cells stick to blood vessel walls and may block arteries.
 - **Excessive alcohol intake.** Drinking an average of more than one drink per day for women or more than two drinks a day for men can raise blood pressure. Binge drinking can lead to stroke.

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- **Illegal drug use.** Drugs including cocaine, ecstasy, amphetamines, and heroin are associated with an increased risk of stroke.
- **Sleep apnea.** Sleep disordered breathing contributes to risk of stroke. Increasing sleep apnea severity is associated with increasing risk.

What are the risk factors I can't control?

- **Increasing age.** Stroke affects people of all ages. But the older you are, the greater your stroke risk.
- **Gender.** Women have a higher lifetime risk of stroke than men do. Use of birth control pills and pregnancy pose special stroke risks for women.
- **Heredity and race.** People whose close blood relations have had a stroke have a higher risk of stroke. African Americans have a higher risk of death and disability from stroke than whites. This is because they have high blood pressure more often. Hispanic Americans are also at higher risk of stroke.
- **Prior stroke.** Someone who has had a stroke is at higher risk of having another one.



Age, gender, heredity and race are among the stroke risk factors that you can't control.

HOW CAN I LEARN MORE?

- 1 Call **1-888-4-STROKE** (1-888-478-7653) to learn more about stroke or find local support groups, or visit **StrokeAssociation.org**.
- 2 Sign up to get *Stroke Connection* magazine, a free magazine for stroke survivors and caregivers at **strokeconnection.org**.
- 3 Connect with others sharing similar journeys with stroke by joining our Support Network at **strokeassociation.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What are my risk factors for stroke?

What are the warning signs of TIAs and stroke?

My Questions:

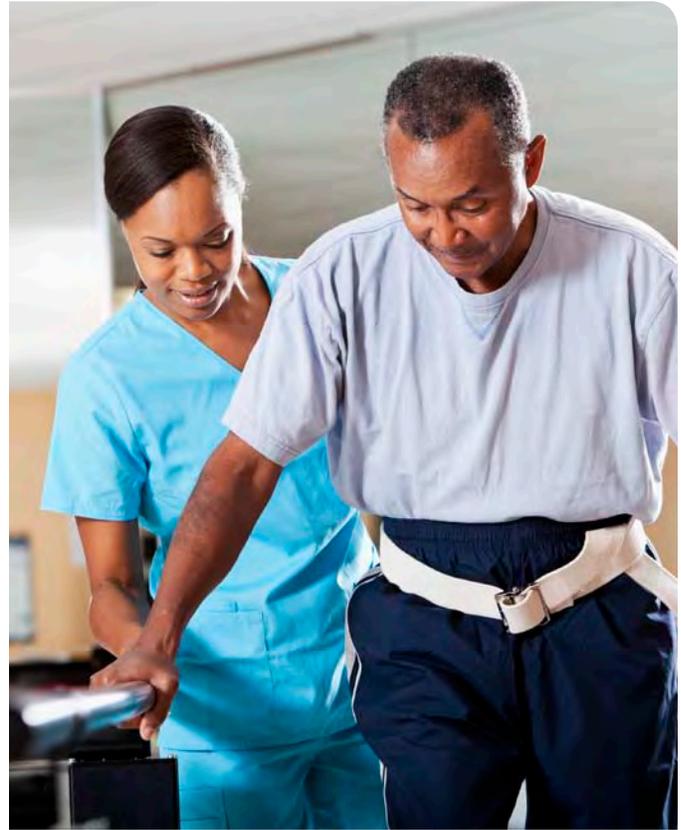
We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **strokeassociation.org/letstalkaboutstroke** to learn more.



let's talk about

Stroke and Rehabilitation

When the immediate crisis of a stroke has passed and you've been stabilized medically, it's time to consider rehabilitation (rehab) therapy.



What is stroke rehabilitation?

After a stroke, you may have to change or relearn how you live day to day. Rehab may reverse some of the effects of stroke.

The goals of rehab are to increase independence, improve physical functioning, and help you gain a satisfying quality of life after stroke. Another goal is to help you make lifestyle changes to prevent another stroke.

Who will be a part of my rehabilitation program?

Your rehab team may include:

- **Physiatrist** — A medical doctor who specializes in rehab.
- **Physical therapist** — A healthcare provider who specializes in maximizing a stroke survivor's

mobility and independence to improve major motor and sensory impairments, such as walking, balance and coordination.

- **Occupational therapist** — A therapist who focuses on helping stroke survivors rebuild skills in daily living activities such as bathing, toileting and dressing.
- **Rehabilitation nurse** — A nurse who coordinates the medical support needs of stroke survivors throughout rehab.
- **Speech therapist** — A specialist who helps to restore speech and language skills and also treats swallowing disorders.
- **Recreational therapist** — A therapist who helps to modify activities that the survivor enjoyed before the stroke or introduces new ones.
- **Psychiatrist or psychologist** — Specialists who

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help stroke survivors adjust to the emotional challenges and new circumstances of their lives.

- **Vocational rehabilitation counselor** — A specialist who evaluates work-related abilities of people with disabilities. They can help stroke survivors make the most of their skills to return to work.

What will I do in rehabilitation?

Rehab programs often focus on:

- Activities of daily living such as eating, bathing and dressing.
- Mobility skills such as transferring from bed to chair, walking or self-propelling a wheelchair.
- Communication skills in speech and language.
- Cognitive skills such as memory or problem solving.
- Social skills in interacting with other people.
- Psychological functioning to improve coping skills and treatment to overcome depression, if needed.



Learning how to use a wheelchair is among the many post-stroke skills taught by rehab therapists.

HOW CAN I LEARN MORE?

- 1 **Talk to your doctor, nurse or other healthcare professionals.** Ask about other stroke topics.
- 2 Call **1-888-4-STROKE** (1-888-478-7653) or visit us at **StrokeAssociation.org** to learn more about stroke.
- 3 Call the American Stroke Association's "Warmline" at **1-888-4-STROKE** (1-888-478-7653), and:
 - Sign up for *Stroke Connection*, a free magazine for stroke survivors and caregivers.
 - Talk to other stroke survivors and caregivers and find local support groups.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

Can you refer me to a psychiatrist?

How can I continue to improve my skills after formal rehab ends?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit strokeassociation.org/letstalkaboutstroke to learn more.

Knowledge is power, so Learn and Live!



let's talk about

Stroke, TIA and Warning Signs

Stroke occurs when a blood vessel bringing blood and oxygen to the brain gets blocked by a clot 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 are affected.

The effects of stroke may be permanent depending on how many cells are lost, where they are in the brain, and other factors. Strokes can cause weakness (paralysis), affect language and vision, and cause other problems.

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!**

Is stroke preventable?

Yes. Stroke is largely preventable. You can reduce your stroke risk by living a healthy lifestyle — controlling high blood pressure; not smoking; eating a healthy diet low in saturated and *trans* fats; being physically active; maintaining a healthy body weight; managing diabetes; and drinking alcohol moderately or not at all.

Can stroke be treated?

If you're having a stroke, time is critical. Immediate treatment may minimize the long-term effects of a stroke

and even prevent death. Treatment will vary depending on what type of stroke you had.

There is a clot-dissolving drug called IV Alteplase (tPA) to treat stroke. It can stop a stroke in progress and reduce disability from stroke by breaking up a blood clot that might be stopping the flow of blood to the brain. To be eligible for Alteplase, you must seek emergency treatment right away and have a clot-caused stroke. It must be given within 3 to 4.5 hours after symptoms start. The sooner it is given, the greater the possibility of a better outcome.

Another treatment option is called a **mechanical thrombectomy**. In this procedure, specially trained doctors try to remove the blood clot by using a wire-cage device called a **stent retriever**. To remove the clot, doctors thread a catheter (thin tube) with a stent through an artery in the groin up to the blocked artery in the brain. The stent opens and grabs the clot. The doctors then remove the stent with the trapped clot.

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This must be done within six hours to 24 hours of the first symptoms of stroke and only after the patient has received IV Alteplase. Patients must meet certain criteria to be eligible for this procedure.

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 immediately. Stroke is a medical emergency!

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

Stroke Warning Signs:

- 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.



HOW CAN I LEARN MORE?

- 1 Call **1-888-4-STROKE** (1-888-478-7653) to learn more about stroke or find local support groups, or visit **StrokeAssociation.org**.
- 2 Sign up to get Stroke Connection magazine, a free magazine for stroke survivors and caregivers at **strokeconnection.org**.
- 3 Connect with others sharing similar journeys with stroke by joining our Support Network at **strokeassociation.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

Which facility close to me is best equipped to treat me if I am having stroke symptoms?

How can I reduce my risk for stroke?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **strokeassociation.org/letstalkaboutstroke** to learn more.

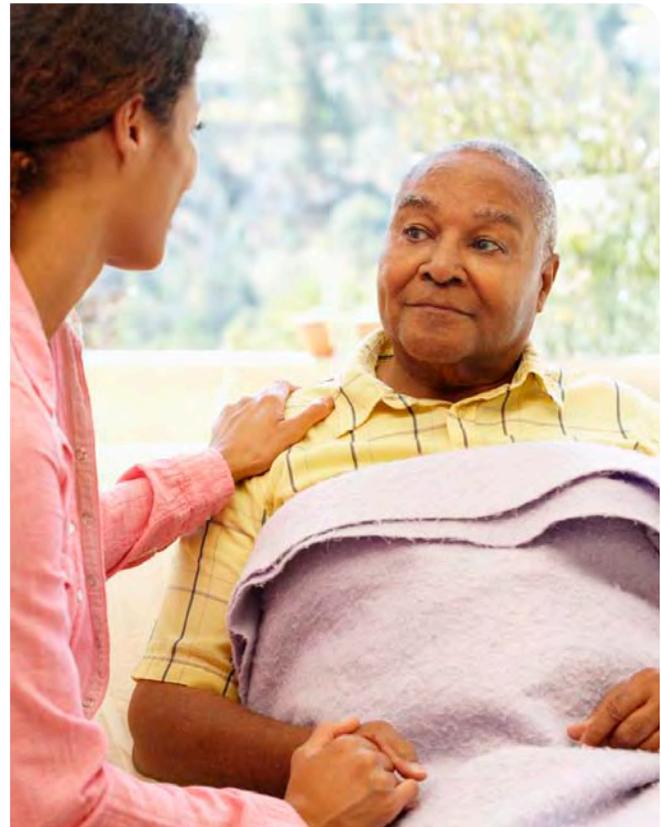


let's talk about

The Stroke Family Caregiver

People who provide help for stroke survivors are often called **caregivers**. Everyone involved in helping a stroke survivor is a caregiver. It can be the spouse, family members or friends. Often one person, spouse, adult child or parent, will provide most of the care.

It's important that caregivers and stroke survivors strive to be "care partners" in their efforts. It's often a challenge for both to adjust to their changed roles. The adjustment may be easier if the caregiver and stroke survivor share in decision-making as much as possible and try to share their feelings honestly.



What should a caregiver do?

There is no one "job description" that explains what all caregivers do. Each caregiver's responsibilities vary according to the unique needs of the stroke survivor. Role changes and new skills may need to be learned. Common responsibilities of caregiving include:

- Providing physical help with personal care and transportation.
- Managing financial, legal and business affairs.
- Monitoring behavior to ensure safety.
- Managing housework and making meals.
- Coordinating health care and monitoring or giving medications.
- Helping the survivor maintain learned rehab skills and work to improve them.
- Providing emotional support for the stroke survivor and family members.

- Encouraging the stroke survivor to continue working toward recovery and to be as independent as possible.

Is there assistance for caregivers?

Many people find caring for another person very rewarding. But there may be times when a stroke survivor's needs are too much for any one person. Sometimes a caregiver just needs a break. These breaks are important to not only the caregiver but also to the stroke survivor. These community resources may be helpful:

- **Adult day care** — professional supervision of adults in a social setting during the day.
- **Adult foster homes** — supervised care in approved (licensed) private homes.
- **Meal programs (Meals on Wheels)** — a federally sponsored nutrition program.

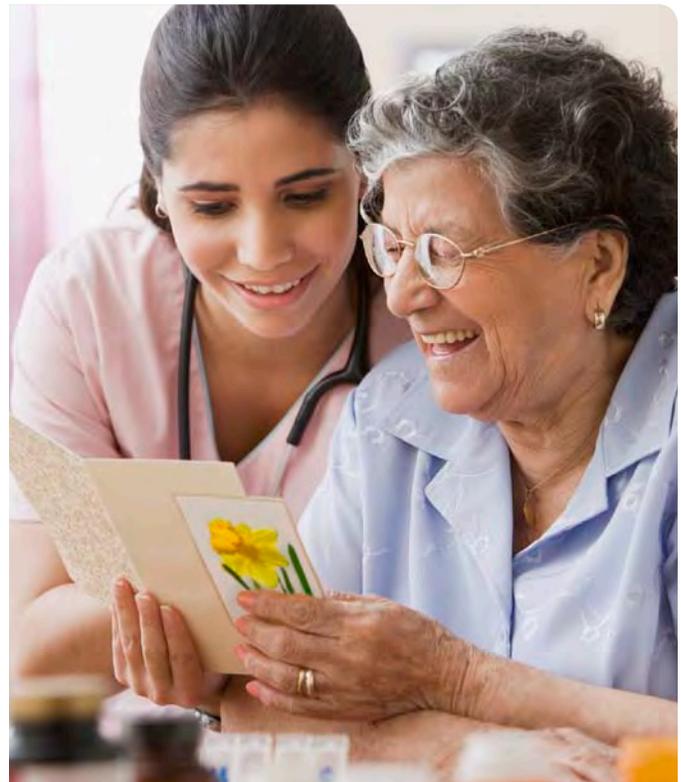
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- **Home health aide service** — in-home personal care assistance.
- **Homemaker assistance** — supervised, trained personnel who help with household duties.
- **Respite care** — people come into the home for a limited time to give caregivers a break. Some nursing homes also provide short-term respite care.

Is training available for family caregivers?

Finding caregiver training locally can be hit or miss. A good place to start is with your local Area Agency on Aging. Visit eldercare.gov to find an office near you.



Hiring a home health aide is a great way to give yourself a break from the rigors of being the primary caregiver.

HOW CAN I LEARN MORE?

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- 3 Connect with others sharing similar journeys with stroke by joining our Support Network at **strokeassociation.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

Is there a stroke support group or caregiver support group in my area?

Do you know of any other national organizations that support caregivers?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit strokeassociation.org/letstalkaboutstroke to learn more.



let's talk about

Lifestyle Changes To Prevent Stroke

You can do plenty to make your heart and blood vessels healthy, even if you've had a stroke. A healthy lifestyle plays a big part in decreasing your risk for disability and death from stroke and heart attack.



How can I make my lifestyle healthier?

Here are steps to take to be healthier and reduce your risk of stroke:

- Don't smoke and avoid second-hand smoke.
- Improve your eating habits. Eat foods low in saturated fat, *trans* fat, sodium and added sugars.
- Be physically active.
- Take your medicine as directed.
- Get your blood pressure checked regularly and work with your healthcare provider to manage it if it's high.
- Reach and maintain a healthy weight.
- Decrease your stress level.
- Seek emotional support when it's needed.
- Have regular medical checkups.

How do I stop smoking?

- The first and more important step is making a decision to quit — and commit to stick to it.

- Ask your healthcare provider for information, programs and medications that may help.
- Fight the urge to smoke by going to smoke-free facilities. Avoid staying around people who smoke.
- Keep busy doing things that make it hard to smoke, like working in the yard.
- Remind yourself that smoking causes many diseases, can harm others and is deadly.
- Ask your family and friends to support you.

How do I change my eating habits?

- Ask your doctor, nurse or a licensed nutritionist or registered dietician for help.
- Be aware of your special needs, especially if you have high blood pressure, high cholesterol or diabetes.
- Avoid foods like fatty meats, butter and cream, which are high in saturated fat.
- Eat moderate amounts of food and cut down on saturated fat, *trans* fat, sugar and salt.
- Bake, broil, roast and boil foods instead of frying.

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- Read nutrition labels on packaged meals. Many are very high in sodium.
- Limit alcohol to one drink a day for women; two drinks per day for men.
- Eat more fruit, vegetables, whole-grains, dried peas and beans, pasta, fish, poultry and lean meats.

What about physical activity?

- If you have a chronic medical condition, check with your doctor before you start.
- Start slowly and build up to at least 150 minutes of moderate physical activity (such as brisk walking) a week. Or, you can do 75 minutes of vigorous-intensity physical activity, or a combination of the two, to improve overall cardiovascular health.
- Look for even small chances to be more active. Take the stairs instead of an elevator and park farther from your destination.



If you have a chronic medical condition, check with your doctor before starting an exercise program.

HOW CAN I LEARN MORE?

- 1 Call **1-888-4-STROKE** (1-888-478-7653) to learn more about stroke or find local support groups, or visit **StrokeAssociation.org**.
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- 3 Connect with others sharing similar journeys with stroke by joining our Support Network at **strokeassociation.org/supportnetwork**.

Do you have questions for the doctor or nurse?

Take a few minutes to write your questions for the next time you see your healthcare provider.

For example:

What is the most important change I can make?

What kind of physical activity can I do safely?

My Questions:

We have many other fact sheets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Visit **strokeassociation.org/letstalkaboutstroke** to learn more.

What is Stroke?

Stroke is a disease that affects the arteries leading to and within the brain. It is the No. 5 cause of death and a leading cause of disability in the United States.

A stroke occurs when a blood vessel that carries oxygen and nutrients to the brain either bursts, ruptures or is blocked by a clot. As a result, the brain cannot get the blood and oxygen it needs and pieces of the brain die.

Stroke Risk Factors

Approximately 80 percent of strokes can be prevented. Though some stroke risk factors are uncontrollable, such as age and race, other risk factors are in your control and making small lifestyle changes can reduce your stroke risk. For example, hypertension, which is the leading risk factor, can be controlled by eating a healthy diet, regularly physical activity, not smoking, and by taking prescribed medications. The American Heart Association identifies seven factors to control for ideal health. Life's Simple 7: be active, control cholesterol, eat a healthy diet, manage blood pressure, maintain a healthy weight, control blood sugar and don't smoke.

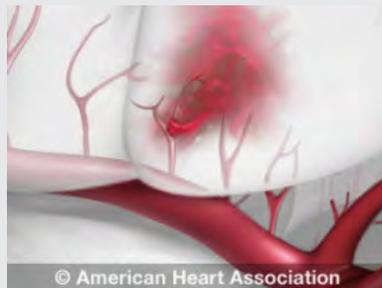
Types of Stroke



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An **Ischemic Stroke** occurs when a clot or mass, often a fatty plaque deposit, clogs a blood vessel cutting off the blood flow to brain cells.

Ischemic strokes account for 87 percent of all stroke cases.



© American Heart Association

A **Hemorrhagic Stroke** results from a weakened vessel that ruptures and bleeds into the surrounding brain tissue.

The blood accumulates and forms a bruise within the brain tissue, compressing brain cells and causing them to die.



© American Heart Association

A **TIA or Transient Ischemic Attack** produces stroke-like symptoms. A TIA is caused by a clot; but unlike a stroke, the blockage is temporary and usually causes no permanent damage to the brain. TIAs are often called "mini-strokes".

Approximately 15 percent of all strokes occur after a TIA. **A TIA is a medical emergency!**

Identifying Stroke



F.A.S.T. is an easy way to remember the sudden signs and symptoms of a stroke. F.A.S.T. is:

Face Drooping Does one side of the face droop or is it numb? Ask the person to smile.

Arm Weakness Is one arm weak or numb? Ask the person to raise both arms. Does one arm drift downward?

Speech Difficulty Is speech slurred, are they unable to speak, or are they hard to understand? Ask the person to repeat a simple sentence, like "the sky is blue." Is the sentence repeated correctly?

Time to call 911 If the person shows any of these symptoms, even if the symptoms go away, call 9-1-1 and ensure they are transported to the hospital immediately by ambulance, the fastest way to get medical care.

Help save a life with the free F.A.S.T. mobile app



Last year 795,000 people suffered a stroke in the U.S. Be prepared to identify a stroke fast with the free F.A.S.T. mobile app.

You can use it to recognize and respond to the sudden warning signs of stroke and find stroke-certified hospitals near you.

For more information and to download the free F.A.S.T. mobile app, visit [StrokeAssociation.org/WarningSigns](https://www.strokeassociation.org/WarningSigns).



OTHER HEART DISEASE

People with coronary heart disease or heart failure have a higher risk of stroke than those with hearts that work normally. Dilated cardiomyopathy (an enlarged heart), heart valve disease and some types of congenital heart defects also raise the risk of stroke.

SICKLE CELL DISEASE

(ALSO CALLED SICKLE CELL ANEMIA)

The genetic disorder mainly affects African-American and Hispanic children. “Sickled” red blood cells are less able to carry oxygen to tissues and organs. These cells also tend to stick to blood vessel walls, which can block arteries to the brain and cause a stroke.

PERIPHERAL ARTERY DISEASE

is the narrowing of blood vessels carrying blood to leg and arm muscles. It’s caused by fatty buildups of plaque in artery walls. People with peripheral artery disease have a higher risk of carotid artery disease, which raises their risk of stroke.

CAROTID OR OTHER ARTERY DISEASE

The carotid arteries in your neck supply blood to your brain. A carotid artery narrowed by fatty deposits from atherosclerosis may become blocked by a blood clot. Carotid artery disease is also called carotid artery stenosis.



UNDERSTANDING STROKE RISK



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EVERY 40 SECONDS, SOMEONE SUFFERS A STROKE.

Yet, 80 percent of strokes are preventable. Though certain risk factors — including heredity, age and race — can't be changed, several risk factors can be changed, treated or controlled.



TALK TO YOUR DOCTOR ABOUT YOUR STROKE RISK

HIGH BLOOD PRESSURE (HBP)

HBP is the No. 1 cause of stroke and the most important controllable risk factor for stroke. People who are overweight or obese, over age 35, have a family history of HBP, African-Americans, pregnant women, and those who are physically inactive, eat too much salt and/or drink too much alcohol are at higher risk for HBP.

Of all people with high blood pressure, more than 20 percent are unaware of their condition. Are you one of them? If you don't know, see a healthcare professional to be tested.

How can you control your blood pressure?

- *Eat a better diet, which may include reducing salt intake.*
- *Engage in regular physical activity.*
- *Maintain a healthy weight.*
- *Manage stress.*
- *Avoid tobacco smoke.*
- *Take your medication as prescribed.*
- *If you drink alcohol, limit your intake (no more than one drink per day for women and two drinks per day for men).*

CIGARETTE SMOKING

The nicotine and carbon monoxide in cigarette smoke damage the cardiovascular system in many ways. The use of oral contraceptives combined with cigarette smoking greatly increases stroke risk.

DIABETES MELLITUS

Many people with diabetes also have high blood pressure, high blood cholesterol and are overweight. This increases their risk even more. Though diabetes is treatable, the presence of the disease still increases your risk of stroke.

POOR DIET

Diets high in saturated fat, trans fat and cholesterol can raise blood cholesterol levels. Diets high in sodium (salt) can contribute to increased blood pressure. Diets with excess calories can contribute to obesity. But a diet that includes five or more servings of fruits and vegetables per day may reduce stroke risk.

PHYSICAL INACTIVITY AND OBESITY

Being inactive, obese or both can increase your risk of high blood pressure, high blood cholesterol, diabetes, heart disease and stroke. So go on a brisk walk, take the stairs and do whatever you can to make your life more active. Try to get a total of at least 30 minutes of activity on most or all days.

HIGH BLOOD CHOLESTEROL

It also appears that low HDL ("good") cholesterol is a risk factor for stroke in men, but more data are needed to verify its effect in women.

ATRIAL FIBRILLATION

The heart's upper chambers quiver instead of beating effectively, which can let the blood pool and clot. If a clot breaks off, enters the bloodstream and lodges in an artery leading to the brain, a stroke results.



OTRAS ENFERMEDADES DEL CORAZÓN

Las personas con enfermedad coronaria o insuficiencia cardíaca tienen mayor riesgo de ataque cerebral. Miocardiopatía dilatada (malformación del corazón), enfermedad de las válvulas del corazón y algunos tipos de defectos congénitos del corazón también aumentan el riesgo de un ataque cerebral.

ANEMIA FALCIFORME

(TAMBIÉN LLAMADO ANEMIA DE CÉLULAS FALCIFORMES)

Este trastorno genético afecta principalmente a los niños afroamericanos e hispanos. Los glóbulos rojos “falciformes o hoz” son menos capaces de transportar oxígeno a los en forma de tejidos y órganos. Estas células también tienden a pegarse a las paredes de los vasos sanguíneos, lo que puede bloquear las arterias que van al cerebro y causar un ataque cerebral.

ENFERMEDAD ARTERIOPATÍA PERIFÉRICA

Es el estrechamiento de los vasos sanguíneos que transportan la sangre a los músculos de las piernas y de los brazos. Es causada por acumulación de grasa de placa en las paredes de las arterias. Las personas con enfermedad arterial periférica tienen un mayor riesgo de padecer de enfermedad de las arterias carótida, lo que aumenta su riesgo de sufrir un ataque cerebral.

ENFERMEDAD DE LAS ARTERIAS CARÓTIDAS

Las arterias carótidas en el cuello llevan la sangre a su cerebro. Una arteria carótida estrechada por depósitos de grasa de puede bloquearse a causa de un coágulo de sangre. La enfermedad de la arteria carótida también se llama la estenosis de la arteria carótida.



ENTERNDER SU RIESGO DE UN ATAQUE CEREBRAL (STROKE)



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CADA 40 SEGUNDOS, ALGUIEN SUFRE UN ATAQUE CEREBRAL (STROKE)

Sin embargo, el 80 por ciento de los ataques cerebrales (stroke) son prevenibles. Aunque ciertos factores de riesgo, incluyendo la herencia, la edad y la raza, no pueden ser cambiados, varios factores de riesgo pueden ser modificados, tratados o controlados.



HABLE CON SU MÉDICO SOBRE SU RIESGO DE UN ATAQUE CEREBRAL (STROKE)

PRESIÓN ARTERIAL ALTA

La presión arterial alta es la causa número 1 de ataque cerebral y el factor de riesgo controlable más importante para un ataque cerebral. Las personas que tienen sobrepeso o son obesos, mayores de 35 años, con historial familiar de presión arterial alta, los afroamericanos, las mujeres embarazadas, y aquellos que son físicamente inactivos, comen demasiada sal y/o beben alcohol en exceso, tienen un riesgo mayor de tener presión arterial alta.

Entre todas las personas con presión arterial alta, más del 20 por ciento no están enteradas de su condición. ¿Es usted uno de ellos? Si no lo sabe, vea a un profesional de salud para hacerse pruebas.

¿Cómo se puede controlar la presión arterial?

- *Lleve una dieta saludable, lo que puede incluir la reducción del consumo de sal.*
- *Participe en actividad física regularmente.*
- *Mantenga un peso saludable.*
- *Controle el estrés.*
- *Evite el humo de tabaco.*
- *Tome el medicamento según lo recetado.*
- *Si usted bebe alcohol, limite su consumo (no más de una bebida al día para mujeres y dos bebidas por día para los hombres).*

FUMAR CIGARRILLOS

La nicotina y monóxido de carbono en el humo del cigarrillo dañan el sistema cardiovascular de muchas maneras. El uso de anticonceptivos orales combinados con el fumar cigarrillos, aumenta en gran medida el riesgo de un ataque cerebral.

DIABETES MELLITUS

Muchas personas con diabetes también tienen presión arterial alta, colesterol alto y sobrepeso. Esto aumenta su riesgo aún más. Aunque la diabetes es tratable, la presencia de la enfermedad aumenta su riesgo de un ataque cerebral.

UNA MALA DIETA

Las dietas altas en grasas saturadas, grasas trans y colesterol pueden aumentar los niveles de colesterol en la sangre. Las dietas altas en sodio (sal) pueden contribuir a un aumento de la presión arterial. Las dietas con exceso de calorías pueden contribuir a la obesidad. Pero una dieta que incluye cinco o más porciones de frutas y verduras al día puede reducir el riesgo de ataque cerebral.

INACTIVIDAD FÍSICA Y LA OBESIDAD

La inactividad, obesidad o los dos puede aumentar el riesgo de presión arterial alta, colesterol alto en la sangre, diabetes, enfermedades del corazón y ataque cerebral. Así que vaya en una caminata a paso ligero, tome las escaleras y haga todo lo posible para hacer su vida más activa. Trate de hacer al menos 30 minutos de actividad física cada día o en la mayoría de los días.

PRESIÓN ARTERIAL ALTA

También parece ser que los niveles bajos de HDL (“colesterol bueno”) es un factor de riesgo de un ataque cerebral en los hombres, pero se necesitan más datos para comprobar su efecto en las mujeres.

FIBRILACIÓN AURICULAR

Las dos cámaras superiores del corazón tiemblan en lugar de latir regularmente, lo que puede permitir la acumulación de sangre y coágulos. Si un coágulo se rompe, entra en el torrente sanguíneo y se aloja en una arteria que irriga el cerebro, puede producirse un ataque cerebral.

DID YOU KNOW?



Link Between High Blood Pressure and Diabetes and Kidney Disease

- If you have diabetes and high blood pressure, your risk for a heart attack is higher.
- High blood pressure and kidney disease can contribute to a heart attack.

Questions to Ask Your Pharmacist

- What is my medicine called, and what does it do?
- How and when should I take it? And for how long?
- What if I forget to take it?
- Are there any side effects?
- Is it safe to take with other medicines or vitamins?
- Can I stop taking it if I feel better?



How to Take Your Blood Pressure with an Automatic Blood Pressure Machine

- Take your blood pressure at the same time every day, such as in the morning and at night.
- Don't smoke, drink caffeinated beverages or exercise within 30 minutes before measuring your blood pressure.
- Relax and sit with your arm slightly bent and resting comfortably on a table at the same level as your heart.
- Place the cuff securely on your upper arm (approximately one inch above your elbow). The cuff should be touching your skin.
- Follow the directions on the blood pressure machine to start the reading.
- Each time you take your blood pressure, do it two or three times, one minute apart, and write down all results.
- Share all results with your health care professional.

STROKE SUPPORT GROUP FINDER – LAS VEGAS, HENDERSON AND RENO

Group Name	Address	Meeting Dates	Who can attend?	Contact Information
Summerlin Hospital Medical Center Support Group	657 Town Center Dr. Las Vegas, NV. 89144	4 th Thursday 3:00pm-4:00pm (Room B)	Caregivers or Survivors	Carol McLeod (702) 233-7061 Carol.mcleod@uhsinc.com
Desert Canyon Stroke Support Group	9175 W. Oquendo Rd. Las Vegas, 89148	2 nd Wednesday Noon-1:00pm	Caregivers or Survivors	(702) 252-7342
Centennial Hills Hospital Stroke Support Group	6900 N. Durango Las Vegas, 89149	2 nd Tuesday 3:00pm-4:00pm Rooms 1-2	Caregivers or Survivors	Josie Covell (702) 629-1309 Josephine.covell@uhsinc.com
Aphasia Lunch Bunch (Green Valley Women’s Care Center)	2651 Paseo Verde Henderson, 89072 Suite 180	1 st & 3 rd Thursday Noon - 2:30pm	Caregivers or Survivors	Kim (702) 616-4901
Henderson Stroke Support Group (Encompass Health Rehab Hospital of Henderson)	10301 Jeffreys St. Henderson, 89052 (Mojave Day Rm)	2 nd Tuesday Noon - 1:00pm	Caregivers or Survivors	Sandy McGinnis (702) 939-9441 Sandy.mcginis@healthsouth.com
Stroke Group – Reno	1495 Mill St. Reno, NV. 89502	2 nd Tuesday 4:00pm-5:00pm	Caregivers, Survivors, or Medical Professionals	(775) 982-7331
Renown Rehab Stroke Support Group	1495 Mill St. Reno, NV. 89502	2 nd Tuesday 4:00pm-5:00pm	Caregivers or Survivors	Sadie Wangler (775) 982-2948 Swangler082@gmail.com