



## **Plancher Orthopaedics & Sports Medicine**

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### **THE DO'S AND DON'TS OF WEIGHT TRAINING**

Incorrect technique in a weight room is one of the main factors contributing to injuries. Weight training can improve strength, increase muscle tone, help lose fat and gain muscle mass while also improving bone density. If done incorrectly, weight training will NOT give you these benefits; it can instead lead to serious injury.

Common weight training injuries for both males and females:

1. Sprains - an injury to ligaments that is caused by being stretched beyond their normal capacity and possibly torn. (Ligaments are tough, fibrous tissues that connect bone to bone across the joints.)
2. Strains - an injury to a muscle in which the muscle fibers tear as a result of over stretching.
3. Tendonitis – inflammation of a tendon. (Tendon - tough band of fibrous connective tissue that usually connects muscle to bone.)
4. Fractures (Stress induced fractures most common)
5. Dislocations/Subluxation - occurs when bones in a joint become displaced or misaligned. It is often caused by a sudden impact to the joint. The ligaments always become damaged as a result of a dislocation. A subluxation is a partial dislocation.

Common Chronic (long-term) injuries sustained over time from improper weight training technique:

1. Rotator Cuff Damage
2. Knee Injury
3. Muscle Overload
4. Bone Stress Injuries
5. Nerve Damage

It is important to know the “Do’s and Don’ts” of weight training before starting an exercise regimen. Below is a quick run through of the basics to avoid injury in a gym.

Activities to avoid when Weight Training:

1. Long Lever Arms - Always keep elbows bent to 30 degrees minimum up to 90 degrees of elbow flexion (depending on exercise) when doing any type of movement (i.e. side raises for medial deltoid muscle; front raises for anterior (Front) deltoids). Never keep arms straight. Keeping arms completely straight puts a huge amount of stress and force to the shoulder joint and can cause injury to the soft tissue and rotator cuff muscles of the shoulder.



Wrong



Right

2. Military Press/Behind the Head Motions = A BIG NO, NO!!! When doing any type of overhead movement, ALWAYS KEEP YOUR HANDS IN YOUR PERIPHERAL VISION!!! If you cannot see your hands in your periphery, you are causing your shoulder joint to sublux (move) forward and can cause injury to the soft tissue of the shoulder joint which maintains the stability of the shoulder joint.



Wrong



Right

3. Deep Knee Bends - A deep knee bend, where hips are dropped below knee level, will place strain on the ligaments and cartilage in the knee. This can cause chronic degenerative problems in the knee.



Wrong



Right

4. Bouncing - All movements should be performed slowly in a controlled manner. Using quick jerking motions can cause injury to muscles, tendons and ligaments.

5. Locking or Hyperextending – Locking of the knees and elbows can overstress these joints and cause injury. No matter what type of standing exercise you do, ALWAYS have a slight bend in your knees.
6. Arching Lower Back or Neck – Hyperextension of the back or neck can damage the spine or cause back injury.



All Wrong Positions

Proper technique is essential for weight-training. When starting a strength training program, use the following guidelines to stay safe and injury-free.

- Find an instructor who can help you learn how to do the exercises correctly using the proper form. For kids, a high school coach or athletic trainer can help. For adults, take advantage of the orientation session that most gyms offer when you join or hire a personal trainer until you feel you can perform the moves safely.
- Warm up and cool down for each session. The warm-up should include stretching and a short cardiovascular workout to warm the muscles. Stretching is also important during the cool-down.
- When starting a new workout, use a small amount of weight at first and set a goal to achieve a minimum of eight to twelve repetitions. Use only an amount of weight that you can lift while still maintaining proper form. Once you build strength, you can progress in both the amount of weight and the number of reps. Don't continue to lift if you feel pain.
- Wear the appropriate foot wear. Ensure that your shoes have good traction to prevent slipping.
- Remember to breathe. Some people have a tendency to hold their breath while lifting a heavy load. Failure to breathe properly may cause increases in blood pressure that could be harmful. It is recommended to exhale through the mouth as you lift.
- Get plenty of rest between workouts. It is recommended to give each muscle at least one to two days rest between sessions to allow for recovery, healing, and building.
- Do not use Performance Enhancing Drugs, "Steroids"; they will hurt your body and can even lead to death.