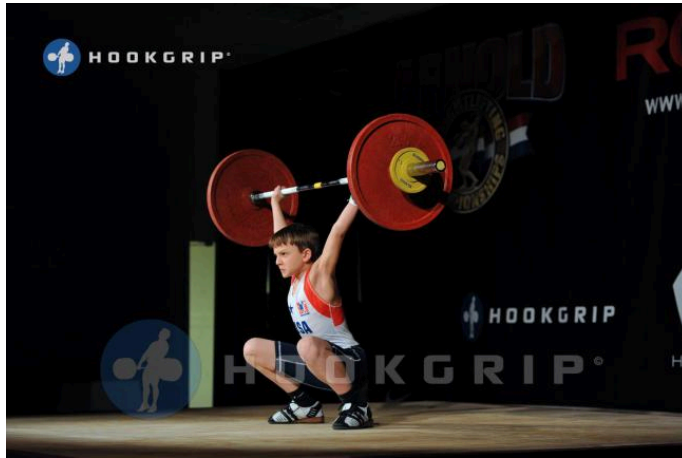


When Can My Child Start Lifting Weights?

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In recent years there has been a growing number of children participating in weight training programs. However, the subject of young athletes lifting weights is still controversial. As a parent or coach it is easy to become overwhelmed with the number of opinions circulating on the topic.

The media today often condemns the use of barbell training for young children. There are some that claim lifting weights at a young age will lead to stunted growth, fractured growth plates and limit athletic potential. Still others believe barbell training can be safe for a child as long as technique is stressed. As a parent or coach, whom should you believe? Is weight training for young athletes really

as harmful as many have made it out to be?

Injury Risk

When you look at the statistics, there is actually a very low risk of injury to children who participate in weight training. This is often attributed to good coaching and qualified supervision. It may surprise you that the injury rates for young athletes participating in the sports of weightlifting and powerlifting are considerably lower than those of rugby, soccer and football (1,3).

For example, one research study followed a group of competitive weightlifters (11-14 years old) over an entire year of training and competing. After a full year, there was not a single injury found that limited training or required professional medical attention (2). It was even safe for young athletes to find their 1 repetition maximum (1RM) without fear of injury (provided proper technique and supervision) (4,5,6). The force an athlete sustains when performing a maximal strength test (such as a 1 RM squat) is actually less than what they would be exposed to on a daily basis in most other sports (1).

Many injuries sustained by children while weight training come down to one factor: poor adult supervision. When unsupervised the chances of a young athlete attempting to lift with poor technique or with too much weight dramatically rises. It also increases the chances of 'horseplay' in the weight room. For this reason, the most common injury to children in the weight room is actually dropping weights on their own hands and feet (7).



Growth Plate Injuries



One of the most common concerns associated with children lifting weights is the potential for injury to the growth plates of their bones. At a young age the bones are still growing and are vulnerable to injury. Maturing bones can be 2-5 times weaker than the surrounding tissues (8). For this reason, a traumatic force that causes a ligamentous injury to an adult will often cause a fracture at the growth plate in a child.

Barbell training, however, is not one of the leading causes of growth plate injuries to children. The leading causes include American football, followed closely by

baseball, gymnastics and hockey (9). In fact, not a single study has reported an injury to the growth plate of a child when proper supervision and technique instruction are provided (1).

The only incidences of growth plate injuries when weight training can be attributed to either poor supervision, improper lifting technique and For example, a 1986 article Sports Medicine reported on a growth plate fracture to his while improperly lifting a unsupervised in his parent's



poorly chosen training loads. from the British Journal of 13 year-old boy who sustained wrist. The injury occurred weight overhead while house (10).

Many are also still under the at a young age will stunt a has never been any scientific training is harmful to the normal growth and development process (11). Your child can in fact perform barbell squats without fear of stunted growth!

impression that lifting weights child's growth. However, there evidence that youth weight

The Benefit of Youth Weight Training

Most children will eventually be introduced to weight training as a part of their preparation for sport competition. For many this introduction doesn't come until they get to high school. This is often the first time these kids will be taught traditional barbell training (the squat, deadlift, bench press, etc). If they are lucky, some athletes will even be taught the weightlifting movements of the snatch and clean & jerk.



There are many benefits associated with weight training at a young age including the promotion of normal bone formation and growth. In fact youth weightlifters commonly display higher than average bone density than other athletes (12).

Weight training can help young athletes develop strength. In 2007 researchers followed middle school students during an afterschool weight-training program. After 9 weeks of training the barbell squat (along with other traditional lifts) considerable improvements in strength were shown without any report of injury (13).

In 2001 another group of researchers followed 30 young boys (ages 9-10) as they participated in a structured weight lifting program at their school. In this study, the entire first month was solely dedicated to teaching proper technique. Many of the children were restricted to only using a broomstick at first! (5). After two years the researchers compared their results to children of the same age that participated only in gym class. Those in the weight-training program were able to gain significant strength compared to the control group (gym class only) without any reports of serious injury. (5)

Lifting weights at a young age may even help reduce injury occurrence in other sports (14). Youth athletes who lift weights are less likely to sustain an injury in their chosen sport. These athletes also recover from injuries faster when compared to teammates who don't lift weights (15).

Many notable medical minds and communities still demonize weight training for young athletes and exaggerate possible injuries. Luckily, we are starting to see a shift in recent years towards allowing our youth to lift weights. The following medical associations have accepted weight training for children as a safe and effective mode of exercise:

- National Strength and Conditioning Association (NSCA)
- American Academy of Family Physicians (AAFP)
- American Academy of Orthopaedic Surgeons (AAOS)
- American College of Sports Medicine (ACSM)
- American Medical Society for Sports Medicine (AMSSM)
- American Orthopaedic Society for Sports Medicine (AOSSM)
- American Osteopathic Academy of Sports Medicine (AOASM)
- American Academy of Pediatricians (AAP)
- The President's Council on Physical Fitness and Sports

If you are a parent or coach of a young athlete and considering a weight-training program, ask yourself the following questions:

- Is your athlete mature enough to accept coaching instructions?
- Does the training program emphasize lifting technique and not the amount of weight lifted?
- Is there a qualified coach to supervise the young athlete?
- Does the coach understand how to monitor the training program and vary the intensity of lifting to avoid overtraining?

If you can answer yes to all of these questions, a weight-training program can be implemented with your young athlete regardless of age.

Take Away

Weight training, including the use of barbell squats, is safe for children of all ages to perform as long as they are adequately supervised and coached. Or course, consult the child's primary physician before starting any new physical training programs.

Until next time,



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