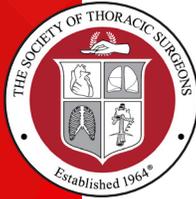


What to Expect After Heart Surgery



**The Society
of Thoracic
Surgeons**



The Society of Thoracic Surgeons

The more you know about what to expect after heart surgery, the smoother your recovery may be. While individual patient responses to surgery and recovery experiences may vary, some generalizations can be made.

This guide, from The Society of Thoracic Surgeons, will help answer questions that patients and their families may have about heart surgery. Always follow your doctor’s specific instructions if they differ in any way from those listed here.

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It's Normal to...

- **Not have much of an appetite.** It takes several weeks for your normal appetite to return. Many patients notice that their sense of taste initially is diminished or almost absent. Don't worry, it will return. Some patients even are nauseated by the smell of food for a week or two after surgery.
- **Have some swelling, especially if you have a leg incision.** Your leg may continue to swell for some time. Elevate your legs, do your exercises, and wear your compression/support hose, if prescribed. These things will help with the swelling.
- **Have difficulty sleeping at night.** You may find it difficult to fall asleep, or you may wake up at 2:00 a.m. or 3:00 a.m. and not be able to fall back to sleep. This will improve. If difficulty sleeping or staying asleep is due to pain or significant discomfort, taking your prescribed pain medication about an hour before bed may help. Also, exercising during the day will help you fall asleep faster and sleep more soundly.
- **Have problems with constipation.** You may use a stool softener or laxative of your choice. Drinking plenty of water and walking, as approved by your doctor, and adding more fruits, vegetables, fiber, and juice in your diet will help move things along.
- **Have mood swings and feel sad on some days.** Your body went through some major changes during surgery. Don't become discouraged. This will get better as your body continues to heal. Talk to your doctor if you experience feelings of anxiety or depression.
- **Have a lump at the top of your incision.** If it is tender and slightly pink or red, this is normal and should disappear with time. Contact your doctor if you notice increased swelling, redness, or pain.
- **Notice an occasional clicking noise or sensation in your chest in the first days after surgery.** This should occur less often with time and go away completely within the first couple of weeks. If it gets worse, call your surgeon.
- **Experience muscle pain or tightness in your chest, shoulders, and upper back between your shoulder blades.** This will improve with time. Your pain medicine also will help relieve this discomfort. If the pain increases, call your surgeon or 911.

Following Discharge

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It may take 4 to 6 weeks before you start feeling better.

Remember to take all medications as prescribed by your doctor. Taking prescribed pain medications an hour before activity will help you be more active and heal faster.

If an artery in your chest called the mammary artery was used during your surgery, you may experience numbness to the left of your incision. This is normal.



If you have steri-strips (tape) on your incision, you may remove any that may not have already fallen off after 1 week.

Follow the exercise program given to you by your physical therapist in the hospital.



Care of Your Incisions

While in the hospital, follow your doctor's instructions. After discharge, most surgeons would agree that it is safe to wash your incisions daily (directly on the incision or over the steri-strips) with mild soap and warm water. Avoid vigorous scrubbing. The steri-strips may even fall off on their own.

You may go home with staples in your leg. The visiting nurse will remove the staples as ordered by your doctor, or they will be removed after your initial visit to the surgeon's office.

Because incisions sunburn easily, be sure to protect them from overexposure to sunlight during the first year after surgery. The scar will become darker if exposed to the sun. Do not apply lotions, creams, oils, or powders to your incisions unless prescribed by your surgeon.

Check your incisions daily. Contact your doctor if you notice any of the following:

- Increased tenderness of the incision
- Increased redness or swelling around the edges of the incision
- Any drainage from the incision line
- A persistent fever

Care of Your Surgical Leg

If your surgery involved taking a bypass graft from your leg, follow these guidelines:

- Care for your leg incisions as described in the Care of Your Incisions (left).
- Avoid crossing your legs because this impairs circulation.
- Avoid sitting in one position or standing for prolonged periods of time.
- Elevate your leg on a stool or coffee table with a pillow under your foot when sitting. You also can lie on a couch and elevate your leg on the arm of the couch or on pillows. Try to elevate your leg above the level of your heart. This makes it easier for the swelling to go down.
- Check your leg daily for swelling. The swelling should decrease when you elevate your leg, but it might recur when you stand. If you continue to have leg swelling or it becomes worse, notify your doctor.
- If compression/support hose was prescribed for you, wear them while you are awake for at least 2 weeks after discharge. The stockings help decrease swelling, especially if you have a leg incision.
- Remove your stockings at bedtime. Wash the stockings with mild soap and water, and dry them on a line.

Medications

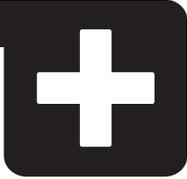
Your doctor will prescribe medications when you are discharged from the hospital. Sometimes these medications will be sent electronically to your pharmacy, or you will receive a paper prescription. It is important to have your insurance cards with you when you pick up your prescriptions at the pharmacy.

Take the medicine exactly as your doctor prescribes. Keep a current list of your medicines, dosages, and times to be taken in your wallet or purse. Do not take other medication, supplements, or herbal preparations without telling your doctor. Additional information about your medications will be provided by your nurse or pharmacist before discharge.

SIDE EFFECTS

It is important to understand that medications can cause side effects. Take them with a small meal, if appropriate. If you have any of the following side effects from medication, you should call your doctor's office:

- Diarrhea, constipation, or stomach pain
- Nausea, vomiting, and upset stomach
- Dizziness or lightheadedness when standing
- Confusion
- Tingling in hands and feet
- Extremely slow or fast pulse
- Skin rash
- Unusual bruising or bleeding



Heart Surgery Discharge

Symptoms

NEEDS IMMEDIATE ATTENTION

Go to the local emergency room or call 911

- Bright red stool
- Chest pain similar to pre-op
- Chills or fever
- Coughing up bright red blood
- Fainting spells
- Heart rate faster than 150 beats/minute with shortness of breath or new irregular heart rate
- New onset of nausea, vomiting, or diarrhea
- Severe abdominal pain
- Shortness of breath not relieved by rest
- Sudden numbness or weakness in arms or leg
- Sudden, severe headache
- Uncontrollable bleeding

URGENT PROBLEMS

Call your doctor

- Acute gout flare-up
- Elevated temperature more than 100.0°F/38.0°C two times within 24 hours
- Extreme fatigue
- Pain or tightness in calf that becomes worse when pointing toe up to head
- Persistent but controllable bleeding or oozing from incisions
- Sharp pain when taking in deep breath
- Skin rash
- Urinary tract infection: frequent urination, burning with urination, urgency with urination, bloody urine
- Weight gain of more than 1-2 pounds within 24 hours
- Worsening ankle swelling or leg pain
- Worsening shortness of breath

Call the clinical nurse specialist/case manager with questions related to:

- Helpful community services or agencies
- Incisional care
- Postoperative recovery
- Discharge instructions
- Home health care
- Surgery
- Draining or reddened wounds
- Management of symptoms

What your doctor/nurse might ask if you call:

- How long have you had these symptoms?
- What medications are you currently taking and when did you last take them?
- When did you have surgery?
- Who was your surgeon?
- Where was your surgery done?
- What was the date of your hospital discharge?
- Does the visiting nurse come to see you?
- What about incisional drainage? What is the drainage color; does it have an odor; how long has it been draining; is the drainage getting better or worse; is the area red and/or swollen?

911



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Activity After Surgery

Stop any activity immediately if you feel short of breath, notice irregular heartbeats, feel faint or dizzy, or have chest pain. Rest until the symptoms subside. If they do not lessen within 20 minutes, notify your doctor.



EXERCISE GUIDELINES

If you experience shortness of breath, dizziness, leg cramping, unusual fatigue, and/or chest pain (angina), stop any exercise immediately. Notify your doctor if these symptoms persist.

If your post-exercise pulse rate is more than 30 beats faster than your resting pulse rate, then you have exercised too hard.

In order to correct these conditions, you will need to modify your next exercise session.

Showers: You can take showers after your pacing wires and staples are out. Avoid soaking in baths until your incisions are healed. Avoid extremely hot water.

Dress: Wear comfortable, loose-fitting clothes that do not put undue pressure on your incisions. If you wear a bra, choose one without underwires and with a front closure.

Rest: You need a balance of rest and exercise during your recovery. Plan to rest between activities and take short naps as necessary. Resting also includes sitting quietly for 20-30 minutes. After meals, rest for 30 minutes before exercising.

Walking: This is one of the best forms of exercise because it increases circulation throughout the body and to the heart muscle. It is important to increase your activity gradually. Walk at your own pace. If you get tired, stop and rest.

Each person progresses at a different rate after heart surgery. Before your discharge, physical therapists will provide you with an individual plan for exercise. It is important to pace your activities throughout the day. Do not try to do too many things at one time. When the outside temperatures are lower than 40°F or above 80°F, walk at indoor shopping malls. In colder weather, wear a scarf or mask around your mouth and nose.

Stairs: Unless your doctor tells you differently, you can climb stairs. Take them at a slow pace. Stop and rest if you tire. When using the handrail, do not pull yourself up with your arms. Use your legs.

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Activity After Surgery

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Sex: You can resume sexual relations when you feel comfortable. For many people, this is about 2-4 weeks after discharge, unless instructed differently by your doctor. Ask your nurse for more detailed information, if needed.

Driving: You can ride as a passenger in a car at any time. Always wear a seat belt. Avoid driving, outdoor bicycling, or motorcycle riding for 6 weeks after surgery. This time period is recommended to allow your breastbone (sternum) to heal. When traveling, be sure to get out of the car every 2 hours and walk around for a few minutes.

Lifting: You should not put too much strain on your sternum while it is healing. Avoid lifting, pushing, or pulling anything heavier than 10 pounds for 6 weeks after surgery. This includes carrying children, groceries, and suitcases, as well as mowing the grass, vacuuming, and moving furniture. Don't hold your breath during any activity, especially when lifting anything or when using the restroom.

Work: Most patients will begin to feel like returning to light work 6-12 weeks after surgery. Check with your surgeon and get cleared before returning to work.

Visitors: Limit your visitors for the first couple of weeks. If you get tired, excuse yourself and lie down. Your visitors will understand.



PULSE ASSESSMENT

Monitoring your pulse rate helps to keep your activities within a safe heart rate range. To take your pulse, place your index and middle fingers on the lower part of your thumb, then slide your fingers down to your wrist. If you do not feel the pulse, try moving your fingers over a little bit in the same area. Once you can feel the pulse, count it for 15 seconds and multiply by four. This will tell you how many times your heart is beating in 1 minute. Your doctor or nurse can help you find your pulse if you have difficulty.



When to Resume Usual Activities

Keep in mind that all of these activities need to be in the 10-pound weight limit or less until 6 weeks after surgery.

FIRST 6 WEEKS

- Light housekeeping (dusting, setting the table, washing dishes, folding clothes)
- Light gardening (potting plants, trimming flowers)
- Needlework
- Reading
- Cooking meals
- Climbing stairs
- Shopping
- Attending sports events, church, movies, and restaurants
- Riding in car as a passenger
- Walking, treadmill, stationary bike
- Shampooing hair
- Playing cards/games



AFTER 6 WEEKS

Continue activities of first 6 weeks, and if you can tolerate more, add:

- Part-time work if your job does not require lifting and returning is approved by your surgeon
- Heavy housework (vacuuming, sweeping, laundry)
- Heavy gardening (mowing lawn, raking leaves)
- Ironing
- Business or recreational travel
- Fishing, boating
- Light aerobics (no weights)
- Walking dog on leash
- Driving a small car or truck

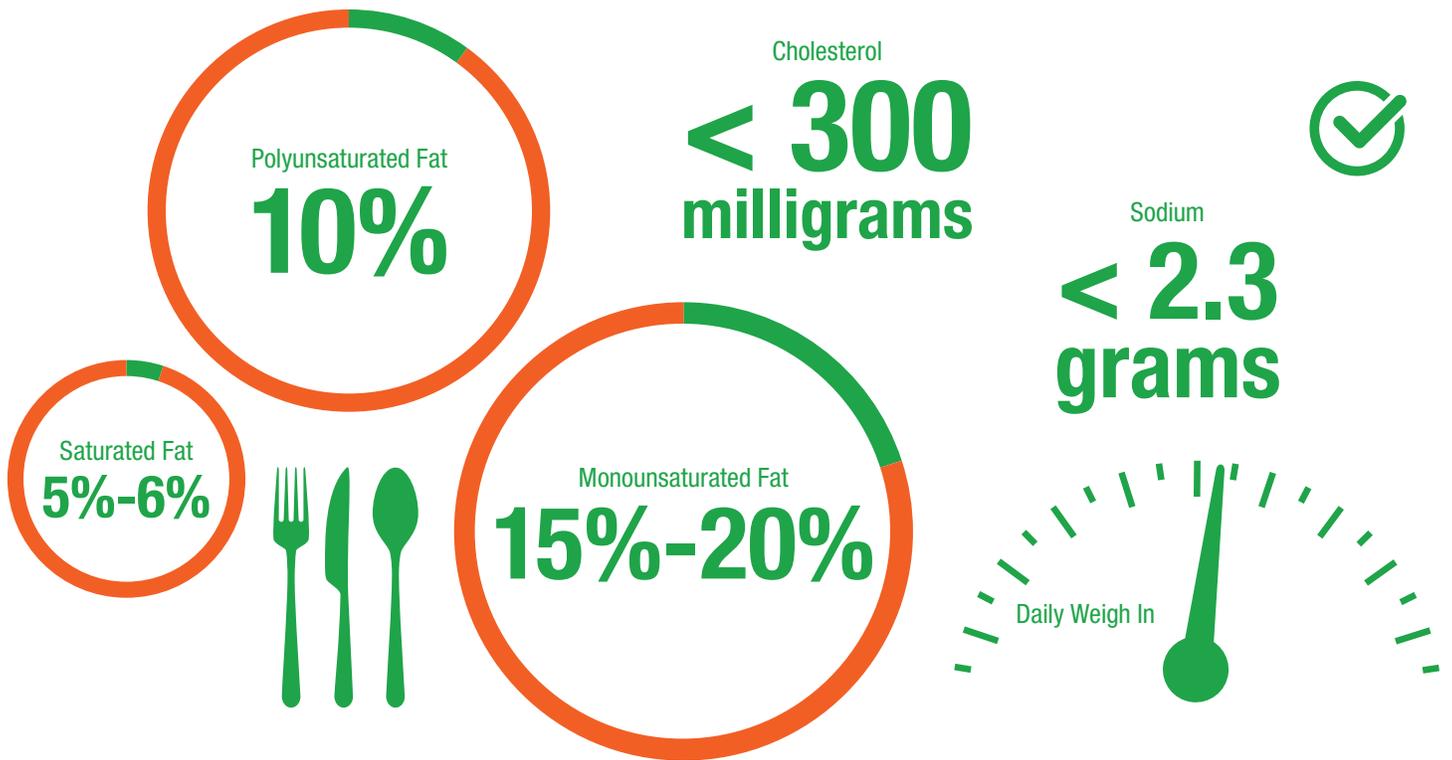


AFTER 3 MONTHS

Continue previous activities, and if you can tolerate more, add:

- Heavy housework (scrubbing floors)
- Heavy gardening (shoveling snow, digging)
- Sports (football, soccer, softball, baseball, tennis, bowling, golfing, swimming, water skiing, skydiving, hunting)
- Jogging, bicycling, weight-lifting, push-ups
- Motorcycle riding





Diet

After discharge, your doctor will recommend that you follow a low-fat diet and that you avoid adding salt when cooking or at the table. This may reduce your risk of a future heart attack and your need for another angioplasty or surgery. You should try to have less than 30% of your calories from fat. It also is recommended that you eat less saturated fat and cholesterol.

The American Heart Association suggests:

- Saturated fat intake should be 5%-6% of calories
- Polyunsaturated fat intake should be up to 10% of calories
- Monounsaturated fat should be approximately 15%-20% of total calories
- Cholesterol intake should be less than 300 milligrams per day
- Sodium intake should be no more than 2,300 milligrams (2.3 grams) per day

Review your medication instructions for any possible dietary interactions. You should begin making changes to your diet when your appetite returns to normal.

DAILY WEIGHT

- Weigh yourself at the same time each morning after you urinate but before you eat breakfast. Use the same scale every day.
- Keep a record of your daily weight.
- Notify your doctor if you gain 2 pounds or more overnight.

Cardiac Rehabilitation

Cardiac rehabilitation is a way for people who have had bypass surgery, valve replacement, transplant, or other heart surgery procedures to get going again. A team of doctors, nurses, exercise physiologists, and nutritionists will help you feel well again by leading you through a rehabilitation program designed to fit your needs. Cardiac rehabilitation includes four phases.

PHASE I begins early after a heart event, while you are still in the hospital. This phase usually includes light supervised exercise such as walking the halls and stair climbing. Additional education is provided by hospital nurses and physical therapists. You should ask the hospital staff about risk factors, diet, medication instruction, sexual activity, exercise, and normal life at home.

PHASE II is the early outpatient phase of cardiac rehabilitation. This phase usually requires a doctor's referral and involves telemetry monitoring. You will start this phase of the program approximately 2-6 weeks after discharge from the hospital. Most programs meet for 1 hour, three or more times per week for 12 weeks. Phase II aims to return you to normal active life.

The goals of Phase II are to:

- Improve functional capacity and endurance
- Provide education of lifestyle changes
- Reduce fear and anxiety about increased activity or exercise
- Assist in making optimal social and psychological adjustments

Education is a major emphasis in the Phase II program and is accomplished through individual or group instruction. *Educational topics include:*

- Medication review
- Lifestyle changes and goal setting
- Nutrition counseling with a registered dietitian
- Stress management
- Safe performance of activities, including sexual activity, vocational, and recreational pursuits

Your spouse or other family members are encouraged to attend the educational sessions with you.

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Cardiac Rehabilitation

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PHASE III is a continuation of the Phase II program. As a general rule, the Phase III program is for participants who were discharged from the hospital 6-14 weeks earlier. A doctor may refer you directly into this program without Phase II participation.

The goals of Phase III are to:

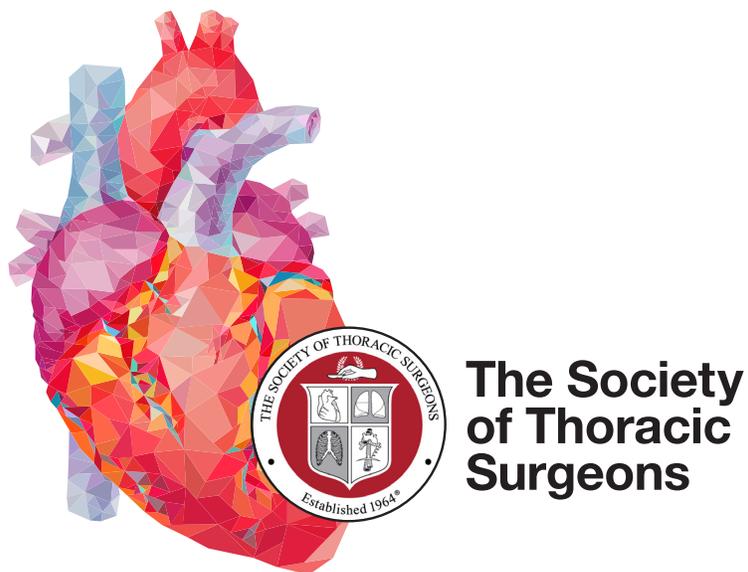
- Provide an ongoing exercise program
- Offer support necessary to make lifestyle changes
- Achieve desired goals such as independent lifestyle or return to work
- Prevent progression of heart disease

The program offers monitoring of heart rhythm and rate, as well as blood pressure before, during, and after exercise. Records of your exercise routines are required. These routines generally occur three or more times per week.



PHASE IV is a wellness program for those who have completed any of the other phases. This program is a means for you to continue making lifestyle changes. You can expect to exercise three or more times per week with minimal staff supervision.





For more information about heart disease and other conditions that cardiothoracic surgeons treat, see **ctsurgerypatients.org**.

If you have questions following your surgery, contact your doctor's office.