



Less Intense Training

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Regular participation in a youth resistance training program may improve muscular fitness, enhance athletic performance, and reduce the likelihood of sports related injuries. A growing number of boys and girls are participating in “strength-building” activities and it is common for young athletes to supplement their sports training with resistance training. However, the weekly training schedule (combined sports practice, sports competition and resistance training) of some high school athletes rival those of college athletes. Nowadays, it is not uncommon for some high school athletes to participate in sports practice four or five days per week, compete once or twice per week, and resistance train three or four days per week.

It appears that the importance of active rest and recovery is undervalued in some high school programs. While more has been written about how to prepare young athletes for sport than how to best recover from practice and competition, training athletes of any age involves balancing the demands of training (required for adaptation) with recovery (also required for adaptation). While some high school coaches still have a ‘more is better’ attitude, the perception that youth can recover from ‘hard’ workouts faster than adults may stem from previous research in the field of pediatric exercise science. While high intensity intermittent exercise is characteristic of many individual and team sports, the ability of youth to recover faster than adults from high intensity,

short-term (10 to 30 second) intermittent exercise does not mean that youth will recover faster than adults from three hours of sports practice and resistance training.

Since children and adolescents are still growing and developing, we believe that youth may actually need more time than adults for recovery between high volume and/or high intensity training sessions. Although a day ‘off’ between workouts maybe adequate for youth who participate in recreational (i.e., low volume/low to moderate intensity) resistance training programs, training to enhance sports performance involves higher levels of physical as well as psychological stress. Therefore, well-planned activities are needed to maximize recovery and return to an optimal performance state. This it is particularly important for youth who represent different sports teams, specialize in one sport year round, or participate in extracurricular conditioning activities at private training centers.

Since recovery is an integral part of the training cycle, we balance high intensity and/or high volume training sessions with less intense training (i.e., L.I.T.) sessions. Instead of simply taking a day off, our L.I.T sessions include activities that facilitate recovery, enhance joint stability, improve range of motion, and reinforce learning of specific movement patterns. Since the greatest adaptations take place when the muscles have recovered from a previous training session, L.I.T. enables our young athletes to train as hard as possible when they are as strong as possible.

High school athletes in our program typically perform a L.I.T. session following a “heavy” training session. For example, if our athletes train with relatively heavy loads (> 80% 1 RM) on

Monday, they will perform a L.I.T. session on Tuesday or Thursday depending upon the phase of the training cycle (e.g., off-season or preseason), their competition schedule, and their training experience. While our athletes typically perform two different L.I.T. sessions per week, they may perform up to four L.I.T. sessions per week during certain times of the year. As a general guideline, our high school athletes follow a progression from power training to strength training and perform several sets of each exercise at a reduced intensity (see table). We purposely include a few different exercises on L.I.T. days to keep the workout challenging and fun. Our athletes perform a series of movement preparation drills with their body weight or a minimal load (e.g. wooden dowel) before they perform the power and strength exercises. Each L.I.T session ends with ‘prehabilitation’ exercises for the torso and shoulder. Due to the potential for lower back and shoulder injuries, exercises that may be prescribed for the rehabilitation of an injury are performed beforehand as part of a preventative health measure. We have observed that L.I.T. facilitates recovery, and reduces the risk of injury while providing an excellent opportunity to reinforce key movement skills and training methods.

Developing programs for high school athletes can be a challenging process which involves balancing the demands of training with the need for recovery. High school coaches should educate young athletes and their parents as to why L.I.T. is important, and should incorporate L.I.T sessions into their periodized training programs. In our high school strength and conditioning program we follow a simple rule: Train hard on your hard days and recover hard on your L.I.T. days. We believe this approach provides an opportunity for high school athletes to maximize training adaptations while minimizing the risk of overtraining.

Suggested Readings

Faigenbaum A, Westcott W. *Youth Strength Training*. Champaign, IL: Human Kinetics; 2009.

Hebestreit, H. et al. Recovery of muscle power after high intensity short-term exercise: comparing boys and men. *J Applied Physio*. 74: 2875-2880. 1993.

Kelleman, M. *Enhancing Recovery*. Champaign, IL: Human Kinetics. 2002.

Kinugsa, T. & Kilding, A. A comparison of post-match recovery strategies in youth soccer players. *J Strength Cond Res*. 23:1402-1407, 2009.

Ratel, S. et al. Effects of age and recovery duration on peak power output during repeated cycling sprints. *Int J Sports Med* 23: 397-402. 2003.