CORE STRENGTH TRAINING – Part 2

Functional Daily Activities

Why is Core Training Important?

Think of your core muscles as the sturdy central link in a chain connecting your upper and lower body. Whether you’re hitting a tennis ball or mopping the floor, the necessary motions either originate in your core, or move through it. The goal of this lecture is to review the core exercises we learned in Part 1 and apply them to everyday activities.

No matter where motion starts, it ripples upward and downward to adjoining links of the chain. Thus, weak or inflexible core muscles can impair how well your arms and legs function. And that saps power from many of the moves you make. A strong core also enhances balance and stability. Thus, it can help prevent falls and injuries during sports or other activities. In fact, a strong, flexible core underpins almost everything you do:

**Everyday acts.** Bending to scoop up a package, carrying groceries, sitting in a chair, or simply standing still — these are just a few of the many mundane actions that rely on your core and that you might not notice until they become difficult or painful. Even basic activities of daily living — getting out of bed, for example — call on your core.

**On-the-job tasks.** Jobs that involve lifting, twisting, and standing all rely on core muscles. But less obvious tasks — like sitting at your desk for hours — engage your core as well. Phone calls, typing, computer use, and similar work can make back muscles surprisingly stiff and sore, particularly if you’re not strong enough to practice good posture and aren’t taking sufficient breaks.
Cardiac Therapy Foundation of the Mid-Peninsula

Core Strength Training – Part 2

GUIDELINES FOR HOME EXERCISE

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Frequency
- 5-7 days per week
- 1-2 sets

Key Aspects:
- Use slow, controlled movements
- Exhale on exertion
- Avoid straining
- Stop training if you have any joint pain during the movement
- Minimize rest between set exercises
- Burning sensation in muscles is normal

Intensity
- Rated Perceived Exertion (RPE) 12-14 (somewhat hard)
- 10-15 repetitions
- Rest 45-60 seconds between each set

Type
- Chair, floor, supine exercises or combination of all three

Time
- Should not interfere with cardiovascular training

Progression
- Increase workload when you can safely perform 15 repetitions with each set.

STOP EXERCISE IMMEDIATELY IF YOU EXPERIENCE ANY PAIN.
Proper Technique for lifting off the floor

You can't always avoid lifting, but there are ways to reduce the amount of pressure placed on the back when you do so. By bending the knees, you keep your spine in a better alignment, and you essentially take away the lever principle forces. Instead of using your back like a crane, you allow your legs to do the work.

1. Take a balanced stance with your feet about a shoulder-width apart. One foot can be behind the object and the other next to it.

2. Squat down to lift the object, but keep your heels off the floor. Get as close to the object as you can.

3. Use your palms (not just your fingers) to get a secure grip on the load. Make sure you'll be able to maintain a hold on the object without switching your grip later.

4. Lift gradually (without jerking) using your leg, abdominal and buttock muscles and keeping the load as close to you as possible. Keep your chin tucked in so as to keep a relatively straight back and neck line.

5. When you put a load down, use these same guidelines in reverse.

Standing Posture

Proper alignment while standing involves keeping your ears, shoulders and hips in a vertical line. If you notice that your shoulders are hunched up and you've been sitting for several hours, get up and move around. Although it can be tempting, you should not try to force your shoulders down or pull your shoulders back. When you notice your shoulders start creeping up toward your ears, consciously relax and mentally release tension from this area.
Carrying groceries is one of the most common activities of daily living. One of the most common ways people carry groceries is with their shoulders hunched forward. This can compromise posture and cause back pain. Please refer to the postural guide above when simply standing but especially when carrying groceries.

- Keep your hips, shoulders and ears in one vertical line.
- Let your hands rest naturally at your sides.
- Avoid hunching forward or leaning back.

Core Exercise Application – Lifting off the floor & Carrying Groceries

Abdominal Squeeze

- Begin by standing with proper posture. (refer to cues above)
- Squeeze your abdominal muscles.
- Hold the squeeze for 5-10 seconds and release.
- Repeat 10 to 15 times.
Glute Squeeze

- Begin by standing with proper posture. (refer to cues above)
- Squeeze the buttocks muscles together.
- Hold the squeeze for 5-10 seconds and release.
- Repeat 10 to 15 times.

Back Bend

- Begin by standing with proper posture. (refer to cues above)
- Place your feet shoulder width apart with a slight bend in your knees.
- Push your hips back behind your heels.
- Bend forward slightly at the waist.
- Rotate your shoulders so your palms are facing down toward the ground.
- Keep your back straight and your torso tall.
- Hold for 5-10 seconds and return to starting position.
- Repeat 10 to 15 times.
Proper Sitting Posture

Good sitting posture at your workstation means your shoulders are relaxed, your feet are flat on the floor, and you can sit up straight to do your work. Guidelines include:

A chair that helps you keep your normal spinal curvature. A supportive chair:

Is adjustable, so that you can set the height to rest your feet flat on the floor. Keep your feet supported on the floor or on a footrest to reduce pressure on your lower back. Some people like to sit in a slightly reclined position because it puts less stress on the back, although this may increase stress on the shoulders and neck when reaching for items.

Supports your lower back.

Has adjustable armrests that allow your elbows to stay close to your sides. If you are not comfortable with arm rests, move them out of your way. It is still important to keep your arms close to your sides even if you choose not to use armrests.

Has a breathable, padded seat.

Rolls on five wheels for easy movement without tipping.

A computer keyboard and keyboard tray that allow comfortable typing or keying.

Your keyboard should be at a height that allows your elbows to be bent about 90 degrees and close to your sides.

Many keyboards and keyboard trays have wrist supports to help keep your wrists in a neutral, almost straight position. But wrist pads are just there for brief rests. They are actually not meant to be used while you are typing. But some people find the pads helpful even when they are using their keyboard or mouse. When you type or use your mouse, try raising your forearms a little so your wrists are in a neutral position and your arms and hands can move freely. If you have arm rests on your chair, you may be able to adjust them so your forearms are parallel to the floor and your wrists are neutral. Your wrist is in a neutral position when the thumb is in line with the forearm and the wrist is bent slightly back, such as when your arm is hanging at your side. You may want to alternate between resting your wrists on the pads and raising them up. If you use a wrist pad, it's best to rest your palm or the heel of your hand on the support, rather than your wrist.

The tilt of the keyboard can be adjusted. Some people find in more comfortable if the keyboard is flat or tilted slightly down at the top. Try different tilt angles to see what is most comfortable for you.
Seated Exercises – Upper Body: Abdominals

Seated Abdominal Knee ups

- Begin by sitting forward in the chair and lean back.
- Grab the sides of the chair with your hands to stabilize your upper body.
- Bend your knees and raise them off the floor toward your chest.
- Only your lower body is moving.
- Keep your spine straight and tall.
- Complete 10-15 repetitions.

Seated Exercises – Lower Body: Low Back, Glutes and Hips

Seated Good Mornings

- Sit toward the front of your chair or bench with legs fairly wide apart to allow you to bend forward unencumbered by your lap.
- Focus on keeping the spine erect and extended even as you bend in other words, do not let your chest collapse toward the thighs.
- Inhale as you bend forward, exhale as you lift back up to the starting position.
- Complete 10-15 repetitions.
Seated Knee Lifts - Alternating

- Begin by sitting forward in the chair and lean back.
- Slowly lift the right knee toward the chest and then return to the starting position.
- Repeat with the left leg.
- Continue alternating on each side.
- Return to original position and repeat for 10-15 repetitions with each leg.

Proper Supine/Getting out of bed position

Many back pains are from improper body mechanics during daily activities. If you currently have back pain, there are several ways of getting in and out of bed to decrease the discomfort while you are healing.
To move from lying on back, bend knees up and roll to your side. Slide legs off edge of bed with knees bent. Push up with your arms, using the legs as a counter weight and sit up. To move from sit to lying down, reverse the procedure. Begin sitting on bed. Lower yourself down to your side, using your arms to help guide and control the movement. Once you are lying on your side, you may slide the legs up onto bed. To roll on your back, keep knees bent and roll onto back.
Bridge

- Lie on your back with your knees bent.
- Keep your back in a neutral position, not arched and not pressed into the floor.
- Avoid tilting your hips.
- Tighten your abdominal muscles.
- Raise your hips off the floor until your hips are aligned with your knees and shoulders.
- Hold for 5-10 seconds.
- Repeat each hold for 10-15 repetitions.

Abdominal Crunch

- Lie on your back and lift your feet so that your knees and hips are bent at 90-degree angles.
- Tighten your abdominal muscles.
- Raise your head and shoulders off the floor.
- To avoid straining your neck, place them behind your head.
- Perform 10-15 repetitions.
Superman – optional

- Lie on your stomach with your arms by your sides.
- You might also use a folded towel to support your head.
- Tighten your abdominal muscles and keep your chin tucked in.
- Lift the head, shoulders, and arms with palms up a few inches off ground.
- Keep your back straight throughout the movement.
- Hold for 5-10 seconds and then repeat for 10-15 repetitions.

Reference