Safety When Stretching and Strengthening

Before undergoing a stretching and strengthening program, one should be reasonably assured the desired physical activity is safe before participating. The first step to activity clearance is consultation with one’s physician. Upon obtaining clearance, the exerciser should understand his or her personal objectives for exercising. Are the objectives related to overall wellness? To fitness enhancement? To performance? The exerciser should also be aware of his or her physical limitations. If those limitations are unknown, the safest approach is a conservative one.

A safe approach to stretching and stretching includes eliminating movements and activities which may lead to injury. Such examples are known as “contraindicated” exercises. Contraindicated exercises are usually labeled as such because of potential risk to a bodily joint, such as the hip, knee, shoulder or neck. Contraindicated exercises may be damaging to the joint surface, or they may increase injury to the body’s ligaments, muscles or tendons. **Ligaments** are tissues that keep the bone segments of a joint held together. While ligaments have some elastic properties, they are not as flexible as muscles or **tendons**, the tissues that connect a muscle to bone. If ligaments were flexible, they would not effectively hold a joint together. This situation is exemplified in the individual who has repeatedly sprained an ankle. During a sprain, one or more ligaments are over-stretched. The ligament(s) keeping the joint stable may remain somewhat more flexible after the sprain, which may increase the likelihood of future sprains. Below are some examples of exercises

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<th>The <strong>Yoga Plow</strong>, used to stretch the neck, hamstrings, and lower back, and is also used as a preparation for shoulder stand, is known to put inordinate stress on spinal disks and ligaments in the neck region.</th>
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<td>As an alternative for stretching the neck, the individual can from a seated position tilt the head forward toward the chest until a stretching sensation is felt. As an alternative for stretching the hamstrings, the individual can lie on the back, knees bent, and bring one extended leg toward the chest, and then repeat for the other leg. As an alternative for stretching the lower back, the individual can lie down, and hug bent knees to the chest. As an alternative for shoulder stand preparation, the individual can lie near a wall, and support weight by walking legs up the wall.</td>
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The **Hurdler’s Stretch** is generally performed to stretch the hamstrings, the muscles located on the rear of the thigh. Some individuals use the Hurdler’s Stretch to target the quadriceps by lying back from the basic hurdling position. Unfortunately, the Hurdler’s Stretch risks injury to the inside of the knee, the medial collateral ligament. The position may also risk hip injury. Furthermore, if the individual lies back to stretch the quadriceps, the lower back becomes vulnerable to injury.

As an alternative, the individual can tuck the bent leg inward to stretch the hamstrings.

The **Deep Knee Bend** is performed to strengthen the thighs. Unfortunately, the extreme knee flexion generated by a deep knee bend, coupled with the weight of the body being supported by the knees, increases risk for cartilage and ligament damage in those joints.

An alternative would be a squat, where the knees are not flexed so extremely.

**Straight-Legged Toe Touches** are performed to stretch the hamstrings. Obtaining the hands-to-floor position, however, risks injury to the back’s ligaments, spinal disks and sciatic nerve.

Usually, performing hamstring stretches on the floor is preferable to stretching from a standing position. If this is not possible, however, the individual may stretch one leg at a time, by extending one leg forward, foot dorsiflexed, heel on the floor. The stretch is achieved by using the other leg: slowly flex the knee until stretch is
An example of a contraindicated strengthening exercise is the **Leg Lift**. The intent of this exercise is to strengthen the abdominal muscles. The straight leg position, however, allows hip flexors to contract. Doing so can increase the arch in the lower back, risking injury.

An alternative is to perform bent-leg abdominal crunches without anchoring the feet. When sufficient abdominal strength is obtained, “reverse crunches” might be performed in order to target the lower portion of the rectus abdominis muscle.

One good rule of thumb is to allow a joint to move in a manner that suits its function. The knee, for example, can flex and extend. Lateral motion is not a natural function, which is why the Hurdler’s Stretch should be avoided.

Generally, contraindicated exercises are to be avoided when pursuing a fitness program. There are, however, occasions—such as in dance, yoga, or a particular sport—when performing what would normally be labeled unsafe exercise is required. This might be because a specific skill, such as flexibility around the hip joint, might be necessary in order to successfully execute a particular movement. In such a case, the person should undergo specific training to develop any necessary flexibility and strength before performing the movement.