

STRENGTH TRAINING AND WEIGHT ROOM INJURIES

Is it safe for kids to engage in strength training?

Strength training is perfectly safe in kids, as long as it is done correctly. The key to doing it right is to remember strength, or resistance, training \neq weight lifting. Weight lifting is often viewed as maxing out, or lifting as much as the body can tolerate. Lifting like this is not safe in kids. This is because their bones are still growing, which means that they have open growth plates. Many muscles attach around these growth plates and exerting a lot of force on them could cause them to break. Once done growing, these growth plates close and the risk of fracture decreases.

There are many benefits to strength training in kids. These include:

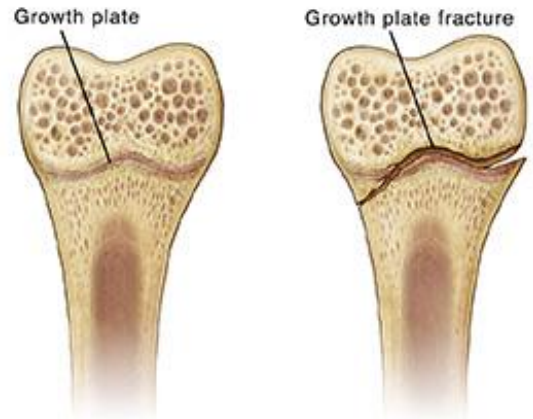
- Increased muscular strength and power
- Improved overall fitness
- Reduced risk of minor injuries
- Improved athletic performance

The maturity level of the individual child should also be taken into account. Kids who lack the maturity to avoid playing on equipment that they are not ready to use or accepting a challenge from a peer when they are not strong enough to complete it safely should not be allowed to participate in strength training until they are a bit older.

What is an Ideal strength training program for young athletes?



Strength training should always be carefully monitored by someone who has been trained to recognize proper technique. This is very important to reduce the risk of injury. The best approach is to start with lighter weights for safety and best results. For example, once proper form can be maintained, start with lifting the weight 12-15 times. This can be repeated 2-3 times. The correct terminology for this amount would be 2-3 sets of 12-15 reps. Avoid the reverse of this, which is lifting heavy weight for only a few sets/reps. This puts extreme pressure on those open growth plates. The amount of weight and repetitions can be adjusted as necessary later on.



An ideal weight lifting program for adolescents and teens should include:

2-3 sets

- Light weight (5-8 lb)
- Increase weight in 5lb increments each time you are able to complete these corresponding sets and reps

More repetitions (12-15)

Warm Up and Cool Down

It is also important to include a good warm up and cool down. Cold muscles are more likely to get injured, and soreness tends to set in worse when an athlete does not cool down properly.

Sample warm up:

- Start with 5-10 min of cardio to increase blood flow to muscles
- Perform dynamic warmup (moving stretches) like high knees or butt kickers, carioca, jumping jacks, etc. Add agility type activities to prepare for sports specific movement.

Sample cool down:

- Repeat light jog or walking for 3-5 min
- Slow 30 sec stretches for legs, arms and low back.

What is the best duration of strength training?

Make sure to let the body rest in between sessions. That means allowing at least one full day between exercising one particular muscle group (example, don't lift arms on back to back days). Keep in mind that two or three days of lifting in a week are plenty.

What are some common weight room Injuries?

The most common injuries to kids participating in weight training include:

- Growth Plate fractures
- Herniated discs in the spine
- Muscle strains and tears

Herniated disks can occur in weight lifting when the person completes the lift using improper form. Incorrect form changes the biomechanics and how the forces are distributed during the lift, which will in turn cause injury to the discs. Muscle strains and tears generally occur when the young athlete is attempting to lift more weight than they are ready for or using improper form.

Thankfully, most, if not all, weight room injuries in adolescents and teens are preventable. The single best tactic to preventing these injuries is to always utilize the expertise of a trained strength and conditioning coach. This person should be able to help guide them through a lifting program, ensure proper form and technique, and monitor the them to ensure they are not lifting heavier weight than their body can handle.

For more information visit:

Cleveland Clinic

<https://health.clevelandclinic.org/cardio-vs-resistance-training-which-is-healthier/>

Mayo Clinic

www.mayoclinic.org/healthy-lifestyle/tween-and-teen-health/in-depth/strength-training/art-200477588

American Academy of Pediatrics

<https://www.healthychildren.org/English/healthy-living/fitness/Pages/Weight-Training-Risk-of-Injury.aspx>

Consult your primary care physician for more serious injuries that do not respond to basic first aid. As an added resource, the staff at **Children's Sports Medicine** is available to diagnose and treat sports-related injuries for youth and adolescent athletes. To make an appointment, call **402-955-PLAY (7529)**.