

HARD TRAINING

...To Provide Information and To Stimulate Thought On The Art of Strength Training
"Read Not To Believe... But To Weigh and Consider... —A.S.

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Training The Adolescent Athlete

By Dr. Ken E. Leistner

I strongly believe that the adolescent and pre-teen athlete should use progressive resistance exercise. The benefits far outweigh the negatives, if, and only if, training is done properly. Many of the rules that apply to the adult, need modification when applied to the training of the teenager, but if steps are taken to insure that nothing is done which might damage the growing skeleton and supportive tissues, objections are minimal.

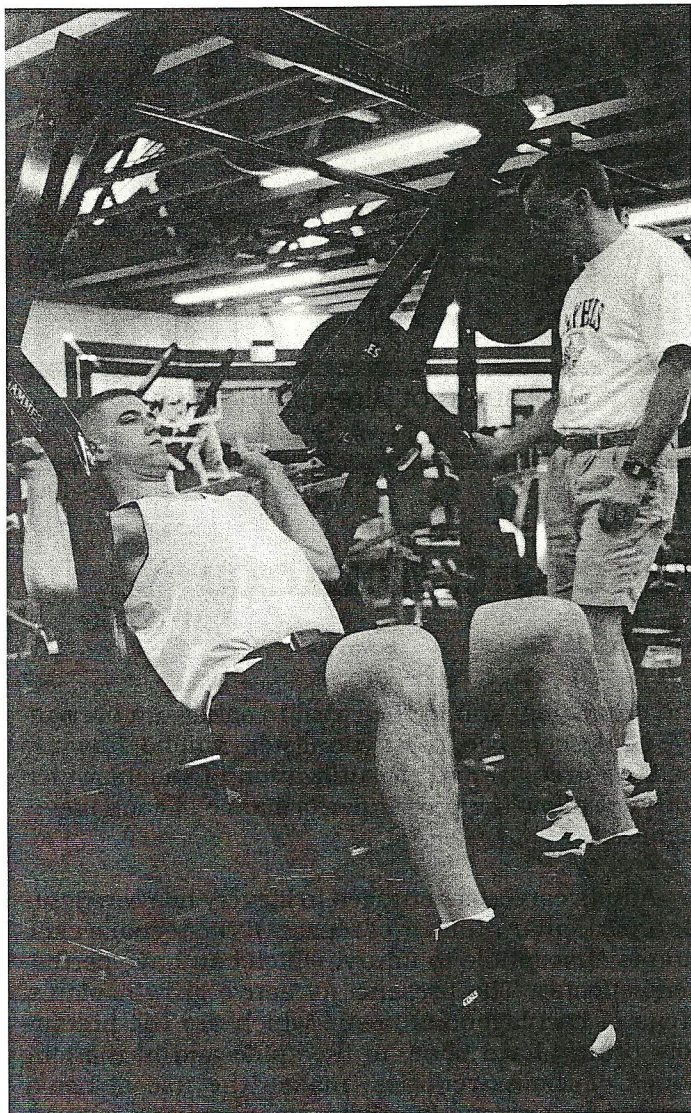
No matter how big or strong a young person is, it must be remembered that they are physiologically immature. Despite the inordinate amount of muscle that top level teen bodybuilders and powerlifters sport, the skeletal and connective tissues, as well as the hormonal cells, are in the developing stages and subject to permanent dysfunction should injury occur. Once that is noted, one can plan an intelligent regime. Youngsters will benefit from supervised weight training activity. They can get stronger and improve local muscle endurance. Proper training will strengthen connective tissue and increase resistance to injury, perhaps the most important aspect of a properly designed program for the adolescent. Ranges of motion can improve as a result of full range resistance exercise. The self-discipline and motivation can be instructive to the young athlete, and of course, there is the satisfaction, which comes as a result of hard work.

For these potential benefits to become reality, you must make sure that the athlete first understands proper execution and technique for every movement in the program. Typically, the youngster is given initial instruction and then left to his own devices, following a list of exercises given to him by his coach or gym manager. As typically, boredom, coupled with a lack of progress, becomes the norm and the youngster is lost as a trainee. Under no circumstances should a weight be used which allows less than ten repetitions per set. Heavy weights can be dangerous

and damaging, and in their zeal to satisfy an over active adolescent ego, most youngsters will be drawn to tests of strength and the utilization of weight which does not allow the proper performance of each movement.

Adults can be encouraged to lift very heavy weights for a particular number of reps, but the teenage skeleton is susceptible to injury, which can have permanent effects. The presence of active growth plates, areas of cartilaginous tissue which are the precursors of new hard bone, in the spine and in the long bones of the extremities, makes the use of heavy weights or low repetition lifting dangerous. Damage to these areas during the growing years can lead to malformed vertebrae and possible spinal abnormalities. Competitive powerlifting, or squatting with maximum heavy weights for five reps or less in any set, can put undue pressure upon the growth plates which can lead to eventual damage. Heavy deadlift attempts, in addition to exposing immature muscles and connective tissue to tremendous forces, poses a threat to maturing bony tissue.

In all cases, the athlete who is active in progressive resistance training should keep the repetitions in the fifteen to twenty five range. This will encourage increases in strength, allowing the lifter to maintain proper technique, and minimize the risk of injury. One set of each exercise should be done, insuring that the youngster trains as hard and intensely as possible in a challenging manner. I am not advocating light training for the young man or woman seeking gains in strength and muscular size. Training should be hard, and as heavy as possible for the number of recommended repetitions. However, the high repetitions will reduce the absolute amount of weight that can be used in any particular exercise, minimizing the risk of injury to joints, bones, and muscle tissue. Two training sessions per week are plenty, especially when you con-



Chris Ensminger, a 6'10" center formerly of Valparaiso University and now professional basketball player in Portugal, gained tremendous strength and size in a safe-effective fashion as an adolescent at Cincinnati Oak Hills High School. Oak Hills strength coach Ed Cicale supervises Chris through a workout.

sider that children and adolescents seek and need other forms of physical activity. Two weekly sessions will stimulate gains without causing overtraining or fatigue. Despite the enthusiasm of parents and/or well-meaning coaches, two weekly sessions will be more than enough to keep the child's interest piqued. More will quickly bore most youngsters. Full range, multi-joint movements are recommended, especially exercises like dips and chins which require the youngster to utilize his or her bodyweight.

To protect joint structures, no quick, jerky movements should ever be employed. This is a training axiom for adults too, but it is most important to observe when training young people. Cleans and other Olympic type movements are not safe for the maturing body and should not be done, nor should any "cheating" exercises. They serve no purpose in the

training program of a young person and can only cause damage. I would also like to state, in the strongest manner possible, that adolescents should not engage in any competitive lifting activities. Their joints and skeletal structures should not be exposed to maximal single repetition attempts in any lift. All of the benefits that one can receive from squatting, for example, can be acquired from sets of fifteen to twenty reps, despite common training room mythology that one needs to do sets of single, doubles, or triples to become "superstrong". Hip rep sets markedly reduce the shear forces that the connective tissue of the low back is exposed to in the competitive squat or deadlift, as well as the compressive forces placed on bony structures. Teenage contests can serve a positive purpose but a format which stressed the performance of a maximum number repetitions, choosing a certain percentage of bodyweight, would be much safer and still allow the youngsters to remain motivated and interested in the competitive aspects of weight training.

At all times, those who are responsible for the weight training activities of the adolescent male or female also have the responsibility of maintaining their future good health. Encouraging activities that have a high risk for skeletal and/or connective tissue injury is irresponsible and in the worst interests of the youngster. Choose a manner of training that will in fact increase the strength, muscle size, and muscular endurance of the involved youngsters, while minimizing the potential risks, and building an enthusiasm in young people that will encourage them to pursue a lifetime of strength and fitness.

Take This Test!

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You're a General Manager or a Head Coach and you need to decide which college player to draft for your NFL team. Ask yourself, what test will be the best indicator of a particular player's future success in the NFL? Lucky for you, the NFL Combines are held annually in the month of February. The combines are a series of activities and skills that test eligible draftees. The basic premise behind some of these tests is to determine which players have the talent to play in the NFL, or which ones have the athletic potential to develop their skills so that they can play in the NFL. These tests are sometimes referred to as the "Numbers Game" and it goes something like this: 'How much does he bench?', 'How fast is his 40 time?', 'What's his vertical jump?' Football is not the only sport with the fortunate insight as to what these numbers will predict. Most sports use some form of testing to correlate with athletic performance or at least with athletic