STROKE
PATIENT EDUCATION

It's your move.

We're here to help.

LEARN MORE: KaweahHealth.org/Stroke

Kaweah Health
MORE THAN MEDICINE. LIFE.

STROKE
PATIENT EDUCATION

WHAT'S INSIDE

PAGE **1**	Contact Information
Page **2**	What is a Stroke?
Page **3**	Warning Signs of a Stroke
Page **4**	Tests to Diagnose Stroke I Treatment of Acute Stroke
Page **5**	Risk Factors for All Types of Stroke
Page **6**	High Blood Pressure I High Cholesterol
Page **7**	Smoking
Page **8**	Drugs and Alcohol
Page **9**	Overweight, Obesity and Physical Inactivity Atrial Fibrillation (Afib)
Page **10-11**	Diabetes
Page **12**	Changing Your Diet Can Help Prevent Stroke
Page **13-15**	Medications
Page **16**	What to Expect After Your Stroke
Page **17**	Therapy Services

Contact Information

Doctor(s) that treat me for stroke issues

Name:

Specialty:

Address:

City:

State: Zip Code:

Phone Number:

Name:

Specialty:

Address:

City:

State: Zip Code:

Phone Number:

Other important phone numbers

For ambulance, fire department, or other emergency services, **CALL 911**

Pharmacy

Other doctors, nurses, therapies

For more stroke resources, please visit

American Heart Association: Heart.org

American Stroke Association Stroke.org

Kaweah Health website stroke page KaweahHealth.org/Stroke

Kaweah Health Stroke Education
www.KaweahHealth.org/StrokeProgramResources

QR CODES

Throughout this booklet you will see square barcodes called QR codes. These codes offer access to more information and education using your smartphone. Open the camera app on your phone and put the QR code in the viewscreen. A pop-up should appear on the screen directing you to click on it to go to the suggested website.

What is a Stroke?

A stroke is a disease that affects the blood vessels of the brain. A stroke occurs when a blood vessel that brings blood and oxygen to the brain gets blocked or pops open. Brain cells die when they don't get the flow of blood and oxygen they need. When this happens, the part of the body they control cannot work. These harmful results are often permanent because brain cells cannot be replaced.

Other names for stroke

- Cerebral vascular accident (CVA)
- Ischemic stroke
- Transient ischemic attack (TIA)
- Intracranial hemorrhage (ICH)
- Cerebral thrombosis

Types of Stroke

There are three types of strokes:

Ischemic stroke is caused by a blocked artery. This is the most common type of stroke. They are sometimes treated with drugs referred to as clot busters.

Hemorrhagic stroke (brain bleed) is caused by bleeding into the brain tissue. A ruptured blood vessel causes this type of stroke.

TIA is called a mini stroke. This occurs when a blood clot blocks an artery for a short time. The signs of a TIA are the warning signs of a stroke. They often last only a few minutes, but 10% of all strokes start with a TIA. TIAs are a medical emergency and need treatment right away.

Warning Signs of a Stroke

Is it a stroke? BE FAST and check for these signs:

B **BALANCE.** Is there a sudden loss of balance?

E **EYES.** Is there a sudden change in vision?

F **FACE.** Is there a sudden facial droop?

A **ARM.** Is there a sudden arm or leg weakness?

S **SPEECH.** Is there a sudden speech difficulty?

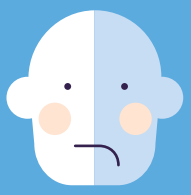
T **TIME.** Call 911 at any sign of stroke.

Fast emergency treatment may reduce disability and save your life.

BALANCE	EYES	FACE	ARM	SPEECH	TIME
Sudden loss of balance	Sudden change in vision	Sudden facial droop	Sudden arm or leg weakness	Sudden speech difficulty	to call 911

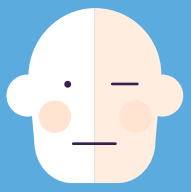
LEARN MORE KaweahHealth.org/Stroke

SUDDEN



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

Confusion, trouble speaking or understanding



Trouble seeing in one or both eyes

Trouble walking, dizziness, loss of balance or coordination

Severe headache without known cause

Medical ID on your smartphone could save your life.

HOW? Setting up Medical ID on your phone can give first responders access to critical medical information and your emergency contacts, even if your phone is locked.

Update your Medical ID yearly. Your emergency readiness could be a life-saving decision.

It's simple! Use these QR codes to get simple, step-by-step instructions. It's easy, and it could save your life!

For iPhone

For Android

Tests to Diagnose Stroke

CT Scan (Computerized Tomography), sometimes called a CAT or CT scan, is a test using radiation that takes a series of pictures of the brain. It may be one of the first tests ordered. Results of this test give the stroke team helpful information about the cause, location, and size of the stroke.

CTA (Computerized Tomography Angiography) is a test using the CT scan and a liquid (dye) that is given through an IV. This test helps show the arteries in the brain and lets the stroke team see where there may be blood flow problems.

MRI Scan (Magnetic Resonance Imaging) is a scan that uses a large magnetic field to take a series of pictures of the brain. It also shows the cause, location and size of the stroke. An MRI can detect brain tissue damage caused by an ischemic stroke or hemorrhage stroke.

Treatment of Acute Stroke

Once a stroke is suspected or confirmed, the main goal of treatment is to bring blood flow back to the brain; timing is important and affects what treatments are used. It is very important to know when your stroke signs started.

Ischemic stroke (clot in the brain) treatment

Thrombolytic medications

These medications are also called clot busters. They are used to dissolve blood clots that are blocking arteries in the brain. To be most helpful, these meds must be started within three hours (and up to four and a half hours in certain eligible patients) after start of stroke signs.

Endovascular procedures

Mechanical thrombectomy is a procedure that doctors do to remove a blood clot in the brain. To do this, a doctor will pass a small tube through a large artery in the leg or arm. This tube goes up to the blocked artery in your brain. The doctor takes away the clot with special suction tubes. Endovascular procedures can only be done on certain blood clots in large vessels of the brain.

Hemorrhagic stroke (bleeding in the brain) treatment

Medical management

Much of the time, patients with a brain bleed are managed by medication and observation.

Endovascular procedures

Endovascular procedures may be used to treat certain brain bleeds in the same way the procedure is used for treating an ischemic stroke. These procedures are less invasive than surgical treatments, and involve the use of a tube introduced through a major artery in the leg or arm, then guided to the bleeding area. It then places a mechanical device, such as a coil, to stop the bleeding.

Surgical treatment

For strokes caused by a brain bleed, we may do an operation to stop the bleeding. Your doctor will decide if an operation, or watching you closely, is the best thing to do.

Risk Factors for All Types of Stroke

Some risk factors can be controlled, others cannot. Below is a list of conditions and behaviors that patients can act on to lower their risk of stroke.

Controllable risk factors

- High blood pressure
- High blood cholesterol
- Atrial fibrillation
- Diabetes (high blood sugar)
- Overweight and obesity
- Smoking
- Excessive alcohol consumption
- Illegal drug use
- Physical inactivity

Uncontrollable Risk Factors

Age
Stroke affects people of all ages, but as we get older, our risk for stroke becomes greater.

Heredity
Risk of stroke is greater in people whose close family members have had a stroke.

Race
African Americans have a higher risk of death and disability from a stroke. This is because they have a greater incidence of high blood pressure. Hispanic Americans are also at risk for stroke due to complications of diabetes.

Prior Stroke
Prior strokes put that person at higher risk of another stroke.

Gender
More men have strokes each year than women, but more women die from strokes than men.

High Blood Pressure

High blood pressure (BP) is also called hypertension (HTN). This is the single most important threat that can cause stroke.

In the U.S., 116 million adults have high blood pressure.[1] Most people with high blood pressure do not know why they have it. It is easy to find and treat high blood pressure.

Medication, diet, exercise, and weight loss can help you control your blood pressure.

- Normal blood pressure is 120/80.[2]
- High blood pressure is 140/90 or higher.[2]
- If you have diabetes, high blood pressure for you is 130/80.[3]

HIgh blood pressure is the single most important threat that can cause stroke.

High Cholesterol

Close to 28 million American adults have total cholesterol levels above 240 mg/dL.[3]

- Your total cholesterol should be below 180 mg/dL.[2]
- Your triglyceride level should be below 150 mg/dL.[4]
- Your HDL, or good cholesterol, should be 40 mg/dL or higher.[4]
- Your LDL, or bad cholesterol, should be below 70 mg/dL.[5]

Please ask to see a dietitian for help with healthy meal plans. This will help lower both your blood pressure and cholesterol.

References and resources

1. CDC, www.cdc.gov
2. Stroke Association, www.strokeassociation.org
3. National Institute of Health, www.nih.gov
4. American Heart Association, www.heart.org
5. American Heart Association, Get With The Guidelines

Smoking

Tobacco use can cause serious illnesses such as heart disease, stroke, lung cancer and lung disease.

Close to 47.1 million men and women smoke cigarettes. The nicotine and carbon monoxide in cigarette smoke harm the body in many ways. Electronic cigarettes, also known as e-cigarettes, are not safe and can cause as much damage to your body as regular cigarettes.

Helpful tips to quit smoking

- Make an agreement with yourself to quit.
- Ask your nurse or doctor about quit smoking aids.
- Go to a smoking cessation class.

Smoking can make your illness worse. If you smoke, you should stop now. Quitting takes hard work and a lot of effort, but there are many ways to help you succeed.

Preventing relapse

- Think of yourself as a non-smoker.
- Watch out for triggers – being around smokers, alcohol, high-emotional situations.
- Manage your weight when you quit.
- Manage your stress when you quit.
- If you slip (smoke or use tobacco products), do not let it turn into a relapse.
- If you have a relapse, you can get back on track.

Resources

Kick It California
1 (800) 784-8669
www.KickItCA.org

American Heart Association
1 (800) 242-8721
www.AmericanHeart.org

American Cancer Society
1 (800) 227-2345
www.Cancer.org

American Lung Association
1 (800) 586-4872
www.LungUSA.org

Drugs and Alcohol

Drugs

The most commonly abused drugs, including cocaine, amphetamines and heroin, have been associated with an increased risk of stroke. Strokes caused by drug abuse often occur in a younger population. Avoid potentially addicting substances and see a doctor if you need support to overcome substance abuse.[1]

For more information, scan the QR code at left to access the American Heart Association's webpage on illegal drugs and heart disease.

www.KaweahHealth.org/drugs-and-stroke

Alcohol

Alcohol abuse can lead to medical complications, including stroke. If you drink alcohol, we recommend no more than two drinks per day for men and no more than one drink per day for non-pregnant women. Pregnant women should not drink alcohol. If you need help overcoming addiction to alcohol, speak with your doctor or contact a local support group.[1]

For more information, scan the lower left QR code to access the American Heart Association's website page on alcohol.

www.KaweahHealth.org/drinking-and-stroke

SCAN TO LEARN MORE about illegal drugs and heart disease.

SCAN TO LEARN MORE about alcoholism and heart health.

Reference

1. American Stroke Association, www.stroke.org

If you need help overcoming addiction to drugs or alcohol, speak with your doctor or contact a local support group.

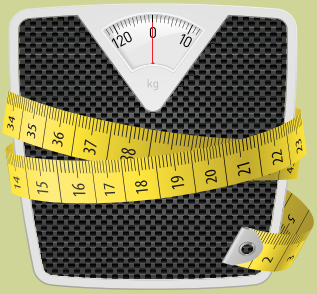
Overweight, Obesity, and Physical Inactivity

Close to 73.6% of people in the U.S. are overweight or obese.[1] If you lose just five to 10 pounds, you can lower your blood pressure and cholesterol. This will improve your overall health.

Staying active helps control blood pressure, reduce cholesterol levels, and control your weight. It is recommended to get 30 minutes of physical activity a day for five to seven days per week.[2] This could be three 10-minute brisk walks a day.

Ideal body weight is determined by calculating your body mass index (BMI). Your nurse or dietitian can help you in calculating your BMI. The ideal BMI is 18.5-24.9.[1]

ALMOST **74%** OF PEOPLE IN THE U.S. ARE OVERWEIGHT OR OBESE.



Atrial Fibrillation (AFIB)

Atrial fibrillation is a condition that causes the upper chambers of the heart, the atria, to vibrate. The atria are supposed to beat properly to move blood into the ventricle. This vibrating causes blood flow to slow and pool. This can increase the risk of clotting. If a clot breaks loose from the atria and enters the bloodstream, it can get stuck in an artery leading to the brain. This can cause a stroke.

People with atrial fibrillation have a five times higher risk for stroke per year.[3]

Anticoagulants (blood thinners) used for treatment of atrial fibrillation could include medications such as Eliquis, Xarelto, Coumadin, or Pradaxa. These will be in addition to other medications you are prescribed. There may be other procedures available if you are not able to take anticoagulant medication.

References and resources

1. Centers for Disease Control, www.CDC.gov
2. Healthy People 2030, www.Health.gov/HealthyPeople
3. American Heart Association, www.Heart.org

Diabetes

Diabetes is an independent risk factor for stroke. Many people with diabetes also have high blood pressure, high cholesterol, and are overweight. You can control diabetes with medications such as insulin, or diabetes pills. Diet and exercise can also help control diabetes. Your doctor may do a lab test called a hemoglobin A1c. This test will let them know how well your diabetes has been controlled in the last 90 days. The goal is to have a number less than 7.0%.

Ask your doctor or provider for a referral to Kaweah Health's Diabetes Clinic at 559-624-2847.

Your diabetes risk

Type 1 diabetes develops when the body's immune system attacks and destroys cells in the pancreas that make insulin. Once these cells are destroyed, the pancreas produces little or no insulin, so glucose stays in the blood. When there is too much glucose in the blood, especially for a long time, the organ systems in the body suffer long-term damage.[1]

Type 2 diabetes is a metabolic disorder. It is characterized by the body not being able to make enough insulin and/or the body cells being resistant to insulin. This results in an abnormal elevation of blood sugar.

Patients with type 2 diabetes may be prescribed empagiliflozin, which can also go by the name of Jardiance or Synjardy. Empagiliflozin is an antidiabetic medication that can improve glucose control and reduce the risk of cardiovascular death in adults with type 2 diabetes and cardiovascular disease. It is known as a medication that protects the heart, and it may help to prevent a stroke or heart attack.

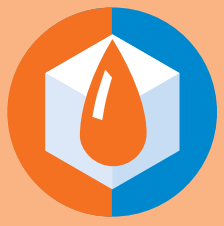
Why should I want to know if I have type 2 diabetes?

Type 2 diabetes rarely occurs alone. People who are newly diagnosed with type 2 diabetes usually already have a disease such as high blood pressure and/or abnormal cholesterol levels. High blood sugar should not be ignored. If it is not treated, high blood sugar will harm large and small blood vessels. It affects every cell in your body.

Resources:

1. American Heart Association, www.heart.org

What are the risk factors of type 2 diabetes?



Race/ethnicity. Diabetes is more common in African Americans, Latinos, Native Americans, Asian Americans, and Pacific Islanders, but type 2 diabetes is seen across all race/ethnic groups.

Age. If you are over the age of 45, your risk increases each year. However, children as young as 8 are being diagnosed with type 2 diabetes.

Family. Type 2 diabetes tends to run in families. If you have a first-degree relative (sibling or parent) with type 2 diabetes, your risk level is higher.

Weight. Being overweight or obese, especially carrying extra weight in your midsection increases your risk.

Activity level. Sedentary lifestyle and a lack of physical activity increases your risk.

Pregnancy history. Women who had gestational diabetes or gave birth to at least one baby weighing more than nine pounds are at a higher risk for type 2 diabetes. If your mother had gestational diabetes while pregnant with you, you are at a higher risk.

Other medical conditions. Having other health problems such as high blood pressure, abnormal cholesterol, and other cardiovascular diseases increases your risk.

Other factors. Your behavior, personality, and other factors can increase your risk. Smoking, high levels of stress, and depression are sometimes associated with type 2 diabetes.

Multiple factors. The more risk factors you have, the more at risk you are of getting type 2 diabetes.

Don't ignore the signs.

- Uncontrolled diabetes is the leading cause of blindness, renal failure, and arm or leg amputations (not related to injuries).
- The leading cause of death in the U.S. is heart disease, and 68% of these people had diabetes.
- Two out of three people with diabetes die from heart disease and stroke.
- By the time people are diagnosed with type 2 diabetes, they likely had the disease for at least five to seven years.

Ask your primary healthcare provider to determine if you have diabetes or are at risk. The keys to preventing health problems from uncontrolled diabetes are early diagnosis and treatment.

FRUIT

LOW FAT

FAT FREE

LEAN

This meal is lean, baked and balanced.

Eating healthy doesn't require living on salads.

Changing Your Diet Can Help Prevent Stroke.

The DASH Diet (Dietary Approaches to Stop Hypertension) and the Mediterranean Diet can help improve health by improving blood pressure and blood cholesterol levels, and may even help you lose weight and improve blood sugar control.

Both of these diets include eating more fruits, vegetables, and whole grains while eating less salt and saturated fat. Here are some tips to help you develop healthy eating habits.

Tips to try at home

- Eat fruit for a snack between meals.
- Fill half of your plate with vegetables at meal times.
- Incorporate whole grains into your diet by choosing whole wheat bread, brown rice and whole-wheat pasta.
- Try lower fat milk or nonfat milk with your cereal and coffee.
- Cook with fish and seafood a couple of times a week.
- When cooking, use salt free seasonings and low sodium broth to flavor your food.
- Use fats that are liquid at room temperature (olive oil, canola oil) instead of solid (butter, stick margarine) when cooking and eating.

Tips to try when eating out

- Read the menu in advance so you can make healthy choices at the restaurant.
- Look for words like baked and roasted items and pick those instead of fried or sautéed items.
- If ordering coffee beverages, request low fat or non-fat milk options.
- Request fruit or vegetables as a side instead of french fries or potato chips.
- Ask for salad dressing on the side when ordering a salad.
- Go for a walk instead of ordering dessert.

Every small change can add up to a big difference in your overall health and how you feel. Do not feel like you have to change everything in your life all at once. Small steps lead to big victories. Try changing one small thing at each meal, and it will add up to a lifetime of healthy habits!

For a personalized meal plan and dietary advice, speak to a dietitian.

Medications

Types of medications

Antiplatelets

Medications such as aspirin, Plavix (clopidogrel), and Brilinta stop platelets (a blood cell related to clotting) from clumping together and forming unwanted clots.

Aspirin is recommended for preventing a first stroke in some patients. Along with other antiplatelet agents, it also has an important role in preventing recurrent strokes.

Anticoagulants

Medications such as Coumadin (warfarin), Xarelto and other XA-inhibitors thin the blood. This stops clots from forming in your arteries. They are different from antiplatelet agents and recommended mainly for patients with a high risk of stroke. They are also recommended for people with atrial fibrillation. While these drugs are more effective at preventing clots in people with atrial fibrillation, they may have side effects. These can include bruising and bleeding. Careful follow up with your primary care doctor, along with blood tests to measure warfarin effect, is essential for people taking these drugs. Again, please be sure to tell any doctor treating you that you take these drugs.

You should not stop these medications unless you first talk to your doctor. It is also important to tell all doctors treating you that you take anticoagulants.

Beta-blockers

These medications decrease the workload on your heart. Beta-blockers are also used to relieve chest pain or discomfort, help prevent heart attacks, and treat arrhythmias (irregular heartbeats). The generic names for beta-blockers all end in the letters –olol, for example, atenolol, metoprolol and propanolol.

Angiotensin-converting enzyme inhibitors (ACE-I)

These medications lower blood pressure and reduce the strain on your heart. Some of these include captopril, benazapril, and lisinopril. They also help slow down further weakening of the heart muscle. Studies have also shown that in certain patients, use of ACE-I may reduce repeat stroke incidence even if blood pressure is normal. In diabetics, these drugs may preserve renal function. In patients with kidney disease, these drugs slow decline in renal function. They also prolong time until dialysis is required.

Angiotensin receptor blockers (ARB)

These medications work very much like the ACE-I. However, instead of blocking formation of angiotensin as ACE-I do, they block the effect of angiotensin on the arteries themselves. Most of the positive effects of ACE-I as listed above are also noted with ARBs. All ARBs end in the letters -sartan, like losartan and valsartan.

Statins

These medications help lower cholesterol in the body. Some of these include atorvastatin or simvastatin and others. Statins also need monitoring by your primary care doctor. The dose should be adjusted to provide maximum benefit. Side effects can include muscle soreness and weakness. If you have these effects, tell your doctor immediately.

It's helpful to have a routine. Take your medications at the same time each day. If necessary, use reminders to help you stay on track.

Other medications

Medications may also be given to relieve pain, anxiety, and depression. This often occurs during and after a stroke.

If you need help paying for any of your medications, please talk to your doctor, nurse, case manager, or pharmacist for assistance.

Taking medications

You need to take most of your medications every day even if you feel fine. Ask your doctor or nurse about any special issues that have to do with your medications. Here are a few additional tips for managing your medications.

- Have a routine. Take your medications at the same time each day. If necessary, use reminders to help you stay on track.
- Take all of your medications. Some work better when used together with others. Don't take one and skip another.
- Plan ahead. Refill your prescriptions before you run out.
- Be sure you have them when you travel.
- Never change your dosage or stop taking a medicine without talking to your primary care doctor. If you miss a pill, don't take two when it is time for the next dose.
- Tell your primary care doctor if you think you are having a side effect to a medication. Your doctor may change the dose or give you a new prescription.
- Carry an up-to-date list of your medicines. Bring the list with you each time you visit your primary care doctor. The pharmacy where you fill your prescriptions should also know about all the medicines you take, even if you do not have the prescriptions filled at the same pharmacy. This will help to prevent any potential medication reactions.
- Use a pill box to be sure you take all your medications properly every day. If you have difficulty filling the box correctly, ask a friend or relative to help.
- Talk to your doctor if you are having difficulty swallowing pills, for example, if you are coughing or the pill is getting stuck.

What to Expect After Your Stroke

There may be many changes in your life after your stroke. You may have changes in your thinking, your actions, and your energy level. You may experience feelings of sadness.

After your stroke, you may not be able to think clearly. You may also have problems remembering things.

Your family may also notice you acting differently. It may be a large change. However, this change may not be there forever. Over time, you may act more like you did before the stroke.

You may feel extra tired in the weeks or even months after your stroke. This tired feeling can occur after your usual daily activities. This is normal. It is important to know your limits and let yourself rest.

Sadness after experiencing a stroke is common. You may be sad because you cannot do the same activities you did before your stroke. You may also be sad about the changes in your life. If you have this kind of sadness, there are people you can talk to or medicine that may help. Contact your doctor if you are having any of these feelings.

Scan the QR code at left to access more information from the American Stroke Association on the emotional and behavioral effects of stroke.

www.KaweahHealth.org/emotions-and-stroke

SCAN TO LEARN MORE about the physical and emotional effects of stroke.

You may feel extra tired for weeks or even months after your stroke. This is normal. It is important to know your limits and let yourself rest.

Therapy Services

Kaweah Health has many therapy services to help stroke survivors get better. Many of our therapists are trained in specific types of therapies.

Physical therapy

Our physical therapists will teach you to move better so you can do the things you need to do.

Occupational therapy

Our occupational therapists work to help you do daily activities by yourself again.

Speech therapy

Our speech therapists help people get better who have problems talking, thinking, remembering, problem solving, and swallowing.

Specific stroke therapy services provided by Kaweah Health

- Gait training
- Orthotic training and assessment
- Balance training and assessment
- Strength and conditioning
- Cognitive rehabilitation
- Vision therapy
- Feeding and swallowing
- Aquatic therapies
- Balance and vestibular

If you feel you need our help, please contact your doctor for a referral to one of our clinics.

Kaweah Health Therapy Specialists
840 S. Akers St.
Visalia, CA 93277
(559) 624-3906

Kaweah Health Therapy Specialists Dinuba
355 Monte Vista
Suite C
Dinuba, CA 93618
(559) 595-7630

Kaweah Health Therapy Specialists Exeter
1131 W. Visalia Rd.
Exeter, CA 93221
(559) 592-7342

The pursuit of healthiness.

Kaweah Health
MORE THAN MEDICINE. LIFE.

400 W. Mineral King Ave.
Visalia, CA 93291
(559) 624-2000

www.KaweahHealth.org/Stroke