

The Importance of Sleep for Young Athletes

Today's young athletes, particularly those in high school, are faced with the challenge of trying to balance and prioritize their schedules. Aside from the competitive demands of one's organization, many athletes also pursue individual activities such as private lessons and structured off-field conditioning programs. The time an aspiring athlete spends training, coupled with that of scholastic and social demands which increase every year, often leaves many feeling tired, both physically and mentally. For a variety of reasons, rest and recuperation often becomes neglected and as a result many student athletes become sleep deprived. Attitude, mood, and performance in the classroom and on the ice may be adversely affected by lost sleep.

Although individual needs may vary, sleep researchers suggest that the optimal length of uninterrupted sleep for the adolescent athlete is about 9.2 hours a night. (Nitka, 02) Sleep deprivation is accumulative, meaning that an athlete getting only 7 hours a night will have accumulated a sleep debt of 10 hours by the weekend. Getting an extra 2-3 hours of sleep on the weekend may make one feel better initially but it often translates into feeling tired and irritable on Monday morning as they feel the affects of their accumulated sleep debt.

Athlete's who are sleep deprived, will likely feel lethargic during training sessions and may display a lower tolerance for frustration when performing challenging exercises or when attempting to learn a new skill or strategic concept. Further, inadequate sleep can negatively affect reaction times. Even a half-second lapse in reaction time can prevent a goalie from making a save or result in a player losing a crucial defensive position, which ultimately can decide the outcome of a game. Lack of sleep can magnify such psychological factors as stress, anxiety and in some cases depression, while increasing one's perceived exertion and fatigue. If this occurs, an athlete can become emotionally unstable and less confident in their abilities to perform.

Young athletes are training harder than ever, making the need for adequate sleep extremely vital to recovery and regeneration. During each game or training session, stress is placed on the body and muscle tissue is broken down with energy stores being depleted. Along with sound nutrition, it is during sleep that the body releases powerful growth hormones which are responsible for muscle repair and growth. If sufficient recovery is not achieved prior to the next training session, the desired adaptations will not occur and the athlete, with rightful intentions, may in fact be doing more harm than good. If this pattern persists it eventually creates a physiological breakdown causing the body to perform at less than 100%. For athletes recovering from injuries or battling sickness, the importance of sleep becomes heightened. During sleep, our bodies stop all but the most essential functions allowing the immune and lymphatic system's effects to be fully realized.

Young athletes need more sleep than their inactive peers and should act to ensure that they are getting enough quality sleep. Establishing a regular sleep schedule can help in doing so. The body's internal biological clock sets a daily or circadian rhythm which determines when one feels tired or alert. Inconsistent sleep patterns disrupts this rhythm and can increase the time it takes to fall asleep. Many athletes experience trouble falling asleep the night before a game in part due to nerves but going to bed at a consistent time each night can help to combat this problem. Creating an optimal environment will also improve the quality of sleep. Aim for complete darkness as this signals the brain it is time to sleep. Even the light from an electrical clock or a screen saver can impede the release of the hormone Melatonin, which among other things works to regulate sleep. Loud or sudden noises can startle a person and disrupt

sleep as well as increasing the time it takes to fall asleep. A fan or earplugs can be used to mask or reduce external noise.

A mattress should provide both comfort and support so there is no discomfort upon waking in the morning and be large enough to accommodate the numerous postural shifts which occur during sleep. Researchers suggest that 65°F is the optimal room temperature and any large deviation from this range may adversely affect the quality of sleep (Nitka).

Adequate sleep is just as important to a young athlete's health as physical training and nutrition. With the help of parents and coaches, young athletes should be taught and embrace the importance of sleep so they can reach their full potential both on and off the field.

The preceding is an excerpt from Trainer's Choice/Mind to Muscle staff articles, for more information please visits www.trainerschoice.on.ca.