

November 2008

Weight Training for Adolescent Girls: Is It Safe?



An important part of strength training, weight lifting provides many health benefits, along with increased strength and endurance in athletics. Because girls produce much less testosterone than boys during puberty, your daughter's muscles will enlarge a little, but most of her increased strength will come from training more nerve cells to fire when a muscle contracts, thus making the contractions more efficient.

The age when children can safely begin a weight-training regimen has been controversial, but such exercises can be safe and effective if proper training techniques and safety precautions are followed. Parents should also consider the child's stage of physical development. Because skeletally immature bodies cannot handle the stress of strength-training exercises, younger children may experience more frequent injuries to the wrist and spine.

Any good strength-training program for adolescents should

- **require a medical exam before training starts;**
- **be supervised by a qualified professional** since most accidents happen when using home equipment or in an unsupervised setting;
- **teach proper lifting techniques using low resistance and require that they be mastered before allowing significant weight to be added;**
- **emphasize a total workout of core and extremity muscle exercises;**
- **avoid explosive and rapid lifting exercises;** and
- **include a 10- to 15-minute warm-up and cool-down component.**

Furthermore, the American Academy of Pediatrics specifically recommends that young people avoid competitive weight lifting, power lifting and bodybuilding until they have reached their full adult height and skeletal maturity.

Before your daughter begins a weight-training program, we can instruct her in the proper form and technique. Such "basic training" will help prevent injuries, encourage safe and appropriate athletic development, and produce a better performing athlete in the long run.

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Knee Taping for Pain Relief



Kneecap, or patella, pain is common, whether a person is athletic or sedentary. Although there are many causes of this condition, an important treatment is **knee taping**, also called “McConnell taping” after Jenny McConnell, an Australian physical therapist who found that the procedure improved kneecap alignment while reducing pain.

Abnormal alignment may indicate that tight tissues on the outside of the thigh are pulling the kneecap toward the outside of the knee, in which case taping may help to realign the kneecap and prevent the pain that occurs during movement and exercise. Knee taping does not just relieve pain, but it also

- **offers immediate relief;**
- **can easily be taught to the patient;** and
- **facilitates more efficient exercise.**

Before knee taping, we first perform “tracking,” which involves your bending and straightening the knee while we assess the patella’s position and function. To observe your pain response, you may also be asked to squat or walk. A white protective tape is applied first to the knee to ensure a strong surface, followed by an adhesive brown tape. Skin irritation that may result from the tape application can be treated easily with a topical hydrocortisone cream.

Typically, the kneecap is taped each day for a period of 2 weeks. Then, taping is done every other day or only for sports and exercise activities. In this way, **taping provides pain relief but prevents patient reliance on the technique.**

While taping does have many benefits, it is a temporary solution to prevent knee pain and stabilize the kneecap. Taping must be used with exercises we can design that strengthen the muscles and tendons that stabilize the knee. This multifaceted approach will ensure that you regain maximum mobility, along with successful pain relief.

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Pain at the Mall



As the outside temperatures drop, people contemplating undertaking an exercise program often consider walking at the mall. Benefits include a controlled climate, an absence of traffic, security and easily available restrooms and water. However, starting a new walking program can sometimes bring on **shin splints**, pain at the front of the lower leg.

Mall walkers are most likely to develop shin pain from

- **improperly warmed up and stretched shin muscles;**
- **walking on concrete or a hard mall floor;**
- **shoes that provide poor support, are poorly designed for walking or are worn out;**
- **weak ankle and calf muscles;** or
- **workouts that increase too quickly in length, intensity or frequency.**

Beginning as a dull ache in the middle of the lower leg, shin pain often disappears after a few minutes of exercise and can be relieved by rest, icing, reducing the amount and intensity of walking and alternating walking with other types of exercise. However, it will often return unless the underlying cause is corrected.

To warm up your shin muscles, walk for 5 minutes at an easy pace before stretching your calf muscles and shin muscles (hold stretches for at least 30 seconds and repeat). For the final 5 to 10 minutes of your walk, slow down to an easy pace and then repeat the stretches you performed after your warm-up. Wear shoes with flexible soles and rounded heels to absorb the shock of your feet hitting the hard mall floor and thick socks to provide cushioning. A gel insert can absorb and spread stress. Get rid of tired shoes whose soles are worn unevenly or that no longer fit well. People with high arches, whose feet roll inward (pronate), or who have gait abnormalities may need arch supports or orthotics.

If you suffer from shin splints, we can design an appropriate set of exercises to stretch and strengthen the leg and ankle muscles so shin pain will no longer interfere with your walking program. We can also evaluate your posture and alignment and help you choose appropriate footwear. After discussing your schedule and training conditions, we can make recommendations to help you avoid overuse problems.

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Regaining Normal Rotator Cuff Function After Surgery



Surgery to repair a torn rotator cuff is often a last-resort treatment, one that requires extensive rehabilitation to return your shoulder to full range of motion without pain. For most people, full recovery will take from 4 to 6 months, depending upon the reason for the surgery, the type of surgery and the patient's level of activity.

No two people are exactly alike, and neither are two recoveries from rotator cuff surgery.

For one thing, a rotator cuff tear is more common in the older population. The muscles and tendons of the shoulder lose their elasticity and are often damaged performing repetitive daily activities. In addition, the reason one person needs rotator cuff surgery may be completely different from the reason another needs it. Athletes, especially those participating in repetitive overhead sports, such as baseball, football, tennis, squash or lacrosse, often incur rotator cuff injuries. While less common than repetitive use injuries, trauma, often the result of falling on an outstretched hand, can also tear the rotator cuff tendons, necessitating surgery.

The type of surgery performed, along with the patient's general health, will have a dramatic impact on the length of recovery. If an active, healthy athlete with good muscle tone (and high-quality tissues) has a **minimally invasive repair** for a small tear caused by a one-time sports injury, recovery time could be 3 to 6 months. Alternatively, if the rotator cuff problem is degenerative in nature, due to years of overuse and strain, the resulting large, complex tear might necessitate an **open repair**, which involves far more extensive surgery. If so, the recovery period could be much longer, perhaps even up to a year. Scar tissue, smoking, poor nutrition or other health issues can also slow down recovery progress.

Physical therapy plays an important role in recovery from rotator cuff surgery. We can develop an individualized physical therapy program, instruct you how to perform the exercises and advance them at a comfortable rate to help you regain your shoulder's range of motion and reduce your pain.

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Rehabilitation After Multiple Fractures to the Pelvis



Pelvic fractures are complicated by nature. The pelvis is actually made up of three “rings” of bone: one major, large ring and two smaller rings. While a mild fracture of the pelvis can heal on its own, more serious fractures like those sustained in automobile accidents often require surgery and intensive physical therapy rehabilitation.

Because the bones of the pelvis help support the weight of your upper body and protect important abdominal organs like the intestines and bladder, as well as major nerves and blood vessels, it is especially important that the bones be properly aligned. If your injury required surgery, after a period of rest you will most likely be referred to us for rehabilitation.

The **major goal** of pelvic fracture rehabilitation **is to get you back to your pre-injury level of function.** It can be a slow process at the beginning, with an individually designed physical therapy program involving a gradual progression of weight-bearing and strengthening exercises. After about 8 weeks of weight-bearing work, exercises will focus on enhancing strength and flexibility, with the addition of a stationary bike or treadmill to your routine.

The difficulty of the rehabilitation will depend on the nature of your injury and your general health, but be aware that the complex structure of the pelvis can make this a complicated and often arduous process, taking anywhere from 6 months to 1 year. Be patient: **Proper alignment of the pelvic bones during healing is vital to your successful recovery, as is restoration of strength and flexibility.**