

Exercise for a Healthy Back basic level

Overview

Exercise is a vital part of improving and maintaining normal, comfortable back function. It is important to exercise regularly so you can maintain your fitness level. Regular exercise is important to prevent back pain and injury. A program of strengthening, stretching and aerobic exercises will improve your overall fitness level. Research has shown that people who are physically fit are more resistant to back injuries and pain, and recover quicker when they do have injuries, than those who are less physically fit. In addition, consider maintaining an average weight for your height.

The following exercises are recommended for people who currently are not experiencing back pain. Modifications to this exercise regimen are necessary if you have back pain. Do not continue to perform an exercise that produces pain. Seek the advice of a physician or physical therapist.

What exercises help maintain a healthy back?

Exercises for a healthy back can be divided into three basic groups:

1. *Strengthening*: repeated muscle contractions until the muscle becomes tired.
2. *Stretching or Flexibility*: slow, sustained lengthening of the muscle.
3. *Aerobic*: steady exercise using large muscle groups.

All of these exercises should be performed slowly and comfortably to avoid injury. When performing strengthening and flexibility exercises, remember to breathe naturally and without holding your breath; exhale during exertion and inhale during relaxation.

Strengthening exercises

Strengthening exercises help increase muscle tone and improve the quality of muscles. Muscle strength and endurance provide energy and a feeling of wellness to help you perform daily, routine activities. Adequate strength of abdominal and back muscles helps stabilize the spine, allows proper spinal movement and makes it easier to maintain correct posture. Strong hip and leg muscles are important to perform proper lifting techniques and body mechanics.

Here are some good strengthening exercises:



- **Curl Ups-Upper Abdominal:** While lying down with arms at your sides and knees bent, tilt your pelvis to flatten your back. Raise your shoulders and head until your shoulder blades clear the floor. Hold for 5-10 seconds, and repeat 10 times.



- **Oblique Trunk Raises:** Lie on the floor with your back flat. Raise your head and bring shoulder toward opposite hip, reaching with your hands, as shown. Hold for 5 seconds. Repeat 10 times, and then switch to the other side and repeat 10 times.



- **Prone Trunk Raises:** Lie face down with arms beside your body. Tighten your buttocks and lift your head and shoulders straight up from the floor as high as you can comfortably go. Hold for 5-10 seconds. Repeat 10 times.



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- Prone Alternate Arm/Leg Lift:** Lie on the floor face down with a towel roll under your forehead, stretch arms outward over your head. Place a pillow under your pelvis and abdomen. Keep your right knee straight, and lift your leg 1-2 inches above the floor, along with the left arm, as shown. Hold for 5 seconds. Alternate with the other knee.

Stretching/flexibility exercises

Flexibility is the ability to move your arms and legs through their full range of motion. Stretching will help improve your flexibility. Adequate flexibility of tissues around the spine and pelvis allows full, normal spinal movement, prevents abnormal force on the joints and decreases the possibility of injury. Stretching also prepares muscles for activity; stretching should be done before and after each vigorous workout to prevent muscle strain and soreness and to help avoid injury. When performing flexibility exercises, stretch as far as you can and hold the stretch. Each stretching exercise should be performed slowly, with no sudden jerking or bouncing. Bouncing can injure or strain a muscle or joint.

Here are some good stretching exercises:

- Lying Down Hamstring Stretch:** Lying down with knees bent, raise one leg, and supporting the back of thigh with your hands, attempt to straighten the knee until a comfortable stretch is felt in back of the thigh. Hold for 20-30 seconds, and repeat 2-3 times. Repeat with other leg.
- Double Knee to Chest Stretch:** Lie on the floor with your back relaxed and straight. Pull both knees toward your chest until you feel a stretch in your lower back, do not bounce. Hold for 5 seconds. Repeat 5 times.
- Quadriceps Stretch:** Resting one hand on an object for balance, bend one leg, bringing your foot up behind your thigh, as shown. Grab the top of your foot and pull the foot toward your buttock until a stretch is felt in front of the thigh. Hold for 20-30 seconds. Repeat 2-3 times for each leg.
- Standing Backward Bend:** Stand straight with your hands on your waist. Bend backward, arching your back as far as you comfortably can while keeping your balance. Hold for 5 seconds. Repeat 5 times.

Lying Down
Hamstring Stretch



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Double Knee to
Chest Stretch



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Quadriceps Stretch



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Standing
Backward Bend



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Aerobic exercises

Aerobic exercise provides cardiovascular conditioning; it strengthens the heart and lungs and improves the body's ability to use oxygen. Some other benefits of aerobic exercise include increased energy levels, improved mood, better sleep habits and decreased blood pressure. Aerobic exercise also burns calories and improves your metabolism, helping with weight loss. Some examples of aerobic exercise include:

- Jogging
- Cycling
- Skating
- Rowing
- Swimming
- Walking
- Dancing

In general, to achieve maximum benefits, you should gradually work up to an aerobic session lasting 20 to 60 minutes, 3 or 4 times a week. Please check with your physician or physical therapist before starting any aerobic program. Your exercise routine should consist of a 5-minute warm-up (including stretching exercises) before the aerobic activity and 5 to 10 minutes of a cool down (stretching and slower activity) after the activity. Here are some precautions with aerobic exercise:

1. Jumping rope puts too much pressure on the discs and should be avoided.
2. Running can be done as long as it doesn't increase lower back pain.
3. When walking or running, wear supportive, well-cushioned shoes and walk or run on a level surface.

What about pain during exercise?

Do not ignore pain. If you feel increased pain or pain spreading to the legs, do not continue the activity. If you continue to perform the activity while you are in pain, you may cause unnecessary stress or damage on your joints. Seek the advice of a physician or physical therapist. Fear of pain can cause unnecessary inactivity, so it is important to learn to 'read' your body and know when you need to stop or modify an activity.

Sources & Links

If you have more questions, please contact the Mayfield Spine Institute at 800-325-7787 or 513-221-1100. Additional information is available on the web.

www.spine-health.com
orthoinfo.aaos.org

Glossary

disc (intervertebral disc): a fibrocartilagenous cushion that separate spinal vertebrae. Has two parts, a soft gel-like center called the nucleus and a tough fibrous outer wall called the annulus.

vertebra: (plural vertebrae): one of 33 bones that form the spinal column, they are divided into 7 cervical, 12 thoracic, 5 lumbar, 5 sacral, and 4 coccygeal. Only the top 24 bones are moveable.

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