

What is Cardiac Rehabilitation?

What does cardiac rehab involve?

Cardiac rehabilitation doesn't change your past, but it can help you improve your heart's future.

Cardiac rehab is a medically supervised program designed to improve your cardiovascular health if you have experienced heart attack, heart failure, angioplasty or heart surgery. Cardiac rehab has three equally important parts:

Exercise counseling and training: Exercise gets your heart pumping and your entire cardiovascular system working. You'll learn how to get your body moving in ways that promote heart health.

Education for heart-healthy living: A key element of cardiac rehab is educating yourself: How can you manage your risk factors? Quit smoking? Make heart-healthy nutrition choices?

Counseling to reduce stress: Stress hurts your heart. This part of cardiac rehab helps you identify and tackle everyday sources of stress.

Cardiac rehab is a team effort

You don't need to face heart disease alone. Cardiac rehab is a team effort.

You'll partner with doctors, nurses, pharmacists – plus family and friends – to take charge of the choices, lifestyle and habits that affect your heart.

Getting started

Here's how to get going and make the most of cardiac rehab:

Ask your doctor if you are eligible.

If you are, register for a cardiac rehab program.

In consultation with your medical team, set goals for your heart health.

Work together to create a cardiac rehab plan.

Take an active role in your care to achieve your goals.

Keep taking your medicines correctly.

Call 911 if you experience new or worsening symptoms.

Understanding Your Heart Condition

Coronary artery disease (CAD), which leads to heart attack, is the most common type of heart condition. Atherosclerosis, the buildup of plaque in the inner walls of the arteries, is a major cause of coronary artery disease. Much of your cardiac rehab treatment plan centers on minimizing or reversing atherosclerosis through lifestyle changes and medicines.

No matter what condition brought you to cardiac rehab, learning how it developed and may progress may help you understand why it's so important to achieve your treatment goals.

How Will I Benefit from Cardiac Rehab?

Recovery is a journey

Following a diagnosis of heart attack or heart failure, or after a procedure such as an angioplasty or heart surgery, participating in cardiac rehab is one of the best things you can do for your heart. Cardiac rehab helps you regain control of your health.

Cardiac rehab doesn't change your past, but it can help you improve your heart's future. Every little step you take toward heart health helps you take the next step, and the step after that. Fair warning: It's not always easy. It's not always fun.

But cardiac rehab is how you can lower your risk of a second cardiac event. It's the path to feeling better than before.

Here are a few ways you will benefit from participating in cardiac rehab. You will:

- Lower your risk of a future cardiac event
- Eat better
- Lose weight
- Return to work
- Engage in daily activities you might have missed

Is cardiac rehab for me?

People of all ages with heart conditions can benefit from a cardiac rehab program.

You may benefit if you have or have experienced a:

- heart attack (myocardial infarction)
- heart condition, such as coronary artery disease (CAD), angina or heart failure
- heart procedure or surgery, including coronary artery bypass graft (CABG) surgery, percutaneous coronary intervention (PCI, including coronary or balloon angioplasty and stenting), valve replacement, a pacemaker or implantable cardioverter defibrillator (ICD)
- Is cardiac rehab covered by insurance?
- Medicare and most other insurers provide reimbursement for cardiac rehab undertaken after most of the conditions outlined above.

Exceptions include cardiac rehab in the wake of procedures to implant a pacemaker or implantable cardioverter defibrillator (ICD). And coverage after heart failure is limited to patients with a heart that has very limited ability to pump out blood. (In medical terms, this is called a "compromised ejection fraction," which affects about half of the

population with heart failure.)

Check with your medical team and insurer to determine if cardiac rehab is covered under your insurance plan.

Getting Physically Active

senior couple dog walking in autumn

People with heart disease need regular physical activity as much as anyone else. Studies show that people who begin to engage in regular physical activity and make other healthy changes after a heart attack live longer and have a better quality of life than those who don't. Without regular physical activity, the body slowly loses its strength and ability to function well.

Physical activity is anything that makes you move your body and burns calories, such as raking leaves, climbing stairs, walking or playing sports. It becomes regular or planned when you organize your activities into a consistent, ongoing program. Besides your regular physical activity program, you can add more physical activity to your day by doing activities such as household chores, playing with children and pets or walking up stairs.

This physical activity program combines exercises that benefit your heart (aerobic exercises) such as walking, jogging, swimming or biking with strength and stretching exercises for overall stamina and flexibility.

Ask your doctor when you can begin a physical activity program. Your doctor can help you find a program suited to your needs and physical condition and may refer you to a formal cardiac rehabilitation program to help you learn to be active safely. You may also need an exercise stress test before you become active again.

Your doctor can tell you what symptoms to watch for during physical activity. If you have any of these symptoms, be sure to follow your health care professional's instructions.

What's the Link Between Physical Activity and Health?

Even with risk factors for heart disease such as high blood pressure, diabetes or high cholesterol, people who enjoy regular physical activity have lower death rates than people who have no risk factors but who aren't physically active. What's more, people with heart disease who are physically fit live longer and have fewer heart attacks than heart patients who aren't physically fit. The facts are clear: Regular physical activity benefits people who have heart disease as well as those who don't.

Regular physical activity helps:

- Lower blood pressure.
- Decrease LDL "bad" cholesterol in your blood.

- Improve blood sugar.
- Reduce feelings of stress.
- Control body weight.
- Improve quality of sleep and reduce the time it takes to fall asleep.
- Improve memory and reduce the risk of dementia and depression.
- Make you feel good about yourself.

What type of physical activity is best?

Any type of physical activity is good if it makes your muscles work more than usual. The heart is a muscle and benefits from a workout just like other muscles in your body.

Physical Activity for Your Heart

Physical activities that involve steady, rhythmic movement of the legs and arms are called "aerobic" exercises and are especially good for the heart. Examples include brisk walking, running, swimming, bicycling and dancing. Regular aerobic exercise conditions the heart to pump blood to the whole body.

Adults with chronic conditions or disabilities should get regular physical activity according to their abilities and should avoid inactivity. Work up to at least 150 minutes (2 hours and 30 minutes) of moderate-intensity aerobic activity or 75 minutes (1 hour and 15 minutes) of vigorous-intensity activity (or an equivalent combination) each week. Preferably, activity should be spread throughout the week. Even greater benefits can be achieved at up to 300 minutes (5 hours) of moderate-intensity aerobic activity or 150 minutes (2 hours and 30 minutes) of vigorous-intensity activity each week.

Talk with a health care professional or physical activity specialist about the types and amounts of aerobic activity appropriate for you.

Physical Activity for Your Other Muscles: Stretching and strengthening activities keep muscles in good working order. Include strength training in your exercise routine at least twice a week.

Muscles lose strength and flexibility as you get older. Common tasks become more difficult, such as bending over to tie shoes, opening a jar, lifting a bag of groceries or even getting out of a chair. When your muscles aren't in good shape, you're more likely to lose your balance and fall. Strengthening exercises can also help boost your metabolism so you get more benefit out of your aerobic activities and lose weight faster.

How to Get Started

Healthy adults generally do not need to consult a health-care provider before becoming physically active. However, if you have a chronic condition, your doctor can help you plan an appropriate physical activity program and may refer you to a formal cardiac

rehabilitation program to help you learn to be active safely. You may also need an exercise stress test before you become active again.

Your doctor can tell you what symptoms to watch for during physical activity and what to do if you have any of these symptoms.

Develop a Physical Activity Plan for You

Work with your doctor on a physical activity plan that works for your needs and abilities. Your doctor will tell you what activities you should avoid and what signs and symptoms to monitor.

To stay healthy and keep doing the things you enjoy, health experts recommend incorporating all three types of physical activities:

- Aerobic exercise to strengthen and keep your heart healthy.
- Strength exercises to keep other muscles of the body in good condition and help your sense of balance.
- Stretching exercises to keep muscles flexible.
- Building Up

If you've recently had a heart attack or other cardiac event or have had heart surgery or a cardiac procedure, it may take a while to reach your physical activity goal. Work with your doctor or cardiac rehabilitation specialist to establish a routine for you. As you feel ready and as your health care team allows, start to increase the amount of physical activity you do. Work up to at least 150 minutes of aerobic physical activities each week, along with stretching and strengthening exercises at least two days per week, or whatever treatment goal your health care team recommends.

Keeping a log of your physical activity can help you monitor your progress and celebrate your successes.

Stretching, Strength and Balance: The Stretching Exercises and Strength and Balance Exercises will help you learn simple activities. You can do these activities at home, work or even when you're on vacation. All you need is a straight-backed, armless chair and two hand weights. Weights can be books, bottles of water or cans of food weighing about one to two pounds. You can work up to heavier weights as you get stronger.

If you had surgery, it's important not to push, pull, twist your body, or lift anything heavier than five pounds for up to six weeks after your procedure. Your doctor will tell you if you should avoid other movements or activities.

You'll repeat each activity six to eight times (repetitions, or "reps"). One group of repetitions is called a set. As your fitness improves, you can increase the number of repetitions. You can also rest a couple of minutes and do another set.

Make sure that you're wearing comfortable, loose-fitting clothing and tennis shoes. Stay hydrated by drinking plenty of water.

Be Safe While Being Active

Ask your doctor when you can begin a physical activity program. Your doctor can help you find a program suited to your needs and physical condition and may refer you to a formal cardiac rehabilitation program to help you learn to be active safely. You may also need an exercise stress test before you become active again.

Warm Up and Cool Down

Before you start and after you finish aerobic or strengthening activities, walk slowly for five to 10 minutes. Warming up, and cooling down allows a gradual increase in heart rate and breathing at the start of your workout, as well as a gradual decrease at the end. After a workout, do some stretching to help improve flexibility.

Monitor Your Intensity

Your health care team will tell you how intense your physical activity should be — probably between a fairly light intensity and a hard intensity. A good rule of thumb is to work hard enough to breathe harder but still be able to carry on a conversation. If you can sing, you may not be working hard enough. You may also need to monitor your heart rate (pulse) and blood pressure.

Watch for Warning Signs: Warning signs that you're working too hard include:

- Angina: a feeling of squeezing, burning, pressure, heaviness or tightness under the breastbone that may spread to your left arm or shoulder, back, throat or jaw.
- Feeling lightheaded, dizzy or confused.
- Feeling extremely tired after physical activity.
- Unusual or extreme shortness of breath.
- Fast or uneven heartbeat.

If your angina lasts for more than a few minutes, or if you also have other symptoms such as nausea and sweating, call 911 or have someone take you to the nearest emergency room. You may be having a heart attack.

Strength and Balance Exercises

If you have medical problems or if you have been inactive and want to exercise vigorously, check with your doctor before beginning a physical activity program. Your doctor can help you find a program suited to your needs and physical condition. If you're at high risk of heart disease, your doctor may conduct an exercise stress test to identify any potential problems.



Arm Raise

Purpose: Strengthen shoulder muscles.

Starting Position: Sit tall with your feet flat on the floor, shoulder-width apart.

Action:

- Hold hand weights (one to two pounds to start) with your arms straight down at your sides and your palms facing inward. Breathe in slowly.

- Slowly breathe out as you raise both arms to the sides until they are parallel to the ground, shoulder height.
- Hold for one second. Then, breathe out as you slowly lower your arms so that they are straight down by your sides again.

Repeat: 6 to 8 times. Rest, then do a second set.



Triceps Extension

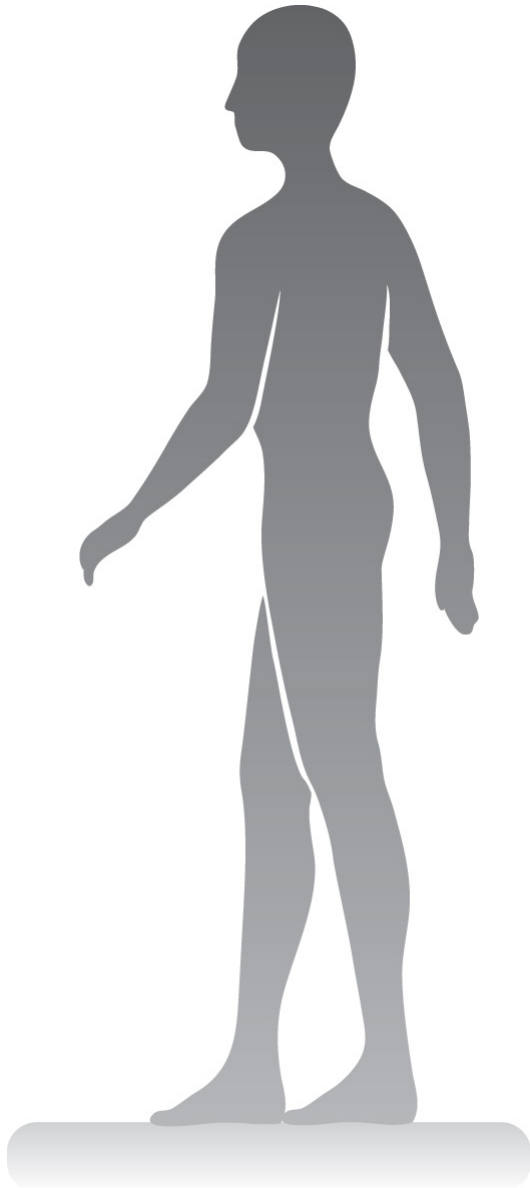
Purpose: Strengthen the triceps muscles (back of the upper arm).

Starting Position: Sit tall with your feet flat on the floor, shoulder-width apart.

Action:

- Hold a hand weight (one to two pounds) in your left hand and raise your left arm up as far as you can. Bend your arm so your elbow is pointing toward the ceiling, with your hand and the weight behind you. Support your left arm by holding it just below the elbow with your right hand.
- Slowly (about three seconds) straighten your left arm so your left hand is reaching toward the ceiling.
- Hold for one second. Then, slowly (about three seconds) bend your elbow to lower the weight behind you. Continue using your right hand to support your left arm throughout the exercise.
- Pause, then straighten and lower your arm again.
- Complete one set, then put the weight in your right hand and work your right arm.

Repeat: 6 to 8 times with each arm. Rest, then do a second set.



Walking Heel-to-Toe

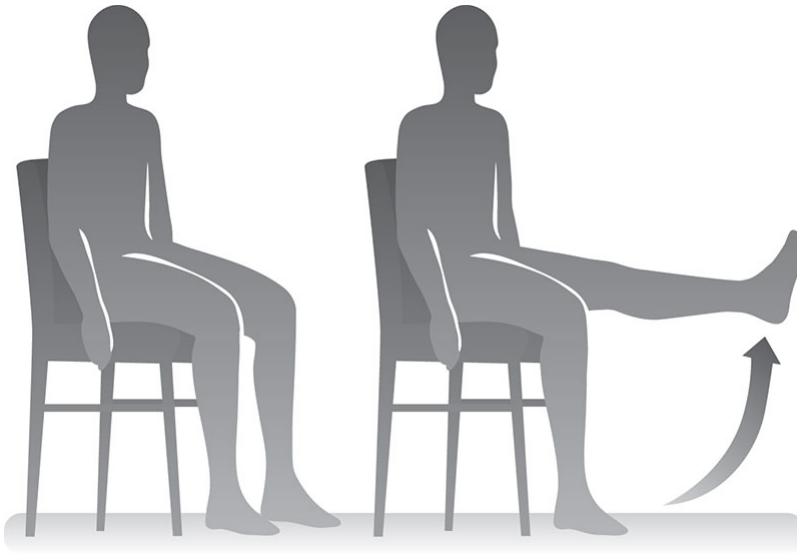
Purpose: Improve balance.

Starting Position: Stand close to a wall for balance.

Action:

- Choose a spot ahead of you and focus on it to keep you steady as you walk.
- Walk by placing the heel of one foot just in front of the toes of the other foot. Your heel and toes should touch or almost touch.

- Repeat for 20 heel-to-toe steps.



Leg Extensions

Purpose: Strengthen the thigh and leg muscles.

Starting Position: Sit tall with your feet flat on floor, shoulder-width apart. You may hold onto the sides of your seat for support.

Action:

- Breathe out and lift one leg off the floor until your knee is straight. Your leg should be slightly lifted off of the chair.
- Flex your foot to point your toes toward the ceiling
- Hold for one second.
- Breathe in and slowly lower your leg back down to the starting position with both feet on the floor.
- Repeat on the other side.

Repeat: 6 to 8 times on each side. Rest, then do a second set.



Side Leg Raise

Purpose: Strengthen hip, thighs and buttocks.

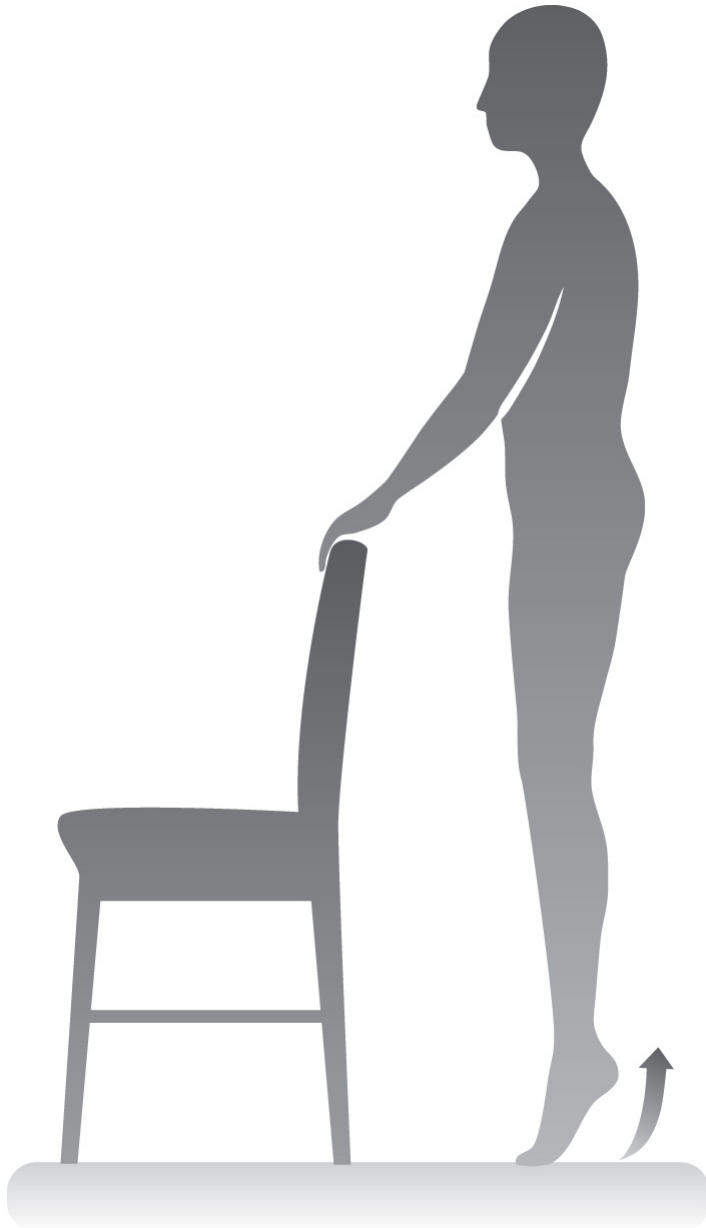
Starting Position: Stand behind a straight-backed chair, with both hands on the back of the chair for balance. Place your feet slightly apart. Breathe in slowly.

Action:

- Breathe out and slowly lift your right leg out to the side until your feet are 12 to 18 inches apart. Keep your back and legs straight, and your toes pointing forward. The leg you are standing on should be slightly bent.

- Hold for one second. Then, slowly lower your leg back to the starting position.

Repeat: 6 to 8 times with each leg. Rest, then do another set.



Plantar Flex

Purpose: Strengthen ankle and calf muscles.

Starting Position: Stand behind a straight-backed chair, with both hands on the back of the chair for balance. Place your feet slightly apart. Keep your upper body straight.

Action:

- Breathe out and slowly lift both heels and stand as high up on tiptoe as you can.
- Hold for one second.
- Breathe in as you slowly lower your heels to the floor.

Repeat: 6 to 8 times; rest a minute, then do another set of 6 to 8.

Note: Work your way up to 15 repetitions per set.



Hamstring Curl

Purpose: Stretch quadriceps muscles on front of thigh. Strengthen hamstring muscles on back of thigh.

Starting position:

Stand behind a straight-backed chair, with both hands on the back of the chair for balance. Place your feet slightly apart. Keep your upper body straight.

Action:

- Shift your weight onto your right leg keeping your leg slightly bent. Slowly bend your left knee, keeping both knees together.
- Breathe in slowly and lift your left foot behind you about 10 to 12 inches off the floor. Bend only at the knee.
- Slowly return to starting position. Repeat.
- Complete one set, then work the other leg.

Repeat: 6 to 8 times with each leg. Rest, then do another set.



Standing on One Foot

Purpose: Improve balance.

Starting Position: Stand close to a wall, chair or table for balance.

Action:

- Shift your weight onto one leg. Stand on that foot and stretch the other leg out in front of you, a few inches off the floor.
- Stand on one leg for eight counts.

- For an extra workout, flex and point your lifted foot. That is, bend the ankle so your toes point away from you, then flex the ankle to bring the toes back towards you. Flex and point eight times.
- Slowly return your leg to the starting position. Repeat with the other leg.
- Repeat 10-15 times with each leg.



Bicep Curl

Purpose: Strengthen upper arm muscles.

Starting Position: Sit tall with your feet flat on the floor, shoulder-width apart.

Action:

- Hold hand weights (one to two pounds to start) with your arms straight down at your sides.

- Hold your hands in the position that's comfortable for you.
- Palms facing forward with your thumbs facing out (as shown).
- Palms facing in toward your body with thumbs facing forward.
- Palms facing out with your thumbs facing back.
- Keeping your elbows close to your sides, slowly bend one arm and lift your hand weight toward your chest. The lift should take about three seconds.
- If your palm is facing forward, lift straight up toward your shoulder, as shown.
- If your palm is facing in, twist your hand so your palm is facing your shoulder as you lift.
- If your palm is facing out, lift to the side instead of the front, toward the outside of your shoulder.
- Keep your wrists straight.
- Hold for one second. Then slowly lower your hand and return to the starting position. Take about three seconds to lower your hand.
- Pause and then repeat with the other arm.

Repeat: 6 to 8 times on each side. Rest, then do a second set.

Stretching and Flexibility Exercises

If you have medical problems or if you have been inactive and want to exercise vigorously, check with your doctor or other health care professional before starting a physical activity program. Your doctor can help you find a program suited to your needs and physical condition. If you're at high risk of heart disease, your doctor may conduct an exercise stress test to identify any potential problems.



Torso Stretch

Purpose: Stretch the midsection (waist).

Starting Position: Sit tall with your feet flat on the floor, shoulder-width apart.

Action:

- Place hands behind your head, as shown, with elbows out to the side. You can also cross your arms over your body or leave them at your sides, whichever is most comfortable.
- Bend your body to one side, bending at the waist. Keep your head facing forward. Hold for 5 seconds.
- Return to starting position. Repeat on the other side.

Repeat: 6 to 8 times on each side. Rest, then do a second set.



Torso Twist

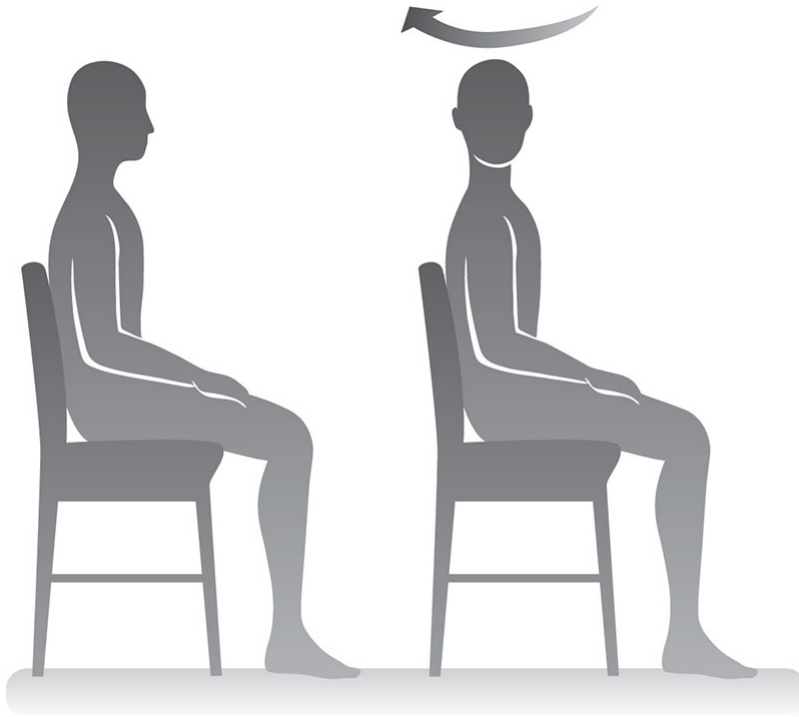
Purpose: Stretch the midsection (waist).

Starting Position: Sit tall with your feet flat on the floor, shoulder-width apart.

Action:

- Place hands behind your head, as shown, with elbows out to the side. You can also cross your arms over your body or leave them at your sides, whichever is most comfortable.
- Slowly twist your body to one side so you face the side wall. Your head should follow your body as you turn. Be sure to twist from your waist without moving your hips.
- Hold the position for 10-30 seconds.
- Slowly return to starting position. Repeat on the other side.

Repeat: 6 to 8 times on each side. Rest, then do a second set.



Neck Stretch

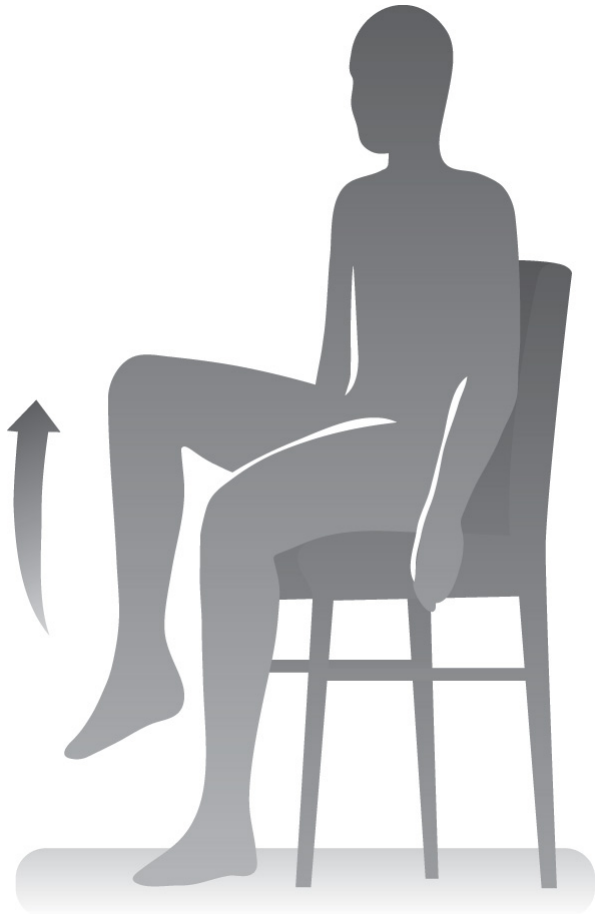
Purpose: Improve neck flexibility

Starting Position: Sit tall, feet flat on the floor, shoulder-width apart.

Action:

- Slowly turn your head to look over your shoulder. Keep your back against the chair and your shoulders facing forward. Hold the position for 10-30 seconds.
- Return to starting position. Repeat on the other side.

Repeat: 6 to 8 times on each side. Rest, then do a second set.



Seated March

Purpose: Increase hip flexibility.

Starting Position: Sit tall with your feet flat on the floor, shoulder-width apart.

Action:

- Raise one knee as high as you comfortably can.
- Return to starting position. Repeat on the other side.

Repeat: March 12 to 16 times (6 to 8 times per leg). Rest, then do a second set.



Quadriceps Stretch

Purpose: Stretch quadriceps muscle (front of thigh) and strengthen hamstring on back of thigh.

Starting position: Stand with your left side to the wall, 12 to 18 inches from the wall. Place your left hand against the wall for balance, keeping that arm slightly bent.

Action:

- Raise your right heel towards your buttocks. Reach back with your right hand and grab your foot at the heel, ankle or sock. If you can't reach your foot, grab your pant leg or just raise your foot as high as you can and still feel comfortable.
- Hold for two to three seconds. Be sure you're standing tall and looking straight ahead. Your knee should be pointing toward the floor and your ankle should be in a straight line with your leg, not twisted to the side.
- Let go of your foot and slowly return to starting position. Then repeat.
- Complete one set, then turn around and hold the wall with your right hand when working your left leg.

Note: Keep your standing leg slightly bent for better balance and to avoid injury. Stand tall and avoid leaning over. If you've had hip or back surgery, talk with your doctor before trying this stretch.

Repeat: 6 to 8 times with each foot. Rest, then do a second set.

Hamstring Stretch



Purpose: Stretch hamstring (back of thigh).

Starting Position: Stand with your left side to the wall, 12 to 18 inches from the wall. Place your left hand against the wall for balance, keeping that arm slightly bent.

Action:

- Place your left heel on the floor in front of you. Lean forward from your hip (not your waist).
- Push your hip back and reach toward your toe with your right hand. Your foot can be pointing up (as shown) or flat on the floor, whichever is more comfortable for you. Make sure to keep your shoulders and back straight as you reach forward.
- Hold for two to three seconds.
- Return to starting position. Then repeat.
- Complete one set and then turn around and work the other leg.

Repeat: 6 to 8 times with each leg. Rest, then do a second set.



Calf Stretch

Purpose: Stretch the calf (lower part of the back of the leg).

Starting position: Stand facing a wall slightly farther than arm's length from the wall, feet shoulder-width apart. Lean against the wall, with both hands on the wall.

Action:

- Bend one leg, and place the foot on the ground in front of you. The other leg extends behind you with the knee slightly bent. Both feet point straight ahead.

- Slowly move your hips forward, keeping your lower back flat. Be sure the heel of your back foot is flat on the floor, and your weight is in your back heel.
- Hold for 10-30 seconds. Then return to starting position.
- Repeat with other leg.
- Continue alternating legs.

Repeat: 3 to 5 times with each leg. Rest, then do a second set.

Common Problems and Solutions for Being Physically Active

Ask your doctor when you can begin a physical activity program. Your doctor can help you find a program suited to your needs and physical condition by providing advice on appropriate types of activities and ways to progress at a safe and steady pace. Your doctor may refer you to a formal cardiac rehabilitation program to help you learn to be physically active safely.

You may also need an exercise stress test before you become active again. Your doctor can tell you what symptoms to watch for during physical activity. If you have any of those symptoms, be sure to follow your health care professional's instructions.

Once your doctor says you can be active, use these tips to get back on track toward your physical activity goals.

Not in the habit of being physically active

Keep your exercise clothes in your car, desk or nightstand where you'll see them and have them handy.

Make a large sign to remind you to be physically active. Put it where you can see it easily, such as on your refrigerator, front door, TV or telephone.

Ask a family member or friend to remind you to be active throughout the week.

Reward for meeting your physical activity goals — treat yourself to a new CD or book, a manicure, a massage or special outing.

Lack of time

- Break up activities into a few short sessions instead of one longer session.
- Watch less TV. Giving up one TV show gives you 30 minutes more in your day.
- Combine physical activities with other things you like to do. For example, meet a friend for a walk instead of for coffee.
- Be physically active during your lunch break (before you eat) at least once or twice a week.

Not feeling well

- As soon as you're well enough to leave the house, set a physical activity plan for the week.
- After you've been sick, start with a light week of activity so you don't get too tired.
- Slowly work your way back to your usual physical activity levels.

Bored with exercise

- Switch between two or three types of aerobic physical activity, such as walking, dancing and tennis.
- Do your stretching, balance and flexibility activities while you watch TV.
- Take a new route when you walk, bike or jog.
- Include a friend or family member so physical activity becomes a social activity, too.
- Try a new activity, like an aerobics class or a rowing machine.

Pain or injury

- Switch to a type of activity that doesn't bother the injured or painful area.

- If it's arthritis pain, try exercising in warm water (such as a pool or Jacuzzi).
- See a doctor for treatment. Ask what types of physical activities you can do.

On the road again...

- Take workout clothes when you travel.
- Use your hotel's health club or pool. If there isn't one, ask if the hotel has guest privileges at a nearby health club.
- Review the Stretching and Flexibility and Strengthening exercises. All of these activities can be done in your hotel room.
- Ask the hotel desk about nearby walking trails and enlist a traveling companion as a walking buddy.

During meeting breaks, walk around while checking and returning messages.