Strength training for children and adolescents

A reader asked me to write a short post on how and whether strength training for children and adolescents is safe and beneficial.

In the old days it was thought that younger people shouldn’t lift weights, as it could have an unknown effect on growth and development. This idea seems to have gone by the wayside, and many experts now recommend weightlifting for young people.

Safety of weightlifting for children

A 2006 review in the Clinical Journal of Sport Medicine looked at 22 different studies of weight training in young people, both pre- and post-puberty.\(^{[1]}\) Specifically, the review was interested in whether growth or maturation were affected. It concluded:

> Experimental training protocols with weights and resistance machines and with supervision and low instructor/participant ratios are relatively safe and do not negatively impact growth and maturation of pre- and early-pubertal youth.

Injury rates were very low. Noteworthy is that all of the studies I’ve seen in this area, including the present one, emphasize that weight training in youth should be \textit{supervised}. That also means instruction. It’s much easier to get injured in a weight room when you don’t know what you’re doing; children, having less cognizance of injuries, even more so.
Another study looked at the feasibility and safety of weight training in obese pre-adolescents.\(^2\) It concluded:

A resistance-training program may be included safely in a multidisciplinary weight management program for obese preadolescent male and female children.

Unfortunately, this study had a high dropout rate, with only 35% of the children completing a one-year program. However, they did lose fat, but there was no change in lean mass. This could be expected due to lack of androgens and, I’m guessing, lower exercise intensity.

A number of sports and exercise scientist groups have published position papers on weightlifting for young people. For example, the Canadian Society for Exercise Physiology\(^3\):

Many position stands and review papers have refuted the myths associated with resistance training (RT) in children and adolescents. With proper training methods, RT for children and adolescents can be relatively safe and improve overall health...

**There is no minimum age for RT for children.** However, the training and instruction must be appropriate for children and adolescents, involving a proper warm-up, cool-down, and appropriate choice of exercises... These exercises can include more advanced movements such as Olympic-style lifting, plyometrics, and balance training, which can enhance strength, power, co-ordination, and balance...In conclusion, an RT program that is within a child’s or adolescent’s capacity and involves gradual progression under qualified instruction and supervision with appropriately sized equipment can involve more advanced or intense RT exercises, which can lead to functional (i.e., muscular strength, endurance, power, balance, and co-ordination) and health benefits.

Under proper supervision, a weightlifting program can improve the health of children and appears to have no detrimental side effects on growth and maturity.

As for adolescents, the same strictures apply: instruction and supervision. Teenage boys, however, may be much more interested in building lots of muscle, which is fine. Many will also be interested in fat loss.

**Weightlifting, teenage boys, and masculinity**

Improvement of self-image, better self-confidence and health, and induction into manhood are all important goals of a weightlifting program for teenage boys.

In my book *Muscle Up*, I quoted the musician Henry Rollins, formerly of the band Black Flag, on how weightlifting changed him as a teenager. He describes...
his youth as being full of fear and humiliation; teachers called him “garbage can” and predicted he would never amount to anything. He was a self-described “spaz”. “I hated myself all the time.”

Until a hardcore but kindly Vietnam vet teacher talked him into taking up weightlifting. It transformed him.(4)

It wasn’t until my late twenties that I learned that by working out I had given myself a great gift. I learned that nothing good comes without work and a certain amount of pain. When I finish a set that leaves me shaking, I know more about myself. When something gets bad, I know it can’t be as bad as that workout.

I used to fight the pain, but recently this became clear to me: pain is not my enemy; it is my call to greatness…

I have never met a truly strong person who didn’t have self-respect… Strength reveals itself through character. It is the difference between bouncers who get off strong-arming people and Mr.Pepperman.

Unfortunately, there’s a movement afoot among feminists and the more left-wing elements of society that degrades what they call “toxic masculinity”, that is, anyone acting like or wanting to be a normal man. This includes hitting the gym and developing muscle mass.

Evidently, the skinny hipster who doesn’t care about his body, who has low self-esteem and no drive for achievement, is the ideal of today’s social movers and shakers.

My advice for teenage boys and young men is to run away from those delusions as fast as possible.

Lifting weights teaches you self-discipline like nothing else. To make progress, you need to lift regularly, and there will be many times that you don’t want to go: you want to sleep in, are feeling tired, or your friends want to do something else.

By making yourself hit the gym, you’ll be teaching yourself a valuable lesson in self-discipline that will serve you well your entire life.

And as the muscle take shape, as you get stronger, and as you lose body fat if that’s what you need, your self-confidence will rocket. It’s hard to describe unless you’ve experienced it.

Young men, teenagers, often feel out of place, unsure of themselves both with their peers and with girls. Pumping iron is absolutely the best cure for this.

I wish I had known about weightlifting when I was a teenager. It would have helped me immensely.
Nothing good comes without work, and believe me, weightlifting is work. And it produces lots of good.