Stroke Rehabilitation
at Dodd Rehabilitation Hospital
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Talk to your doctor or health care team if you have any questions about your care.
For more health information, contact the Library for Health Information at 614-293-3707 or e-mail health-info@osu.edu.
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Stroke Rehabilitation

Overview of Stroke and Your Recovery

This handbook provides basic information about stroke. The Stroke Rehabilitation Team has selected materials about stroke that we believe will decrease your fear and anxiety. This handbook may not answer all of your questions, but it will be helpful. Please read and share the handbook with interested family and friends.

Rehabilitation after stroke means helping a person who has had a stroke to use all remaining strengths. This may mean learning to do things with one hand or walking with a brace. The ultimate goal of rehabilitation is to help every person with a stroke adapt to their previous environment and lifestyle.

Therapy goals
Therapy goals will be designed for you depending on how you have been affected by the stroke. These may include improving your ability to:

- Swallow safely
- Communicate
- Concentrate when doing tasks
- Do more than one task at a time
- Safely move around
- Do an activity over a long period with no breaks
- Dress, groom, eat, and bathe
- Clean, cook, and make plans
- Do hobbies, leisure activities, and sports

Therapy strategies
Practice the skills and exercises you learn from your health care team members (doctors, nursing staff, dietitians, and therapists) when you are in your room. Your progress is reviewed by staff each week. Therapy strategies:

- Are tailored to your physical needs and lifestyle
- Improve skills through a lot of practice
- Address the different ways in which you move
- Are challenging, so progress is made over the long term
Your Care Team at Dodd

Your care team includes doctors, nurses, therapists, and other professionals working together to manage your care and address your needs. Members of your team will teach you and your family about your care, so you are able to understand your condition and how to manage your health after you leave the hospital. Some professionals you may be less familiar with are explained below.

Speech language pathologist (SLP)

Your nurse will do a screening to check your ability to swallow. If there are any concerns, you will be seen by a speech language pathologist (SLP), also called a speech therapist. The SLP will complete a Bedside Swallowing Evaluation (BSE). You will be asked questions about your medical history and ability to swallow. The SLP will examine your mouth and may ask you to eat different foods or liquids to find out what type of swallowing problem(s) you may have. Based on the problems identified, a plan will be developed to help with your swallowing problem.

The speech language pathologist (SLP) also treats patients who have problems in understanding or expressing spoken or written words.

Physical therapy (PT)

The physical therapist (PT) helps people be mobile. This may include:

- Moving in bed
- Range of motion exercises
- Transferring into or out of a wheelchair
- Walking alone or with a walker or cane

The PT may also help improve strength, balance, and coordination.

Occupational therapy (OT)

The occupational therapist (OT) checks your ability to perform daily living skills. The OT helps the person with a stroke cope with:

- Limited use of their arms
- Visual problems
- Problems in thinking, such as memory, concentration, and being safe
- Grooming and dressing
- Special equipment, such as using a wheelchair, splints, or casts

Case manager

The case manager is a link between the insurance provider, equipment company, doctors, other team members, and the patient. The case manager works with the care team and doctors to plan your discharge and follow up care.

Social worker (SW)

The social worker (SW) provides support and counseling for patients and their families, such as dealing with:

- Adjusting to life after a stroke
- Relationships with family and friends
- Financial concerns
- Education and job needs
- Selecting a nursing facility if needed
Defining Stroke

A stroke is a sudden loss of brain function due to a change in the blood flow to the brain. Cerebral vascular accident (CVA) is another name for a stroke. There are 2 main types of stroke:

- **Ischemic stroke** caused by a clot that blocks blood flow to brain tissue. This is the more common type of stroke.
- **Hemorrhagic stroke** caused by bleeding that puts pressure on brain cells. This causes a loss of oxygen to brain tissue. This type of stroke is less common, but it can cause serious injury or death. Types of bleeding are:
  - *Intracerebral hemorrhage (ICH)* - bleeding inside the brain.
  - *Subarachnoid hemorrhage (SAH)* - bleeding around the brain or into the space between the brain and the skull.

**Ischemic stroke causes**

The blockage of blood flow to the brain may be from fatty deposits, called plaque, or from blood clots. Pieces of the plaque or clots can break loose and travel to the brain to cause a stroke.

Your care team may talk about your stroke based on whether the blockage or clot formed in your brain or moved to your brain. There are 2 types of clots:

- **Thrombus** is a clot that forms on the wall of a blood vessel in the brain.
- **Embolus** is a clot in a blood vessel that moves or travels through the bloodstream to the brain.

**Hemorrhagic stroke causes**

The main causes of this bleeding in or around the brain are:

- High blood pressure, also called hypertension.
- Ruptured aneurysm - a bulging or weak spot in an artery wall in the brain that bleeds.
- Smoking, alcohol, or drug abuse.
- Other causes may include trauma, infections, tumors, blood clotting, or blood vessel problems.
Effects of a stroke

The effects of a stroke depend on the location in the brain and amount of damage to the brain. Movement and sensation for one side of the body is controlled by the opposite side of the brain, meaning the right brain controls the left side, and the left brain controls the right side.

For example, if your stroke affected the left side of your brain, you will have problems with the right side of your body. This also impacts what problems you will have.

If the brain stem is affected, it may involve both sides of the brain and affect both sides of the body.

Changes in Function

There may be changes in behavior or in your ability to do daily activities, such as:

- Loss of movement to one side of the body, called hemiplegia
- Quick and impulsive behavior
- Memory loss or trouble remembering new things
- Lack of attention to where one side of the body is positioned, called neglect
- Problems with swallowing
- Forgetting how to do daily activities
- Language issues
- Problems with talking and understanding, called aphasia
- Slow and cautious behavior
- Accidents of bowel or bladder due to not having awareness of the need to go the bathroom
Stroke Risk Factors

A person who has had a stroke has a higher risk of having a second stroke. Work with your doctor to manage things that put you at higher risk, called risk factors. There are some risk factors you cannot change, such as your age, sex, race, family history, and your own history of stroke or heart attack. Some risk factors you can change or control, such as controlling high blood pressure.

Your risk factors

Check your health problems that are risk factors for stroke:

- High blood pressure
- Diabetes (goal is 4.0 to 6.0)
- Diet too high in cholesterol and fat
- High bad cholesterol (LDL goal is less than 70 for someone who has had a stroke)
- Atrial fibrillation (an irregular heartbeat that can cause blood to pool in your heart)
- Smoking or tobacco use
- Alcohol use (goal is no more than 2 drinks per day for men or 1 drink per day for women)
- Lack of exercise
- Drug abuse or recreational drug use
- Being overweight or obese
- Stress
- Past strokes
- Transient ischemic attack or TIA (blood flow is blocked or reduced briefly and then flows again, sometimes called mini-strokes)
- Family history of strokes
- Circulation problems (such as coronary artery disease or peripheral vascular disease)
- Blood clotting problems (such as hemophilia or sickle cell anemia)

Blood thinning medicines and dietary supplements need to be managed. Talk to your doctor about any dietary supplements you are taking, including fish oil and garlic. Both can have a blood thinning effect if taken in large amounts.

Know the warning signs of stroke - BE FAST

- **B - Balance:** Sudden loss of balance or coordination
- **E - Eyes:** Sudden vision changes
- **F - Face:** Face droops on one side or uneven smile
- **A - Arms:** Arm numbness or weakness on one side
- **S - Speech:** Slurred speech, difficulty speaking or understanding
- **T - Time:** Call 911 and get to the hospital right away
Preventing Stroke

Know your blood pressure

- High blood pressure is a leading cause of stroke. If your blood pressure is high, work with your doctor to control it.
- Have your blood pressure checked at least one time each year and more often if you have had high blood pressure.
- Take your blood pressure at home routinely.
- See your doctor if the top or higher number (your systolic blood pressure) is often over 120 or if the bottom or lower number (your diastolic blood pressure) is often over 80.

Eat less fat in your diet

Limit saturated and trans fats in your diet.
- Saturated fats come from high fat animal products, such as fatty meats and high fat dairy products.
- Trans fats are partially hydrogenated oils and are found in cookies, crackers, commercially baked goods, and many deep fried foods.

Use healthier fats from vegetable sources such as olives, nuts, soybeans, corn, and safflower.

Talk to a registered dietitian (RD) for help in changing your diet and eating habits to lower your fat intake.

Lower your bad cholesterol

- If your bad cholesterol (LDL) level is over 70, work with your doctor to control it.
- High cholesterol can increase stroke risk by putting you at risk of heart disease.
- Often high cholesterol can be controlled with diet and exercise, but some people may need to take medicine, called statins. These medicines block the production of cholesterol in the liver to lower LDL cholesterol levels.

If you have diabetes, control your blood sugar

- Having diabetes puts you at increased risk for stroke.
- Check your blood sugar regularly.
- Talk to your doctor, diabetes educator, or dietitian for help, so you can learn to control and manage your diabetes.
Stop smoking or other tobacco use
Smoking doubles the risk for stroke. If you stop smoking today, your risk for stroke will begin to decrease. Any tobacco use can increase your risk.

Limit the amount of alcohol you drink
• If you don’t drink, don’t start.
• Drinking should be limited to no more than 2 drinks a day for men or 1 drink a day for women, provided that there is no other medical reason not to drink at all.
• Alcohol is a drug, and it can interact with other drugs you are taking.
• Alcohol is harmful if taken in large doses.
• A serving size for 1 drink is equal to 12 ounces of beer, 5 ounces of wine or 1 ½ ounces of distilled spirits (vodka, rum, gin or whiskey).

Exercise daily
A brisk walk, swim, or other exercise activity for as little as 30 minutes a day can improve your health in many ways and may reduce your risk for stroke.

Eat a lower salt diet
By cutting down on the salt, also called sodium, and fat in your diet, you may be able to lower your blood pressure and your risk of stroke. It can also improve the health of your heart.

Find out if you have atrial fibrillation (AF or atrial fib)
• Your doctor can detect atrial fib by carefully checking your pulse. If you have atrial fib, work with your doctor to manage it.
• Atrial fib can cause blood to collect in the chambers of your heart. This blood can form clots and cause a stroke.

Blood thinner medicines
You may also need to take a blood thinner medicine, called an anticoagulant. Ask your doctor or nurse for information about the medicine.
• Take your medicine for the entire time prescribed. Have your blood checked if directed to do so by your doctor.
• Report any unusual bleeding or bruising to your doctor right away.

Ask if you have circulation problems
• If you do, work with your doctor to control them.
• Fatty deposits can block the arteries that carry blood from your heart to your brain. This kind of blockage can cause a stroke.
• Sickle cell disease, severe anemia, or other diseases can cause stroke if left untreated.

Take your medicines as directed
Do not stop taking your medicines because you feel better or because you have no more refills on the prescription. Check with your doctor before you stop any medicine. Many medicines will need to be taken long term.

If you have questions about your stroke risk, please ask your doctor or nurse.
How to Check Your Blood Pressure

Measure your blood pressure regularly. It is quick and painless, and it is the only way to know whether your pressure is high. You can check your blood pressure at a doctor’s office, at a pharmacy, or at home. If you are taking your own blood pressure at home, talk to your doctor about what type of equipment is best for you. Your insurance may also have certain devices that are covered by your plan.

Equipment
There are different types of devices to measure blood pressure.

- **Automatic devices** can be more costly, but can be good for people with hearing or vision problems. The automatic devices can be more sensitive to body movements and cuff placement, so it can be harder to get accurate readings.
- **Manual (Aneroid or dial) devices** are less expensive, but can take more practice to learn to use. This type of monitor uses a stethoscope with it.

Checking your blood pressure

- Take your blood pressure at the same time each day.
- Rest for a few minutes before taking it.
- Place your arm on the table, palm up. Your arm should be at the level of your heart.
- Sit in a comfortable position.
- Push your sleeve up and lay your arm on a table with your palm up. If your clothes are too tight around your arm, take your shirt or blouse off before checking your blood pressure.

Using an Automatic Device

- Wrap the cuff around your upper arm right above your elbow. The cuff should be placed over your brachial artery (the blood vessel in your arm located on the inner side of your elbow). Most cuffs will tell you when you have it placed right. Check the device instruction manual for help. Your doctor’s office can also show you how if you bring your device to your next visit.
- Push the button that starts the pump. The cuff will tighten, and then loosen.
- The numbers will change. When they stop changing, your blood pressure reading will appear.
- Take 2 or 3 readings one minute apart to make sure you are getting the correct reading.
Using a Manual Device

- Place the first two fingers of your other hand on the inside of your elbow and find your pulse. This is where you listen to measure your blood pressure (brachial artery).
- Wrap the cuff around your upper arm just above the elbow. Make sure the lower end of the cuff is about one inch above your elbow. The cuff should be snug around your arm.
- Close the valve on the bulb, but not too tightly.
- Place the ear pieces of the stethoscope in your ears. Place the diaphragm of the stethoscope over the pulse in the bend of your elbow.
- Squeeze the bulb repeatedly and pump up the cuff 30 points higher than your usual systolic blood pressure (higher number).
- Loosen the valve to allow air to slowly escape from the cuff.
- Watch the gauge closely. When you hear the first beat, read the number from the dial and remember the number to write it down later. This is the top number or systolic number.
- Continue to slowly release the air. When the beating sounds stop, read the number on the dial and remember that number to write it down later. This is the bottom number or diastolic number. Let the rest of the air out of the cuff.
- Remove the cuff from your arm.
- Always recheck your blood pressure if you get a reading that is higher or lower than normal. Wait at least one minute between blood pressure checks.

Keep track of your readings

- Keep track of your blood pressure readings on your record sheet, so you can see how you are doing and can share it with your doctor.
- Ask your doctor or nurse what your blood pressure goal range should be. A normal blood pressure is below 120 / 80.
About diabetes
Having diabetes puts a person at increased risk of stroke. Diabetes is a disease in which your blood glucose, or blood sugar, levels are too high. Glucose comes from the foods you eat. Insulin, a hormone made by the pancreas, helps the glucose get into your cells to give them energy.

- With type 1 diabetes, your body does not make insulin.
- With type 2 diabetes, your body does not make enough insulin, or your body is not able to use the insulin it makes. Without enough insulin, the glucose stays in your blood.
- With prediabetes, your blood glucose is higher than normal, but not high enough to be called diabetes. Having prediabetes puts you at a higher risk of getting type 2 diabetes.

Over time, having too much glucose in your blood can cause serious problems, such as damage to your eyes, kidneys, and nerves. Women can also get diabetes during pregnancy (gestational).

Warning signs of diabetes
Everyone responds differently to diabetes. Some of the common warning signs are:

- Having to go to the bathroom often to pass urine
- Feeling thirsty, even though you are drinking fluids
- Losing weight
- Blurry vision
- Healing is slow for cuts or scrapes on your skin
- Feeling tired
- Feeling hungry
- Being irritable or grumpy

Often people may not notice any signs of diabetes. One in four people with diabetes doesn’t know he or she has it.

How to check your blood sugar
A blood glucose monitoring device, also called a blood sugar meter, allows you to measure the amount of sugar, called glucose, in your blood. A small drop of your blood, often from the side of your finger, is placed on a test strip. In less than 30 seconds, you know your blood sugar result.

Managing your blood sugar
Our staff monitor your blood sugar while you are at Dodd and adjust your medicines as needed. We will also teach you and your caretakers how to manage your diabetes after you leave the hospital. After returning home, diabetes classes are available at many locations with Ohio State University Wexner Medical Center. For more information about class times and locations or to register, please call 614-688-6251.
**Bowel Care**

The area of the brain that receives nerve signals from the rectum to have a bowel movement may be damaged after brain injury. This can cause bowel problems. Your diet, less activity, and certain medicines may also affect stool texture. Symptoms may include loss of control (incontinence), loose bowel movements (diarrhea), or hard bowel movements (constipation).

**Work with your doctor and nurse to create a daily bowel care program.** This will help you spend less time on bowel care and avoid accidents.

### Bowel care program

- Keep a record of your bowel movements.
- Have a routine. Pick a regular time for sitting on the toilet or bedside commode, such as after a meal or shower. While in the hospital, you may be asked to sit on the toilet 2 or 3 times a day.
- Be patient. It may take 15 to 45 minutes to have a bowel movement. Sit on the toilet until you feel that your bowel is empty.
- Gently rub your stomach to help stool move through your colon.
- When you feel the urge to have a bowel movement, use the toilet right away. Do not wait.
- Drink plenty of water, at least eight, 8-ounce glasses a day.
- Eat fiber-rich foods, such as fruits, vegetables and whole grains.
- Talk to your doctor or nurse about taking medicine to help.

### Incontinence

- Limit milk, fruit juice, raw fruits, beans, and peas. These foods irritate the bowel and can cause diarrhea.
- Learn to be aware of small signs that you need to have a bowel movement, such as feeling restless or cranky, passing more gas, or having nausea or bowel cramps.
- Sit on a toilet or bedside commode for about 20 to 30 minutes after you eat.

### Diarrhea

- Limit milk, fruit juice, raw fruits, beans, and peas. These foods irritate the bowel and can cause diarrhea.

### Constipation

- Keep active. Walk if you can or if you use a wheelchair, ask your health care team about exercises.
- Drink prune juice daily.
- Use K-Y jelly, petroleum jelly, or mineral oil to lubricate your rectal opening.
- Talk to your doctor or nurse about taking an enema, stool softener, or laxative to make bowel movements softer and to help empty the bowel.

### Ask about your medicines

- Talk to your doctor about the medicines you are taking. Some medicines can cause you to become constipated or to have diarrhea.
- Ask what options you have if your medicine causes a bowel issue.
Bladder Care

Bladder function is controlled by the brain. Injury to the brain may cause bladder problems, such as:

- **Incontinence:** Not being able to control when the bladder empties of urine or not being aware of the need to use the toilet.
- **Retention:** Not being able to fully empty the bladder of urine.

**Work with your doctor and nurse to create a daily bladder care program** to improve bladder control and reduce your risk of urinary tract infection (UTI).

- **Signs of UTI include:** pain or burning when you urinate, fever, an urge to urinate often, pressure in your lower belly, urine that smells bad or looks cloudy or reddish, and pain in your back or side below the ribs.

**Bladder Care Program**

- Keep a record of when and how much you urinate.
- Have a routine. Use the toilet or bedside commode at regular times, at least every 2 to 4 hours. Use the toilet before therapy and exercise.
- If your skin gets wet from urine, wash it with soap and water and rinse well. Keep skin clean and dry to prevent skin irritation and sores.
- After bathing, use a moisturizer and a barrier cream, such as petroleum jelly, zinc oxide, or diaper cream, to keep water and urine away from the skin.
- Drink plenty of fluids, at least eight, 8-ounce glasses a day, to help wash bacteria out of the urinary tract and prevent infection. Water and cranberry juice are helpful.
- Do not drink anything 2 to 4 hours before bedtime. Empty your bladder before bedtime to prevent an accident at night.
- Talk to your doctor or nurse about taking medicines to help.

**Incontinence**

- Use the toilet or bedside commode at regular times, at least every 2 to 4 hours.
- Look at your record of how often you urinate. See if there is a common time of the day that incontinence occurs. Use the toilet 30 minutes before that time.
- Practice your rehab exercises to improve pelvic muscle tone.
- Talk to your doctor or nurse about using urinary incontinence products, such as pads and adult diapers. Change these regularly, even if you are dry, to keep your skin healthy. You may also want to use washable waterproof pads under sheets and on chairs to protect furniture.
- Male patients may use a condom catheter to collect urine.

**Retention**

- Take prescribed medicine as ordered by your doctor.
- Nursing staff may use a bladder scanner to assess the amount of urine left in your bladder after urinating.
- You may be using a catheter to empty your bladder throughout the day, called intermittent catheterization, self catheterization, or straight cath. A tube is put into the bladder to drain urine and is removed after.
Deep Vein Thrombosis

Deep vein thrombosis (DVT) occurs when a blood clot forms in a large vein. It most often occurs in the legs as a result of slow circulation. Part of a clot may break loose and travel to the lungs, causing a blockage, called a pulmonary embolism.

Sitting or lying for a long time can increase your risk for DVT. Treatment includes medicines to ease pain and inflammation, break up clots, and keep new clots from forming. Learn to recognize early signs of DVT and how to prevent it.

**Signs of DVT**

**Deep Vein Thrombosis**

Most people have no signs. When signs occur, they tend to be in the affected part of the body, such as the leg.

Common signs include:

- Swelling
- Pain or tenderness
- Increased warmth in the area that is swollen or painful
- Redness of the skin

**Pulmonary Embolism**

Common signs include:

- Shortness of breath
- Pain with deep breathing
- Coughing up blood
- Rapid breathing
- Faster than normal heart beat

If you have any of these signs, seek medical help right away.

**Preventing DVT**

To prevent DVT, your doctor may have you wear compression devices. Compression devices are wraps that are placed around your legs or feet. A pump pushes air into the wrap through tubes to put pressure on your muscles and then releases the air to help your blood flow.

Wear the compression devices while in bed or if you are sitting up in a chair for a longer period of time.

Other things you can do to reduce your risk of DVT:

- Do leg and arm exercises everyday to help your circulation. Ask your doctor or therapist what type of exercise is best for you.
- Avoid sitting or lying in one position for long periods of time. Do not sit with your legs crossed or with constant pressure on the back of the knee.
- If your legs tend to swell, prop them on a stool when sitting.
- Avoid smoking and tobacco use.
- Take medicine, called anticoagulants, to prevent DVT.
- Wear loose-fitting clothes.
- Drink at least 6 to 8 cups of liquid daily unless you need to limit your fluids.
Pneumonia Care and Prevention

About pneumonia

Pneumonia is an infection or inflammation of the lungs. The air sacs or some areas of bronchial tubes in the lungs fill with infection or other secretions. Pneumonia is caused by bacteria or viruses, but is not usually passed from person to person.

Sometimes people who have had a stroke cannot swallow normally. Food or liquid that stays in the airway can enter the lungs and allow harmful bacteria to grow, resulting in a lung infection, called aspiration pneumonia.

Signs of pneumonia

- Shortness of breath
- Chest pain with deep breathing
- Fever
- A cough with mucus that is green or rust colored

Treatment

Treatment for pneumonia depends on the person’s health and how well the pneumonia responds to medicines.

- **Medicine:** Antibiotic medicines may be used to treat bacterial pneumonia. Antiviral medicines may be used to treat viral pneumonia. Other medicines may be given to reduce the amount of mucus in the lungs, to help with cough, to reduce chest discomfort, or to reduce fever.

- **Incentive Spirometer:** To help improve air flow and reduce fluid in the lungs, a device called an Incentive Spirometer, may be used. The goal is to push as much air into the tube as possible. This may be done every few hours to promote healthy breathing and to check how well your lungs are working.

Prevention

- Use the incentive spirometer as directed by your doctor.
- Do deep breathing and then cough several times to clear mucus out of the lungs. Spit any mucus that comes out into a tissue.
- Brush your teeth and floss every morning and evening.
- Sit up to eat meals.
- Get enough fluids.
- Stay active if possible. Rest also in between the times you are active.
How to Use an Incentive Spirometer

Using the incentive spirometer, also called a breathing exerciser, helps you take deep breaths to open the air sacs in your lungs. This can help reduce the chance of developing breathing problems like pneumonia. It can also be used if you have a tracheostomy tube, also called a trach tube.

Your goal amount is __________________ ml.

Steps for use

1. Sit up as straight as you can. Sit on the edge of a chair or your bed if possible.
2. Hold the incentive spirometer upright or put on a table next to you.
3. Breathe out.
4. Close your lips tightly around the mouthpiece.
5. Take in a slow, deep breath through your mouth. Your incentive spirometer will tell you if you are breathing in too fast.
6. As you take a deep breath, the piston in the clear chamber of the incentive spirometer will rise.
7. After you breathe in as deeply as you can, hold your breath for 3 to 5 seconds.
8. Set the goal indicator tab at the level that you reached.
9. Take out the mouthpiece and breathe out slowly.
10. Relax and breathe normally for a few seconds until the piston returns to the bottom.
11. Repeat these steps for a total of 10 times.
12. If you start to feel light-headed or dizzy, slow down your breathing and take more time between deep breaths.
13. After the 10 times, take another deep breath and cough to clear the mucus from your lungs.
14. Do this exercise every 1 to 2 hours, or as directed by your doctor.
**Steps for use with tracheostomy**

1. A one-way valve called a “T” piece will be placed on the open end of the clear tubing. The opening of the “T” piece will fit onto your tracheostomy tube.
2. Sit as straight up as you can.
3. Hold the incentive spirometer upright.
4. Your respiratory therapist or nurse will tell you how deeply you should breathe based on your sex, height, and age.
5. Attach the open port of the “T” piece to your tracheostomy tube.
6. Breathe out normally, then inhale slowly and deeply. This slow deep breath will raise the piston in the clear chamber of the spirometer. Your incentive spirometer will let you know if you are breathing in too fast.
7. Continue to breathe in, trying to raise the piston as high as you can. Read the volume you have reached at the top of the piston.
   - If you have had surgery on your chest or stomach area, do not be alarmed if your breath is not very deep. Each day you use your incentive spirometer, you should see improvement.
8. When you feel like you cannot breathe in any longer, hold your breath for 3 to 5 seconds and then breathe out slowly.
9. Breathe normally for a few breaths and let the piston return to the bottom of the chamber.
10. Set the goal indicator tab at the level that you reached.
11. Repeat the slow, deep breath in and slow breath out again.
12. Continue this cycle for a total of 10 breaths. If you start to feel light-headed or dizzy, slow down your breathing and take more normal breaths between the deep breaths.
13. After you have taken 10 deep breaths on your incentive spirometer, cough to try to remove secretions that build up in your lungs.
   - If you have had surgery on your chest or stomach area, place a pillow or a folded blanket over the top of the incision, and wrap your arms around it like you are hugging it. This will provide support and decrease some of the pain you feel when you cough.
14. Repeat steps 2 through 10 every 1 to 2 hours, or as ordered by your doctor.

**Helpful hints**

- Take medicine to control your pain. It is harder to take a deep breath if you are having pain.
- Keep the incentive spirometer within reach, so you remember to use it as directed.
- Use your incentive spirometer when you go home to help keep your lungs clear while you recover.
Medicines After a Stroke

There are many medicines to treat stroke and conditions that may increase your risk for stroke. Ask your doctor, nurse, or pharmacist if you have questions.

- Take your medicines as directed.
- **Do NOT stop taking your medicines because you feel better or because you have no more refills on the prescription.** Check with your doctor before you stop taking any medicine. Many medicines will need to be taken long term.
- Tell your doctor or nurse if you are taking any over the counter medicines or herbal supplements. They may interact with medicines.
- Talk with your doctor or nurse if you have side effects from your medicines. Side effects are an unwanted effect of a drug.

**Anti-platelets**

These medicines prevent platelets in the blood from clumping or clotting. They are often used after a heart attack or stroke, or after stent procedures to prevent platelets from blocking the stent.

**Do not stop taking this medicine without talking to the doctor who ordered it.**

Stopping your anti-platelet medicine puts you at risk for forming clots or for the stent to get blocked.

**Medicine side effects may include:**
- allergic reaction, black, bloody or tarry stools, nausea, vomiting, abdominal pain, skin bruising, dizziness, confusion, hallucinations, loss of hearing, or ringing in the ears.

**Statins (HMG-CoA Reductase inhibitors)**

Statins block the production of cholesterol in the liver. This lowers total cholesterol and bad LDL cholesterol levels, but raises good HDL cholesterol levels. High levels of bad cholesterol in the body increase the risk of heart disease and stroke.

Your cholesterol levels should be checked with blood tests 1 to 2 times each year.

**Medicine side effects may include:** muscle weakness or pain, elevated liver enzymes, and upset stomach.

Your doctor will check your liver function before starting a statin. You should also have liver function testing done if you have signs of liver problems while taking a statin, such as feeling very weak or tired, loss of appetite, upper belly pain, dark urine, or yellowing of your skin or eyes.
**Beta blockers**

Beta blockers improve the heart’s ability to relax and block the effect of other hormones in the body (adrenaline/norepinephrine). They slow the heart rate and help control blood pressure. These medicines are used to treat high blood pressure, heart failure, angina (chest pain), and may be used after heart attack or stroke.

**Side effects may include:** dizziness, slow heart rate, fatigue, shortness of breath when first starting medicine, and sexual dysfunction.

**Angiotensin-converting enzyme (ACE) inhibitors**

ACE inhibitors widen the blood vessels and help increase blood flow by blocking the production of a hormone in your body that tightens blood vessels. They help lower blood pressure, lessen the amount of work the heart needs to do, and protect the kidneys. These medicines are used to treat high blood pressure, heart failure, and may be used after heart attack or stroke.

**Medicine side effects may include:** dizziness, weakness, cough, and decreased ability to taste. If you have swelling throughout face, tongue or lips, stop taking the medicine right away and call your doctor.

**Anticoagulants**

Another type of blood thinner, these medicines increase the time it takes for blood to clot and makes it harder for a blood clot to form.

**Medicine side effects may include:** bleeding, diarrhea or constipation, dizziness, headaches, indigestion, rashes. If you have severe bleeding, call 911 and get medical attention right away.

**Taking your medicines**

As part of your rehabilitation, you will learn to take your own medicines. There are 3 steps in this program. You must finish one step before moving on to the next. Please ask your nurse if you have any questions about this program. If taking your medicines is more complex, the nurse and hospital pharmacy may work more closely with you until you are able to take them on your own.

**Step 1**

For each of your medicines, you will learn:
- Name of the medicine
- How much you are to take (dose)
- When you are to take it
- Why you are taking the medicine

Your nurse will give you written sheets on each of your medicines. These list side effects and any foods or medicines that may change the way your medicine works. They also list what you should do if you miss a dose of your medicine.

**Step 2**

Your nurse will give you a Medicine Record to record your medicines. Together, you will write:
- Name of the medicine
- Dose or amount of the medicine you are supposed to take
- Time(s) you are to take the medicine
- Reason you take the medicine

When you feel you are ready to fill out the medicine record by yourself, talk to your nurse.

**Step 3**

Call your nurse when it is time to take your medicines. When your nurse brings them to you, check off the medicines you take on your medicine record.
Aphasia is caused by damage to the language areas of the brain. It is often due to a stroke, but may have other causes, such as a traumatic brain injury (TBI), tumor, or brain disorder. Aphasia can affect all forms of communication, including speaking, understanding, reading, and writing. Not all language areas may be affected the same way. For example, one person with aphasia may find it easier to read than talk, while another may find it easier to write than read.

Aphasia can be temporary or permanent. Recovery often depends on how severe the damage is, the person’s age, and how well he or she does with rehabilitation.

**Types of aphasia**

**Non-Fluent Aphasia**

The most common problems of non-fluent aphasia range from finding the right word to being able to say that word. A person with non-fluent aphasia may sound hesitant while searching for the right word to say. It can be frustrating for the person affected because he or she usually understands better than he or she is able to express.

- The person may know what he or she wants to say, but is unable to say it. Attempts to find the right word may or may not be successful.
- The person may only be able to speak in single sounds, words, short phrases, or parts of sentences. Sometimes the person may not be able to talk at all.

**Fluent Aphasia**

A person with fluent aphasia does not have trouble saying words, but the words spoken may be nonsense or real words that are used incorrectly. The person with fluent aphasia may be unaware that his or her speech is not meaningful. This can lead to frustration and anger toward the listener for not understanding.

**Other speech problems**

**Word or Sound Changes**

There may be sound or word changes that:

- Have no meaning (“lat” instead of “bat”)
- Change the meaning (“mate” instead of “date”)
- Are unrelated to the word intended (“table” instead of “map”)
- Are closely related to the word intended (“ladle” instead of “spoon”)

You may also hear these problems called paraphasic errors.
Repetition/Perseveration
• This refers to repeated words, phrases, sentences, or ideas. The person may have trouble going from one thought to the next. When asked “what do you drive”, he or she may answer “car” and then continue to answer “car” to the next several questions.

Naming Problems
• A person may have problems naming common objects that he or she sees. The person usually knows what the object is and how it is used, but is not able to say the name of it.

Oral Apraxia
• A person cannot put sounds in the correct order to be able to say the word he or she wants. There is often face and neck tension, and facial grimacing in an attempt to speak.

Ways to help someone with aphasia
• Treat the person as an adult. Do not use “baby-talk,” talk louder than normal, or talk about the person as if he or she is not there.
• Use materials that are of interest and familiar to the person.
• Remove items that can get in the way of communication or are distracting. For example, turn off the TV when talking.
• Help the person to communicate clearly. Use a communication board that has pictures of objects. The person can point to what they need, or it can be used to connect thoughts and correct word choices.
• When giving directions, break long directions into short and simple parts. Allow extra time for the person to respond and do not be afraid of silence.
• Encourage him or her to write down what he or she wants to say, if able.
• Speak slowly, pause between words, and use simple phrases. Emphasize words that have the most important meaning.
• Only ask one question at a time. Asking only yes and no questions may be helpful.
• Provide sentences for the person to complete, such as “I want a drink of ______.”
• Provide word choices to help the person find the right word.
• If the person is able, ask him or her to describe the object to help find the right word. You may say, “If you can’t think of the name of the object, tell me something about it.”
• Do not pretend to understand when you do not! Confirm what has been said and tell the person at what point you stopped understanding.

Your loved one’s speech language pathologist (SLP) can give you additional activities and ideas. Remember that aphasia affects the person’s language, not intelligence.
Apraxia

Apraxia is a motor planning disorder in which the brain and nervous system are unable to communicate. This causes a loss of the ability to carry out movements or use objects correctly when there are no sensory or motor control problems. For example, a person with apraxia may not be able to brush his teeth because he does not remember the steps to do the task, even though he has use of his arms. For communication, the person has trouble saying what he or she wants.

Types of apraxia

There are different types of apraxia, such as:

- **Apraxia of speech:** The person may be unable or having difficulty speaking.
- **Oral apraxia:** The person may be unable to move the muscles of their face and mouth or follow commands.

With all types, the person understands and wants to complete the task, but is unable to on command. This causes distorted speech sounds and nonsense words.

In severe cases, the person may be unable to use their vocal cords to produce sound. However, the person may be able to say a familiar or automatic word such as “Hi”, “Fine”, and “Okay” when he or she is not thinking about what to say.

The person may also be able to use the muscles in their face and mouth for other automatic tasks, such as eating, yawning, and licking their lips when not thinking about it.

Ways to help someone with apraxia

- Blow bubbles, noisemakers, or pinwheels.
- Practice different mouth movements, such as opening and closing mouth, puckering, smiling, and moving the tongue around.
- Sing familiar songs, such as “Happy Birthday” and the “Alphabet Song.”
- Practice familiar sequences, such as counting days of the week and months of the year.
- Practice fill in the blank opposite pairs, such as “up and ____” and “yes and ____.”
- Practice fill in the blank phrases, such as “say please and thank ____” and “don’t cry over spilled ____.”

Your loved one’s speech language pathologist (SLP) will help the person with other strategies to improve communication and with activities to do outside of therapy.
Communication Skills with Right Brain Injury

A stroke can sometimes result in damage to the right side of the brain, or brain injury. A person with a right brain injury has problems with thinking skills, but may not be aware of the problems that he or she is having.

Common problems

- Problems expressing and understanding information:
  - Says a lot, but lacks a main idea.
  - Brings up subjects out of the blue.
  - Hard time following long instructions.
  - Hard time understanding indirect requests and humor.
- Changes in interactions with others:
  - Loses eye contact.
  - Changes the topic without warning.
  - Interrupts other people talking.
  - Talks too much or not much at all.
- Flat tone of voice or no facial expression.
- Not being aware of objects on left side.
- May have trouble reading or writing.
- Trouble paying attention, keeping track of time, and remembering recent events.
- Forgetting steps in every day activities.
- Acts without thinking and poor judgment.
- Ask questions that need more than a yes or no answer.
- Use gestures or spoken reminders to signal your turn to talk.

Visual Skills

- Use reminders to help find landmarks.
- Encourage looking left to right.
- Use an index card or finger to focus attention on one line at a time reading.

Thinking Skills

- Give extra time to learn new things.
- Use mental images or associations.
- Describe ideas when the person is unable to think of a certain word.
- Talk through the steps of an activity.
- Remind the person to slow down.
- Stay calm and relaxed.

Orientation

- Use clocks and calendars.
- Keep a daily schedule or use checklists.
- Point out familiar landmarks.

Ways to help

Conversation

- Get rid of distractions, turn off the TV, or close the door.
- Face the left side of the person.
- Signal to get attention before talking and remind him or her to look at you.
- Use reminders to get back on topic.
How the visual system works

Although vision problems may not be the most noticeable barrier after a brain injury, they do affect your ability to move and complete daily tasks.

The Visual System includes:

- Eyes
- Nerves that connect the eyes to the brain
- Parts of the brain that process and interpret what we see

The brain functions by:

- Coordinating the eyes to move together
- Storing what we see in our memory
- Allowing us to adjust how we move based on what we see

Vision changes after a stroke

Side of Injury

The visual changes you may have depends on the location of the stroke damage. Because each eye receives only part of the information, some from the left half and some from the right half, only one side may be impacted. For example, if your injury is on the right side of your brain, it mostly affects the vision on the left.

Vision involves 2 processes:
1. Eye movement and taking in visual information into the brain
2. Processing and interpreting what you see

Damage to the brain can cause problems with one or both processes.

Eye Movement and Taking in Visual Information

The first step in how vision occurs involves how the eyes move and the amount of information they take in. Problems may include a visual field cut, muscle weakness, or double vision.

Visual Field Cut (Hemianopsia)

When both eyes are open, everything you see is called the visual field. Not being able to see part of the visual field is called a visual field cut (hemianopsia). The most common loss of vision is the ability to see on one side (peripheral vision) or loss of half the visual field of each eye.
Muscle Weakness
The lower part of the brain is called the brainstem. It helps control eye movement. It directs the six muscles that keep the eyes moving together as you look up, down, right, and left. If a brain injury affects these muscles, it may be hard to see things move (such as watching a sporting event), or it may be hard to read.

Double Vision (Diplopia)
If the brain injury affects the cerebellum or brainstem, you will most likely have double vision or diplopia. This occurs because the muscles that control the eyes are not able to keep them evenly aligned. A person with double vision has trouble walking because he or she cannot see the floor. Spills may occur at meals because there are “two” of every item.

Processing and interpreting what is seen
The second part of vision is processing and interpreting what we see. This is where the true "seeing" takes place. This is called perception or visual processing.

Visual Neglect or Inattention
This is a common perceptual problem after a brain injury. It is caused by not being able to correctly process or pay attention (neglect or inattention) to visual information on one side of the body. It is not a problem in seeing the information.

This problem is more common in a right brain injury that affects the left side of the body.
Someone with this problem may hold their head or eyes to the right and may not look at you if you stand to their left. They may not be able to locate items on the left side of the meal tray and may run into objects on their left side.

You may also see neglect or inattention in a left brain injury that affects the right side of the body. With this brain injury, missing things on their right is less obvious then with a right brain injury.
Visual neglect can often be improved by increasing the person's awareness of the neglected side.

Help for patients with visual problems
Usually, a team of these health care providers provides the most effective treatment for visual problems after a brain injury.

- **An Occupational Therapist (OT)** will do a vision screening to identify problems. This screening may include visual tests and watching the patient do daily tasks, such as dressing, eating, and moving in a wheelchair. Once a problem is identified, your OT may teach you ways to help compensate or retrain your vision. If the eye muscles need to be strengthened, exercises may help align them.

- **A Neuro-ophthalmologist** is a medical doctor who specializes in visual problems related to the nervous system, diseases of the eye, and eye surgery.

- **An Optometrist** specializes in vision development and can diagnose and treat eye disease. They look at a person’s vision as it relates to their ability to do activities at work, play, school, or sports. Treatment may include lenses, prisms, low vision devices, and vision therapy.
Balance Changes

Balance is your ability to hold your body up and keep that position while doing other activities. Your balance keeps you from falling. Balance is controlled in your body by several systems working together sending signals and getting signals from your brain.

A stroke can affect the way these systems work together or how the signals get to and from your brain to cause you to have balance problems.

How your body controls balance

There are three systems in your body that work together to control your balance:

- **Visual** - your eyes and sight
- **Vestibular** - sensors or receptors in your inner ears
- **Somatosensory** - body sensors or receptors that make up the information loop

**Sight**

Your eyes and sight let your brain know where you are in your environment. You can see what is around you and how you need to move to be safe.

**Inner Ear**

The sensors in your inner ear let your brain know how your head is moving. This system lets your brain know where your head is in relation to the rest of your body and detects changes in the speed of your movement.

**Information Loop**

Your body sensors are part of the information loop. These sensors:

- Tell your brain where your legs, arms, and trunk are in your environment.
- Send signals, so your brain knows where each leg or arm is at any time.
- Tell your brain what direction the parts of your body are moving.
- Take in information from what is going on around you. This is sent to your brain, so your brain can signal your body parts to tell them how to adjust.
**Example:**
When you stand on sand, the sensors in your feet sense the soft, grainy texture of the sand and the sinking of your feet. They send this information to your brain, so your brain can tell the muscles in your leg to take the next step and your trunk to move to keep your balance.

All of the information from the receptors travels to the brain, so the brain can send messages back to your muscles to move in a certain way, so you do not fall. More information about how your muscles move is sensed by the receptors in your limbs and trunk. These body sensing loops or cycles happen over and over in a short period of time.

## How balance can change

A stroke can change your balance because of:

- An injury to one of the systems that controls your balance
- Damage to these system connections to your brain
- Injury to your brain

Some common problems after a stroke that can change your balance:

- **Not seeing things clearly**
  If you cannot see clearly, you may not be able to react to what is around you as easily as you did before.

- **Not able to sense position**
  If you cannot sense where your head or trunk is positioned, your brain may have trouble knowing what signals to send to your muscles to keep your body upright.

- **Not feeling motion**
  If you cannot feel and sense where your limbs are moving, it is hard for your brain to be sure where to send your limbs for the next step.

- **Trouble processing information**
  Your brain must be able to take in the information from your environment and develop a plan to adjust your body, so you stay balanced. If the part of your brain in charge of this task is injured from a stroke, the information may not get processed well.

- **Trouble sending messages**
  The brain may also have trouble sending the right messages back to your muscles.
Positioning for Impaired Mobility

Sitting up
These guidelines for sitting up will help you relax, lessen pain, and help prevent muscle tightness.

• Sit with your buttocks completely back in the wheelchair. Keep your hips and knees at a right angle and your feet flat on the floor. Place the foot of your affected side on the foot rest while your wheelchair is in motion.
• Keep your head and body in line with your hips. You may need to use a pillow or wedge to help distribute your weight evenly on both buttocks.
• Support your affected arm with pillows, a table, trough, or half lap board if in a chair.
• Place your affected shoulder slightly forward. Support the wrist and hand.
• Sit with your body at a right angle in bed. Do not slouch.
• Check your skin often for redness, bruising, or breakdown.

Lying down
For the positions shown below for lying down, the shaded areas are the affected side.

• Place flat pillows under your head and limbs for support. Place your wrist and hand straight on a pillow, not drooped or fisted.
• Keep your shoulder forward and your hips and knees bent.
• Do not lie in one position for longer than 2 hours. Check the skin often for redness, bruising, or breakdown.
Saving Energy and Making Work Easy

General tips

• Sit when doing a task. Standing takes more energy.
• Do work with your arms instead of your legs. Working with your legs takes more energy.
• Wait 30 minutes after eating before doing a task. Work done after a meal causes more demand for oxygen to your heart.
• Avoid doing activities in temperatures above 80 degrees F with humidity or below 20 degrees F. Extremes heat or cold can be dangerous for the heart.

Pace yourself to save energy

• Get at least 6 to 8 hours of sleep each night.
• Rest for 20 to 30 minutes at least twice a day. If you get tired, stop and rest for 15 minutes whether or not you have finished your task.
• Alternate easy tasks with hard tasks or spread a task out over the day.
• Focus your energy on the things you can do.
• Ask for help if the demands on your energy are too much.
• Hire help as needed.
• Avoid stress.

Use labor-saving methods and devices to save energy

• Sit to work when you are able. Sit at a counter or table to make food, shave, or apply makeup.
• Organize work areas and keep items where you use them. Keep shaving items and make up near the sink and mirror. Store things used often at chest height to avoid stretching.
• Get rid of unnecessary work, such as using a dishwasher or wearing clothes that do not need to be ironed.
• Use automatic or electric appliances. Use an electric can opener, mixer, clothes dryer, sander, riding mower, electric saw, and dishwasher. Use cruise control when driving.
• Use wheels to move things, such as a garbage can on wheels, or using a cart for cleaning supplies or to move laundry.
• Use both hands to lift or move objects, such as from the oven or refrigerator.
• Use proper body mechanics. Slide rather than lift things. Do not lean forward without supporting yourself. Instead rest your elbows on counter tops. Bend at the knees to lift.
• Use aids for bathing dressing, such as wearing slip on shoes or using a long-handled shoe horn and sock aid. Use a shower bench to sit and an elevated toilet seat.
Dysphagia after Stroke

You may have trouble eating or drinking after having a stroke. When a person has trouble swallowing, he or she may have problems moving food or liquid from the mouth to the stomach, called dysphagia. Stroke is a common cause of dysphagia.

Swallowing problems may lead to:
- Food or liquid getting into the airway, called aspiration
- Higher risk of choking
- Poor nutrition
- Dehydration (when your body does not have enough water or other fluids)

Swallowing changes after a stroke

Every person swallows in a slightly different way, however, several things need to happen for normal swallowing to occur. There are 5 main stages in the swallowing process. Problems can happen in one or more of these stages.

Preparing to Swallow - Anticipatory Stage

Normal process:
- Body gets ready to eat or drink
- Begin process of picking up utensils and bringing food or liquid up to the mouth
- Brain sends signals to chew

After a stroke, you may have:
- Changes in ability to pick up utensils, bring food or liquid up to the mouth or to chew once food is in the mouth
- Problems paying attention to eating and chewing
- Problems seeing food or liquid due to vision or perception changes

Oral Preparation Stage

Normal process:
- Food is chewed
- Food or liquid is mixed with saliva and formed into a food ball, called a bolus
- Process uses strength and coordination between the lips, tongue, jaw, and cheeks
**After a stroke, you may have:**

- Trouble taking food off of utensils
- Problems using straws or forming a seal around a cup
- Saliva, food, or liquids leak from the mouth
- Trouble chewing food
- Biting the inside of the cheek or lip
- Food scattering in the mouth
- Food collects between cheek and gums (pocketing)

### Oral Transit Phase

**Normal process:**

- Food or liquid is moved to the back of the mouth by a squeezing action, mostly by the tongue

**After a stroke, you may have:**

- Less strength or coordination to move food to the back of the mouth
- Need to swallow multiple times to clear the food or liquid from the mouth
- Leftover food or drink left in the mouth after swallowing
- Liquids or foods may fall into the throat too soon, causing a risk of it getting into the airway

### Pharyngeal Phase

**Normal process:**

- Food enters the upper throat area, above the voice box, and the soft palate (back of the roof of your mouth) pulls up
- Small flap, called the epiglottis, closes at the top of the voice box to close off the opening to the windpipe (trachea)
- Tongue moves backwards and the throat walls move forward
- Actions help force the food or liquid through the throat toward the esophagus

**After a stroke, you may have:**

- Brain does not signal the muscles to begin swallowing at the right time, leading to risk of aspiration
- No feeling when food or liquid goes down “the wrong way”, called silent aspiration
- Throat muscles are not strong enough to squeeze food or liquid through the throat, increasing risk of aspirating or choking
Esophageal Phase

Normal process:
- Food ball or liquid enters the esophagus and is moved to the stomach by a squeezing action

After stroke, you may have:
- Changes in muscle that separates pharynx from the esophagus
- Changes in muscle coordination that moves food or liquid through the esophagus

Checking for swallowing problems

You will likely be screened for a swallowing problem when you come into the hospital. A nurse or doctor may ask you questions about your swallowing, look at the movement of your mouth muscles, and give you something to drink.

If your doctor suspects that you may have a swallowing problem, you will be seen by a Speech Language Pathologist (SLP). The SLP specializes in swallowing and communication problems. The SLP will ask you questions about your medical history and ability to swallow. The SLP will examine your mouth and ask you to eat and drink different types of foods and liquids to find out what kind of swallowing problem you have. The SLP may recommend you have more swallow testing.

Treating swallowing problems

Test results and recommendations will be shared with you and your doctor. Your treatment plan will vary based on your ability to swallow safely.

Treatment may include:
- Facial exercises for strength and coordination
- Learning to eat in a special way.
- Preparing food in a certain way or avoiding certain foods.
- Adding special thickeners to liquids.
- A feeding tube may be needed if eating or drinking is no longer safe.

You may need to continue to work with the SLP after you go home.
Thickened Liquids for Safer Swallowing

Your Speech Language Pathologist (SLP) and doctor may want you to thicken liquids for safer swallowing. Some liquids are naturally thick. Other liquids can be made thick with powders or gels.

Thickened liquids can:
- Give you better control of swallowing the liquids in your mouth.
- Reduce the risk of liquids going into your windpipe or trachea, which leads to your lungs and can cause a lung infection.

Levels of liquid thickness

You will be told how thick liquids should be for you to swallow safely. This depends on your problem with swallowing, also called dysphagia.

- **Thin liquids**: such as water, milk, juice, coffee, tea, Ensure, carbonated drinks, Jell-O, ice cream, sherbet, sorbet and broth-based soups. Thin liquids may be mixtures of solids and liquids, such as soups or cereal with milk. **Slightly thick** is the term used for infant formula and supplements.

- **Mildly thick or nectar-like liquids**: such as fruit nectars, maple syrup, egg nog, tomato juice and cream based soups.

- **Moderately thick or honey thick liquids**: with the thickness of honey.

- **Extremely thick or spoon thick liquids**: with the thickness of pudding.

Thickening products

Products are available to thicken liquids without changing the taste. Most can be used with hot and cold liquids. Thickening products are found at your local pharmacy or medical supplier, or can be ordered online. You do not need a prescription. Some products are not kept in stock. Be sure to order in advance to avoid running out.

Product information for some common thickening products is provided below. Visit the product’s website for more information and to find a store near you. Consider the cost, ease of use and availability of the product as you decide what to use.

- **Nestle Resource ThickenUp Clear**, [www.thickenupclear.com](http://www.thickenupclear.com), 1-800-422-2752
  - Product comes as a powder to mix with liquids. Sold in canisters or single serving packets.
  - **Pros**: Product has a quick mixing time and does not separate over time.
  - **Cons**: Product reduces carbonation in carbonated beverages and has a longer mixing time if beverage contains protein.
SimpleThick, www.simplythick.com, 1-800-205-7115

- The product comes as a gel to mix with liquids. It is sold as single servings, bulk servings, or in a dispenser bottle with a pump.
- Pros: The product has a smooth texture and does not thicken or separate over time. It can be mixed in large quantities and stored in the refrigerator.
- Cons: The product reduces carbonation in beverages and does not mix well with supplements.

Thick & Easy, www.homecarenutrition.com, 1-800-491-6876

- The product comes as a powder to mix with liquids or as pre-thickened, ready to serve beverages. Powder is sold in canisters or as single serving packets.
- Pros: The product is easy to use and locally available.
- Cons: Pre-thickened beverages must be thrown away within 10 days of opening.

Thick-It, Thick-It 2 or Thick-It AquaCareH2O, http://thickit.com, 1-800-333-0003

- Thick-It and Thick-It 2 come as powders to mix with liquids. They are sold in canisters or as single serving packets. Thick-It AquaCareH2O comes as pre-thickened, ready to serve beverages, including water, coffee, and some juices. It can be heated or chilled. Can use alone or with powdered drink mixes.
- Pros: The products are locally available.
- Cons: Powder products take up to 5 minutes to mix well or lumps may form. Powder products may separate over time, and thickening results vary depending on the type of liquid used. They also reduce carbonation in beverages.

Other tips

- Talk with your dietitian if you have questions about the nutrition of the liquids that you consume.
- For powder products, add more thickener if the liquid is too thin. If too thick, add more liquid until the thickness level you need is reached.
- Check with your SLP before consuming Jell-O, sherbet, sorbet, and ice cream. These products turn to liquid as they melt in your mouth and may not be safe for you.
- Broth-based soups are thin liquids. Do not use unless the broth is thickened to the right level for you.
- If you like popsicles or to cool your beverages, the thickness will change as it melts. Talk to your SLP or dietitian about how to safely cool or freeze liquids for your diet.
- Take your supplies with you when eating out. Many thickening products come in single serving packets that make travel easy.

If you have questions or are still having swallowing problems, please talk to your SLP. There may be other tips or products for you to try.
Feeding and Swallowing Plan
Instructions and Precautions

Follow the instructions checked below:

- Remain upright at 90 degrees while eating and for 30 to 45 minutes after meals.
- Take small amounts of food and liquid, no more than 1 teaspoon at a time.
- Take liquids with a cup or spoon only (no straws).
- Take liquids only by straw.
- Place food on the left / right side of the mouth.
- Tuck the chin down while swallowing.
- Turn head to the _____________ when swallowing.
- Place food to the _____________ of the mouth.
- Swallow _________ times after every bite or sip.
- Swallow before taking another bite or sip.
- Check the _____________ side of the mouth for pocketed food.
- Alternate liquids and solids.
- Clear throat after every 2 to 3 bites or sips.
- Check vocal quality before taking another bite or sip.
- Provide mouth care after each meal.
- Other: ________________________________________________

Patient’s Name: ___________________________ Date: __________
Diet Level: ____________________ Liquids: _____________________
Heart Healthy Eating with DASH

DASH, or Dietary Approaches to Stop Hypertension, is an eating plan that lowers blood pressure and LDL (bad) cholesterol to reduce your risk of stroke. The food groups listed show examples of daily or weekly servings for a 2,000-calorie-a-day diet. You may need more or less servings each day based on your calorie (energy) needs. Talk to your provider for support.

**Sodium - limit to 2,300 mg or less per day**
Your provider may recommend 1,500 mg or less per day.

- 1 teaspoon of salt has 2,300 mg of sodium.
- Most of the sodium in our diets comes from processed foods, like lunch meat, canned soups and vegetables, and boxed or packaged mixes.
- Read food labels to learn how much sodium is in a food.

**Grains - eat 6 to 8 servings per day**

- 1 serving equals:
  - 1 slice of bread
  - 1 ounce of dry cereal (about ½ to 1¼ cups, depending on cereal type)
  - ½ cup of cooked rice, pasta, grains, or cereal
- Choose whole grains (100% whole wheat or whole grain bread, brown rice, quinoa, or oatmeal) over refined grains (white flour, degermed cornmeal, white bread, or white rice).

**Vegetables - eat 4 to 5 servings per day**

- 1 serving equals:
  - 1 cup raw, leafy vegetables
  - ½ cup chopped raw or cooked vegetables
  - ½ cup low-sodium vegetable juice

**Fruits - eat 4 to 5 servings per day**

- 1 serving equals:
  - 1 medium fruit
  - ¼ cup dried fruit
  - ½ cup fresh, frozen, or canned fruit
  - ½ cup fruit juice
- Choose whole fruits (fresh, frozen, or dried) over juice.
Fat-free or low-fat dairy - eat 2 to 3 servings per day
- 1 serving equals:
  - 1 cup fat-free or 1% low-fat milk
  - 1 ½ ounces low-fat cheese
  - 6 ounces fat-free or low-fat yogurt

Lean meats, poultry, and fish - eat 6 to 8 servings per day
- 1 serving equals:
  - 1 ounce cooked meat, fish, or poultry
  - 1 egg
- Trim away visible fat.
- Remove skin from poultry.
- Use low-fat cooking methods, like broil, roast, poach, bake, and grill.
- Limit meat to 3 ounces at meals (about the size of the palm of your hand).
- Limit egg yolks to 4 per week.

Fats and oils - eat 2 to 3 servings per day
- 1 serving equals:
  - 1 teaspoon butter, margarine, or oil
  - 1 tablespoon mayonnaise
  - 2 tablespoons salad dressing
- Use small amounts of butter or margarine.
- Use olive oil as your first choice for oils.

Seeds, nuts, and legumes (beans, lentils, and peas) - eat 4 to 5 servings per week
- 1 serving equals:
  - ½ cup or 1 ½ ounces of nuts
  - 2 tablespoons nut butter
  - 2 tablespoons or ½ ounce seeds
  - ½ cup cooked beans, lentils, or peas
- Eat more vegetarian or meatless meals.

Sweets and added sugars - eat 5 or less servings per week
- 1 serving equals:
  - 1 tablespoon of sugar, honey, maple syrup, or chocolate sauce
  - 1 tablespoon jelly or jam
  - ½ cup sorbet, sherbert, or ice cream
  - 2 small cookies
• Keep sugar on the food label to less than 10 grams per serving.
• Men: limit sugar to no more than 150 calories or about 3 tablespoons (38 grams) per day.
• Women: limit sugar to no more than 100 calories or about 2 tablespoons (25 grams) per day.
• A 12-ounce can of regular soda has about 40 grams of sugar!

**Tip:** Read food labels to learn what is in a food. This will help you to make healthier choices. Look at calories, saturated fat, sodium, and sugars.

For more information about DASH, visit:
• National Heart, Lung, and Blood Institute at [www.nhlbi.nih.gov/health-topics/dash-eating-plan](http://www.nhlbi.nih.gov/health-topics/dash-eating-plan)
• MedlinePlus at [https://medlineplus.gov/dasheatingplan.html](https://medlineplus.gov/dasheatingplan.html)

### DASH sample 1-day menu

<table>
<thead>
<tr>
<th>Breakfast</th>
<th>Dinner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cup bran flakes cereal</td>
<td>3 ounces lean beef with 2 tablespoons fat-free beef gravy</td>
</tr>
<tr>
<td>1 medium banana</td>
<td>1 cup green beans sauteed in ½ teaspoon olive oil</td>
</tr>
<tr>
<td>1 cup 1% low-fat milk</td>
<td>1 small baked potato topped with 1 tablespoon fat-free sour cream, 1 tablespoon low-fat shredded cheddar cheese, 1 tablespoon chopped scallions</td>
</tr>
<tr>
<td>1 slice 100% whole wheat bread</td>
<td>1 small whole wheat roll with 1 teaspoon tub margarine</td>
</tr>
<tr>
<td>1 teaspoon butter or soft margarine</td>
<td>1 small apple</td>
</tr>
<tr>
<td>½ cup orange juice or orange segments</td>
<td>1 cup 1% low-fat milk</td>
</tr>
</tbody>
</table>

### Lunch

<table>
<thead>
<tr>
<th>Snacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>¾ cup chicken salad on 2 slices 100% whole wheat bread</td>
</tr>
<tr>
<td>Salad with ½ cup fresh cucumber slices, ½ cup tomato wedges, 1 tablespoon sunflower seeds, 1 teaspoon Italian dressing</td>
</tr>
<tr>
<td>½ cup fruit cocktail</td>
</tr>
</tbody>
</table>

| ½ cup almonds, unsalted                        |
| ½ cup raisins                                  |
| ½ cup low-fat, low-sugar Greek yogurt          |
Healthy Cooking Resources
Websites, Cookbooks, and Handouts

Websites
These sites have listings on their search engine for heart healthy and low-fat recipes.

- American Dietetic Association, www.eatright.org
- American Heart Association, www.heart.org
  1. Click on “Get Healthy”
  2. Next click on “Nutrition Center”
  3. Click on “Recipes” or “Cookbooks”
- Cooking Light, www.cookinglight.com
- EatingWell, www.eatingwell.com

Cookbooks
- Prevent a Second Heart Attack: 8 Foods, 8 Weeks to Reverse Heart Disease. Janet Bond Brill, PhD, RD, and Annabelle S. Volgman, MD, 2011.

Heart Healthy Handouts
Ask for these handouts or visit https://patienteducation.osumc.edu.
- Cooking Suggestions and Recipes for a Low Sodium Diet
- Eating Healthy on a Budget: Shopping Tips and Menu Ideas
- Restaurant Rehab: Using Menu to Make Heart Healthy Choices
- Tips for Eating More Fruits and Vegetables
Benefits of exercise

Some of the benefits of exercise are to:

- Improve your heart and lungs and blood pressure control.
- Help with weight control.
- Improve your body’s ability to use its own insulin.
- Help you feel better and have more energy.
- Lessen your risk of health problems.
- May help lower your lipid levels (cholesterol and triglycerides).

All of these are good reasons to begin and stick with a regular exercise program.

Getting started

If you have not been exercising, talk with a member of your health care team before you start exercise. For your safety, follow any limits your doctor sets.

- Begin slowly and increase the time you exercise and the intensity of the exercise over time.
- If you are new to exercising, start with 5 or 10 minutes of walking, 3 or 4 days a week. Then the second week increase to 10 minutes of walking, twice a day, 3 days a week.
- Aim for 150 minutes of moderate intensity, cardiovascular exercise each week. You can break up this time, such as exercising for 30 minutes, 5 days a week.
- The type of exercise you choose depends on what you like and what is comfortable for you.

Exercise at the right pace

Do not push yourself too hard. If you are walking, you should be able to say hello to your neighbor or a person passing you on the sidewalk without feeling short of breath.

Exercise at a pace that makes your body work, but does not cause you pain or exhaustion.

Stop exercising right away if you feel:

- Pain or pressure in your chest, neck or jaw
- Tired even though you have been sleeping well
- Dizzy or light-headed
- Irregular heart beats

If any of these signs persist after stopping exercise, call your doctor or seek medical help right away.
Quitting Tobacco Use

Smoking or any tobacco use is dangerous to your health. Quitting will reduce your risk of stroke, as well as heart disease, blood vessel disease, lung problems, and cancer.

Benefits of quitting now

- In 3 months, your circulation and lung function improves.
- In 9 months, you will cough less and breathe easier.
- After 1 year, your risk of heart disease is cut in half.
- After 5 years, your stroke risk returns to normal.

Before you try to stop smoking, commit to stopping. Smoking is a learned behavior that you must unlearn. It is not easy, but it can be done if you are serious about quitting. Stopping will help you live healthier and longer.

Talk to your doctor about quitting. Ask about classes and support groups in your area. Get support and encouragement and learn how to deal with stress. Talk with your doctor about medicines and other aids to help you quit.

Quit Lines:

- Ohio Tobacco Quit Line, 800-QUIT-NOW (784-8669)
- Quit for Life program from the American Cancer Society, 800-227-2345
- American Lung Association, 800-586-4872
- BeTobaccoFree.gov Smoking Quit Line, 877-448-7848

Ohio State clinics:

- Ross Heart Hospital Smoking Cessation Clinic, 420 W. 10th Avenue, Columbus, OH 43210, 614-293-0932
- The Lung Center, Tobacco Dependence Clinic, 2050 Kenny Road, Suite 2200, Columbus, OH 43221, 614-293-4925

Mobile apps:

Search your mobile device’s app store for quit smoking apps, such as:

- QuitGuide
- QuitStart
Depression after Stroke

Grief and feelings of loss are common after many illnesses. Dealing with life after a stroke involves adjustment. As you or a loved one learns to deal with changes in your lives, you may have feelings of sadness, anxiety, frustration, or anger. When sadness changes into depression, it is important to seek help. Talk to your doctor or others on your health care team if you are feeling depressed.

Common reaction
Depression is a common emotional reaction to stroke. Sometimes, depression is caused by the physical damage that stroke causes in the brain. Depression can start right after a stroke, during rehabilitation, or after you go home. Some studies suggest that people who have had a stroke are at greatest risk for depression 6 to 24 months after they leave the hospital.

Signs of depression
When a person is depressed, he or she has several signs nearly everyday that last at least 2 weeks, such as:
- Increased frustration, irritability, or grouchiness
- Loss of interest and pleasure in activities you used to enjoy
- Feeling sad, blue, empty, or down in the dumps
- Crying more than usual
- Feeling slowed down, restless, or unable to sit still
- Feeling worthless or guilty
- Feeling pessimistic or hopeless
- Feeling anxious or worried
- Changes in appetite or weight loss or gain
- Change in sleep patterns – being unable to sleep or sleeping too much
- Problems concentrating, thinking, remembering, or making decisions
- Withdrawing from people or events you normally enjoy
- Loss of energy or feel tired all the time.
- Sexual problems

If you have any of these signs for more than 2 weeks, or if you have had thoughts of suicide or of trying to harm yourself or others, see your doctor right away.

Prevention
- Learn about stroke. Information can help lessen your fears. Talk to your health care team about your questions and concerns.
- Make the most of rehabilitation and keep track of your progress. The more you recover, the better you will feel.
- Spend time with family and friends. Talk about your feelings.
- Maintain interests and hobbies.
- Exercise.
- Do not drink alcohol.
- Talk to a health care professional as soon as you notice signs of depression.
Learning to cope after having a stroke can be very difficult. It is common to have fear, stress, sadness, and confusion. Don’t try to go through it alone. Talk about your feelings with people you feel close to and trust.

**Tips to help you cope**

- **Be kind to yourself.**
  Pay attention to your health. Get plenty of rest, exercise, and eat a balanced diet. Do not use alcohol and other substances because they can add to your problems.

- **Take one day at a time.**
  Do the best you can to get through each day. Have a schedule and try to do one important task each day. Try to eat a healthy diet and rest.

- **Learn about your abilities and care.**
  Understanding the changes in your abilities and how to take care of yourself can lessen stress and prevent problems. Educate others to help them support you and to lessen their fears.

- **Set goals.**
  Start by listing some simple activities you want to do, like writing letters or talking to friends. Later you can list future plans. Remember goals and plans can be changed.

- **Write in a journal.**
  Write down your feelings about your losses. Write down things you are thankful for. You can also use your journal to track your progress. The more you recover, the better you will feel.

- **Do relaxation techniques.**
  Relaxation techniques can help you to let go of the physical and emotional stress change causes in your life.

- **Use leisure activities to find pleasure.**
  Your therapist will work with you to find activities you enjoy and help you learn new skills.

- **Connect with others who have been through it.**
  Your health care team can connect you to support groups. There are also communities of people that connect online to share experiences and support.

- **Be active.**
  Being active can boost hormones that lower stress and create a sense of well being. Work with your therapist on how you can be active safely.
Where to get help

- **In the hospital**, talk with your nurse, doctor, psychologist, social worker, or therapist. They can provide or recommend help for you.

- **After discharge**, talk to your primary care doctor or social worker.

- **To make an appointment or get a referral**, call Ohio State’s Rehabilitation Psychology at 614-293-3830. They can give you information about available mental health services.

- **Counselors** - Your doctor, nurse, social worker, or hospital chaplain can provide counseling or help you find a counselor if you need one. Individual counseling, group therapy, or family counseling may be helpful.

- **Church, temple, mosque, or other place of worship** - These can be sources of fellowship and community. Many people find it helpful to talk with a spiritual leader about their grief.

- **Social work organizations** - Social work organizations and local hospitals can help you find services and support groups in your area.

- **Mental health services** - Mental health organizations and centers may provide education and information about other available services.
  - Contact Mental Health America of Franklin County at 614-221-1441 or visit [www.mhafc.org](http://www.mhafc.org) for a resource directory and fact sheets.
  - Contact National Mental Health America at 1-800-969-6642 or visit [www.mentalhealthamerica.net](http://www.mentalhealthamerica.net) for health information and help finding treatment and support groups.

- **Community resources** - Local organizations can help you find things like support groups.
  - HandsOn Central Ohio offers 24-hour referrals by calling 211, or visit [www.handsoncentralohio.org](http://www.handsoncentralohio.org).

- **In an emergency**, call 911 or go to or call Ohio State’s Emergency Department at 614-293-8333.

**Help Anytime**

If you have feelings of hurting yourself or others, get help right away. There are 24-hour hotlines that you can call anytime.

- **National Suicide Prevention Lifeline**, 1-800-273-TALK (8255)
- **Netcare Crisis Hotline**, 614-276-2273
- **Suicide Prevention 24-hour Hotline**, 614-221-5445
Learning to be sexual again can still be possible as part of your recovery from stroke. Each person expresses sexuality in different ways. Sexual expression includes touching, talking, hugging, fantasizing, kissing or just holding hands. It can also include sexual intercourse.

**Are sexual problems common after stroke?**

Most often, if people have sexual problems after a stroke, they are “thinking” problems rather than “doing” problems.

Changes in sexual functioning are common and may be caused by:

- **Medical and psychological problems**, especially if you have feelings of depression. You may have changes in your desire to have sex or your ability to feel arousal or reach orgasm. Low energy and problems moving may make it hard to have sex.

- **Physical problems.** You may need to change how you engage in sexual activity. If you have impaired mobility, talk to your partner about trying new positions. If you have bladder or bowel accidents during your daily activities, you may also have them during sex. Use the toilet before sex and place a washable waterproof pad under your hips.

- **Fear of being unattractive.** Share your fears, wants, and needs with your partner. Your partner can help by being more open and expressive. Even though some things have changed, remember that you are still loved and desired.

**Can the drugs I take affect my desire to have sex?**

Yes. Talk to your doctor about your symptoms. Your ability to have an erection and to ejaculate or achieve orgasm may also change. This varies from person to person. Do not stop taking your medicines without talking to your doctor first.

**How can I start a sexual relationship again?**

Talk openly and learn as much as you can. Practice and being willing to try new things are important factors in a sexual relationship. Ask any member of your health care team for information about being sexual again.

Before you begin sexual activity, talk to your doctor or nurse about protection from unplanned pregnancy and sexually transmitted infections.
Relaxation Techniques

Learn relaxation techniques to reduce stress and anxiety. Try different techniques to find what works best for you. Practice your techniques often and your ability to relax will improve over time.

Listening to music
Listen to your favorite music by itself or play music while using another relaxation technique. Look for new music, which you find soothing and helps you feel calm and relaxed, such as classical music or nature sounds. Try also guided meditation music.

Breathing exercises
1. Find a quiet room.
2. Turn on music that you find relaxing.
3. Get into a relaxing position.
4. Close your eyes and think of an image in your mind that will help you to relax, such as a calm, peaceful setting or a place you have enjoyed visiting.
5. Breathe in deeply. Hold your breath and tense your muscles. Keep them tense for a second or two.
6. Relax your muscles as you breathe out.
7. Starting with the muscles in your lower legs, work your way up your body to your head, tightening and relaxing each muscle group.

Guided imagery
Close your eyes and think of a time and place when you felt safe and comfortable. Imagine those surroundings, sights, smells, and sounds. Bring as much of that experience back to the here and now as possible. When you feel ready, take a deep breath and open your eyes.

Aromatherapy
Aromatherapy is the use of essential oils from plants as therapy to improve your well-being. Some oils, such as lavender, are thought to produce a calming effect. They can be inhaled or diluted and used on skin. Dodd has aromatherapy machines, so let staff know if you are interested in trying it.

Positive thinking
Thinking negative thoughts can cause stress and muscle tension. Create some positive statements to replace negative self-talk. Repeat these statements to yourself and use them to motivate you. Some examples:
- I am doing the best that I can.
- I care for my well-being.
- I will try again.

Relaxation resources
- Guided Imagery Exercises [go.osu.edu/guidedimagerypractices]
- Mindfulness [go.osu.edu/mindfulness]
- Heart Centered Practices [go.osu.edu/heartpractices]
- Relaxation Response [go.osu.edu/relaxationresponse]
Leisure as Part of Your Rehabilitation

Finding things you enjoy doing helps you recover in many ways. Talk to your health care team about your interests.

We will work with you to both build your skills and adjust the leisure activities you are interested in to fit your abilities.

What do you like to do?
I like to...

- do something meaningful
- be active
- feel commitment to something
- be busy
- do lots of different things
- take it easy and relax
- do something different from work and school
- be able to do what I want
- be spontaneous
- make and carry out plans
- try my own methods of doing things
- compete with others
- compete with myself to do better
- laugh and enjoy
- make use of my skills
- improve my skills
- have something to show for my efforts
- get approval for what I do
- be successful at what I do
- have a feeling of personal worth
- learn more about myself or a topic
- develop relationships with other people
- be part of a group or team
- meet new people
- develop friendships
- help others
- be in attractive surroundings

Leisure activities

Check the activities you enjoy or would like to try. Share this list with your health care team, family, and friends. Your community may have classes and programs available through libraries, park and recreation departments, senior centers, and fitness clubs.

Relaxation activities

- House plants
- Computer / Internet
- Crossword puzzles
- Jigsaw puzzles
- Library
- Listening to music
- Meditating
- Movies
- Pet care
- Reading books
- Video games
- Word search games
- Writing
- ____________________
- ____________________
Creative activities
- Acting
- Art shows
- Baking or cooking
- Ballet
- Broadway plays
- Canning food
- Church activities
- Collectibles
- Community activities
- Concerts
- Crocheting
- Drawing
- Flower arranging
- Home repair and improvement
- Jewelry making
- Knitting
- Museums
- Needlepoint
- Opera
- Painting
- Photography
- Play musical instruments
- Pottery or ceramics
- Quilting
- Scrap booking
- Sewing
- Singing
- Woodworking

Social activities
- Bingo
- Board Games
- Card games
- Checkers or chess
- Clubs / organizations
- Cornhole / bean bag toss
- Darts
- Dominoes
- Eating out
- Going to parties
- Politics
- Pool, billiards or snooker
- Shopping
- Socializing with friends
- Traveling
- Volunteer work

Physical activities
- Aerobics
- Badminton
- Basketball
- Bicycling or spinning
- Bocce
- Bowling
- Football
- Frisbee
- Golf
- Handball, racquetball, or squash
- Hockey
- Ice skating
- Jogging or running
- Judo or other self defense
- Shuffleboard
- Skiing
- Soccer
- Softball or baseball
- Swimming
- Table tennis
- Tennis
- Volleyball
- Walking
- Weight lifting
- Yoga

Outdoor activities
- Auto repair
- Bird watching
- Boating
- Camping
- Canoeing
- Fishing
- Gardening
- Hiking
- Horseback riding
- Horseshoes
- Miniature golf
- Roller blading
- Sailing
- Yard work
- ________________
- ________________
- ________________
- ________________
- ________________
Planning for Discharge from Dodd Rehabilitation Hospital

Your case manager and social worker will work with you and your family to prepare you for discharge from the hospital. Your care needs will be reviewed by your health care team. They will make recommendations on your length of stay and your date for discharge. **You and your family are the most important members of the team. Talk honestly with staff about your care needs.**

**Things to consider**

**Family and caregivers are required to take part in training** to learn the skills needed to provide care at home. Therapists provide training weekdays between 9 AM and 3 PM. Training by the nurses may be done in the evenings. Training can also be scheduled by appointment.

**Most patients need ongoing therapy, care, and support.** Your case manager and social worker will help you to explore insurance coverage for needed services. There is a lot of variation in what insurance will and will not cover. Family members may need to provide 24 hour supervision.

**Service options**

Depending on your care needs and whether family and friends are available to help, these options may be considered:

- **Home with outpatient therapy:** Therapy appointments outside of the home, often 2 or 3 times each week.
- **Home with home health care:** Home visits by a therapist or nurse, often 1 to 3 times each week. Most insurance providers do not cover the cost of home health aides to help with personal care activities, such as bathing and grooming.
- **Skilled nursing facility:** If more services and special therapies are needed, a stay in a nursing facility may be recommended.

**Most services may require a co-payment.** Talk to your insurance provider for details. Your case manager and social worker will help you find services and advocate for you to get the care you need.

**Medical equipment needs**

Your case manager will help you to order the equipment needed for care. Insurance providers vary as to whether they’ll cover the cost of bathing equipment, commodes, raised toilet seats, and a hospital bed. Often, they will cover either a wheelchair or walker, but not both.

**Comfort in talking about it**

Your social worker can help you prepare how to talk with family members, friends, and others about your needs and what has happened.

**Contact us**

Please call your case manager or social worker if you have questions or concerns about your plans for discharge:

- **Case Manager at 614-685-9092**
- **Social Worker at 614-293-7209**
Care after Leaving the Hospital

Discharge planning helps you, your family, and your care team coordinate your care in and after you leave the hospital. Many people are able to leave the hospital and go home. They are able to care for themselves with the help of family and friends. Sometimes, care after the hospital stay is needed.

Levels of care

Based on your care needs and the ability of you and your family to manage your care, you may go home, or you may need to consider other levels of care. Your care team can discuss these options with you in more detail, based on your needs. Care options include:

- **Self care at home** with family support.
- **Home health care** - nurses and aides come to your home several times each week.
- **Assisted living** - nursing home that provides help with personal care and homemaking services.
- **Extended care facility** - provides care for those who need daily care and support for a longer period of time.
- **Acute rehabilitation** - a hospital, such as Dodd Rehabilitation Hospital, that provides more rehab to improve independent function.
- **Long-term care or skilled nursing facility** - provides more complex medical care and rehabilitation services.

Community resources

A wide range of community services are available. Ask your social worker or case manager for a list of resources in your area.

- **HandsOn Central Ohio** provides information and referral services. Call 211 in Franklin County or call 614-221-6766.
- **Ohio Association of Area Agencies on Aging** has a network of agencies that provide services across Ohio, 614-481-3511 or [www.ohioaging.org](http://www.ohioaging.org).
- **Central Ohio Area Agency on Aging** serves Delaware, Fairfield, Fayette, Franklin, Licking, Madison, Pickaway and Union Counties, 614-645-7250 or [www.coaaa.org](http://www.coaaa.org).
- Community centers and adult day care programs may offer support and services.

Follow up care

You will be given discharge instructions when you are leaving the hospital. Be sure to ask questions if there is anything you do not understand.

You will be scheduled for a follow up visit with your doctor. Be sure to keep this appointment. Your doctor will check you and may make adjustments to your medicines to reduce your risk of another stroke.
Outpatient therapy

Outpatient therapy may last months or years after the initial brain injury. The goal of therapy is to improve skills for daily living. There are many types of programs that are part of outpatient therapy.

• **Day Treatment Rehab**
  Full or half day programs may be available in your area. Some programs are everyday and some are less often. During the day, the patient moves from one rehab skill set to another. For example, the morning session may focus on recreational and physical therapy while the afternoon focuses on speech and occupational therapy. Patients benefit from these programs and still get to return home at night. These programs are typically not reimbursed by private insurance or Medicare, however the Medicaid passport waivers will sometimes cover costs.

• **Neurobehavioral Programs**
  These programs can be inpatient or outpatient to address behavior after a brain injury. The goal is behavior management at home, in a social setting, or at work. Behavior management is often combined with physical or occupational therapy.

Home health care

Home health care may be needed during recovery. Nurses may come to the home to help with complicated dressing changes, injections, IV care, or therapies. Home health aides may help with activities such as bathing, grooming, eating, and getting out of bed. These trained personnel help to provide needed care while checking progress made in other rehab programs.

Covering the costs

You are probably concerned about the cost of the services needed. The cost of services may depend on your income and insurance status. Members of the discharge team will help you explore coverage for needed services within your budget. Insurance plans vary in what they will and will not cover. Medicare, Medicaid, and private insurance may only pay for some of the costs. Assisted living is not typically covered by private insurance or Medicare, however the Medicaid passport waivers will sometimes assist with costs.

**Contact your insurance company before discharge from the hospital and before placement in any rehabilitation program or facility.** Social workers, case managers, and financial counselors are available to answer questions and help those with limited or no insurance coverage.

If you have issues or concerns after you leave the hospital, please call your doctor or social worker. They can help guide you through the emotional and physical challenges of your illness. Information about community resources in your area will also be provided.

For more information call:

• Social Work at 614-293-7209
• Financial Assistance at 614-293-0860
Stroke Support Groups

These are support groups in central Ohio and online support groups to help you to learn more about stroke and how to manage your care. If you need other resources, talk to your social worker, case manager, or others on your health care team.

Support groups in central Ohio

- **Ohio State’s Stroke Support Group - Worthington**
  Group is led by rehabilitation psychologist. Stroke survivors, family members, and friends are welcome.
  Meets every Friday from 12 noon to 1 PM in the Worthington Senior Center (Griswold Center) at 777 High Street, Worthington, OH 43085.
  For more information, contact Dr. Wanda McEntyre at 614-293-3830.

- **Cerebral Aneurysm and AVM Support Group**
  Support for person, family, and friends affected by cerebral aneurysm or AVM.
  For more information, contact Marissa DeJesus at 614-293-0689 or by email at marissa.dejesus@osumc.edu.

- **Columbus Aphasia Group**
  Education and support for people dealing with aphasia.
  Meets the first Friday of the month from 10 AM to 11 AM at OSU Department of Speech and Hearing Sciences, 1070 Carmack Road, Columbus, OH 43210.
  For more information, contact Shannon Hand by email at hand.21@osu.edu.

- **Mount Carmel Stroke Support Group**
  Meets the 3rd Tuesday of the month, except January at Westley Glen.
  For more information, call 614-234-3905 for time and directions.

- **Central Ohio Young Empowerment Stroke Support Survivor Group (CO-YESSS)**
  For young adults and their families, offered at the branches of the Worthington Library on the second Tuesday of the month from 10 AM to 11:30 AM.
  For more information, contact Brie at 614-788-6161.

- **SWAT (Stroke, Wound, Aneurysm, Tumor) Support Group - OhioHealth Neuroscience Center**
  Riverside Methodist Hospital, 3535 Olentangy River Road, Columbus, OH 43214.
  Call 614-566-1124 for more information.

Online support groups

- **The Stroke Network**
  www.strokenetwork.org

- **Internet Stroke Center**
  www.strokecenter.org

- **National Stroke Association**
  www.stroke.org
Resources

Area resources

Home Health Services

Columbus Public Health
614-645-7417 or www.columbus.gov/publichealth
Offers many services including education, health and wellness, child health services, dental, and vision care for adults, and food services.

LifeCare Alliance
614-278-3130 or www.lifecarealliance.org
Provides home delivered meals to qualifying central Ohio residents, visiting nurses, nurse practitioners, dietitians, wellness center, senior centers, homemakers, and home health aides.

The Ohio Home Care Waiver Program
1-800-324-8680 or http://medicaid.ohio.gov/FOR-OHIOANS/Programs/Ohio-Home-Care-Waiver
Allows people with physical disabilities and unstable medical conditions to get care at home.

Housing

Columbus Metropolitan Housing Authority
614-421-6091 or www.cmhanet.com
Helps people find affordable housing. Call or go to their website for more information.

Ohio Department of Aging, Home and Community-Based Services and Supports
www.aging.ohio.gov/HomeCommunityCare
Assisted Living Waiver Program pays the cost of care in an assisted living facility for certain people with Medicaid, helping meet “room and board” expenses. Must meet eligibility requirements. Other home support services also explained.

Legal Assistance

Columbus Bar Association
614-221-0754 or www.cbalaw.org
Provides free lawyer referrals. Call 8:30 AM to 5:00 PM weekdays and the operator will help match a lawyer to your need. Call or go to their website or more information.

Disability Rights Ohio
1-800-282-9181 or www.disabilityrightsohio.org
Provides help to people in Ohio with disabilities who have been abused or neglected, denied services, or access to public facilities.

Legal Aid Society of Columbus
614-224-8374 or 614-241-2001 or www.columbuslegalaid.org
Provides legal support in civil cases for people with low income who cannot afford to hire an attorney. Some costs may apply. Housing, domestic violence, and other legal issues, not criminal.
Return to Work or School

Columbus Urban League
614-221-0544 or www.cul.org
Offers programs including career services, education, and housing services.

Opportunities for Ohioans with Disabilities (OOD)
1-800-282-4536 or 614-438-1200 or www.ood.ohio.gov
Works with partners in business, education, and non-profit organizations to help Ohioans with disabilities to have quality employment and gain independence. Also has Bureau of Vocational Rehabilitation (BVR) which provides people with disabilities help attaining and maintaining employment.

The Ohio State University, Office for Disability Services
614-292-3307 or www.ods.osu.edu
Offers a variety of services for Ohio State students with disabilities, such as exam accommodations, adaptive equipment and technical training help, counseling, and advocacy.

Financial Assistance

Franklin County Department of Job and Family Services
614-462-4000 or https://jfs.franklincountyohio.gov
Provides career and support services, and assists with signing up for programs, such as Medicaid and food assistance.

Medicare
800-633-4227, TTY/TDD 1-877-486-2048 or www.medicare.gov
Provides health insurance to people aged 65 or older, people under the age of 65 with certain disabilities, and people with permanent kidney failure.

NeedyMeds
800-503-6897 or www.needymeds.org
Provides information about discounted medicines or pharmacy assistance.

Ohio Best Rx Program
1-866-923-7879 or www.ohiobestrx.org
Helps low income, uninsured Ohio residents get free or discounted brand name medicines. Call or go to their website to determine your eligibility and for information on how to apply.

Ohio State University Wexner Medical Center Financial Assistance
614-293-0860 or https://wexnermedical.osu.edu
Provides help with completing applications for government-sponsored programs, explains other assistance programs, or helps create a payment plan for medical treatment if you meet criteria.

Social Security - Local office
614-469-6855 1-800-772-1213, TTY 1-800-325-0778 or www.ssa.gov
Provides financial assistance to people with disabilities with the Social Security Disability Insurance (SSDI) program and the Supplemental Security Income (SSI) program.
Transportation

Transportation Resources Guide
patienteducation.osumc.edu/Documents/trans-resources.pdf
Lists transportation resources for Franklin County and surrounding Ohio counties.

Drug/Alcohol Counseling Services

24 Hour Hotline
614-228-HOPE or 614-228-4673

Alcoholic’s Anonymous
614-253-8501 or www.aa.org
Hours of operation are 8:30 AM to 8:00 PM, Monday through Friday and 8:30 AM to 1:00 PM Saturday. Call or go to their website for more information.

Columbus Area Integrated Health Services
614-252-0711 or www.columbus-area.com
Provides mental health and substance abuse counseling services. There is a sliding fee scale. They accept Medicaid and Medicare.

House of Hope for Alcoholics, Inc.
614-291-4691 or www.hofhope.org

Maryhaven
614-445-8131 or www.maryhaven.com
Provides drug and alcohol rehabilitation regardless of ability to pay. Provides programs across cultures, ages, and severity of addiction. Call or go to their website for more information.

Nicotine Anonymous
614-487-9025 or www.nicotine-anonymous.org
- Provides a program built off of Alcoholics Anonymous (12 steps). Provides meetings via telephone if you are unable to or if it is difficult to leave your home. Call to schedule.
- Nicotine Anonymous World Services’ toll free phone number is 1-877-879-6422.

Ohio Department of Mental Health and Addiction Services
1-877-275-6364 or www.mha.ohio.gov
Call or visit for information or referral to addiction services by county.

Ohio State University Talbot Hall
614-257-3760 or https://wexnermedical.osu.edu/mental-behavioral/addiction-drugs
Offers a full range of outpatient programs and 25 beds for patients whose therapy requires a hospital stay.

Parkside Behavioral Health Care
614-471-1601 or www.thewoodsatparkside.com
Provides alcoholism and drug addiction services. Call for more information.
Traumatic Brain Injury (TBI) Network
614-685-8511 or http://tbi-network.org
Located at Ohio State Martha Morehouse Outpatient Care, the TBI Network treats adults dealing with both brain injury and drug or alcohol abuse.

Other Counseling Services

Catholic Social Services
614-221-5891 or www.colscss.org
Offers counseling, parenting services, and parenting counseling. Offers career development counseling specifically for the Hispanic Community. Offers social worker consults for the elderly for housing, medical appointments, insurance, transportation, and other health care needs.

North Central Mental Health Services
614-299-6600 or www.ncmhs.org
Provides mental health and recovery services. Offers an outpatient clinic for mental health and chemical dependence. Provides psychiatry consults. Suicide, senior, and teen hotlines offered.

Syntero
614-889-5722, ext 133 or https://www.syntero.org
Provides both mental health and substance abuse counseling. Offices at four locations around central Ohio. Accepts private insurance, Medicaid, Medicare, self-pay, and a sliding fee scale for uninsured Franklin, Delaware and Morrow County residents.

Ohio State’s Rehabilitation Psychology
wexnermedical.osu.edu/physical-therapy-rehabilitation/rehabilitation-psychology
Support programs for those with disabilities, which arose from injury or illness. Psychologists work with other members of the health care team to ensure the best care.

Resource directories and coordinating agencies

Action for Children
614-224-0222 or www.actionforchildren.org
Helps individuals find local child care agencies. This is a free service. Call to request written materials or to make an appointment. You can also go to their website for more information.

Hands-On Central Ohio
handsongentralohio.org or call 2-1-1
Reach thousands of social service, government, and community resources in Franklin County to address any problem you may be facing or to be connected to volunteer opportunities.

Netcare Access
614-274-9500 or 614-276-2273 (crisis hotline) or www.netcareaccess.org
Connects people to mental health, crisis intervention, and substance abuse services. Serves anyone regardless of income.

Ohio Department of Aging, PASSPORT Program
https://aging.ohio.gov/HomeCommunityCare
Helps Medicaid-eligible older Ohioans get long-term services and support needed to stay at home.
Ohio Department of Job and Family Services
1-800-852-0010 or 614-466-2100 or jfs.ohio.gov
Assists people by connecting them with agencies like many of the ones in this directory. They help connect to employment, child care, medical services, financial and legal services, and housing.

Veterans Administration
1-877-222-8387 or 1-800-273-TALK (Suicide Hotline) or www.va.gov
Assists veterans with issues on education, health care, insurance, burials, housing, etc. Helps locate local VA sites. Call or go to their website for more information.

Helpful websites
American Speech-Language-Hearing Association (ASHA)
301-296-5700 or www.asha.org
Can connect you to an Audiologist or Speech Language Pathologist (SLP) in your area.

American Stroke Association
(614) 848-6676 or www.strokeassociation.org
Part of the American Heart Association, a national network of local organizations providing research funding, education, community programs, and fundraising.

Centers for Disease Control and Prevention
www.cdc.gov/stroke
Stroke treatment information and educational resources.

Family Caregiver Alliance
800-445-8106 or www.caregiver.org National
Provides caregiver education and online support groups.

National Association for Home Care and Hospice
202-547-7424 or www.nahc.org
Provides a home care and hospice locator.

National Library Service for the Blind and Physically Handicapped
1-888-657-7323 or www.loc.gov/nls
Provides free braille and audio reading materials.

National Stroke Association
1-800-STROKES(787-6537) or www.stroke.org
Provides education and links to support for all impacted by stroke.

Stroke Survivors Empowering Each Other (SSEEO)
1-800-988-8047 or www.sseeo.org
Provides advocacy, support, education, and resources to stroke survivors and their families.