Healthy sleep habits and proper understanding of sleep fundamentals continue to evolve within this age group. This is a time period where changes in the way a child’s brain regulates sleep begin to rapidly occur. The development of proper sleep and healthy sleep habits at this age can have significant effects on a child’s behavior, concentration, growth, and physical/mental health.

Children within this age are probably feeling the burden of more homework and more time spent in sports and other extracurricular endeavors. It is easy for children to have sleep time squeezed out of the equation to make time for these other activities. It is becoming more common for kids this age to receive insufficient sleep secondary to afterschool activities, homework, and social interactions. It is important for coaches to be vigilant in looking for signs of excessive sleepiness in their children. These signs can range from frank sleepiness (excessive nocturnal sleep, difficulty waking up in the morning, frequent napping) to more subtle signs of sleepiness (mood changes/depression, irritability, inattentiveness, memory disturbances, sluggish play). Poor sleep can be secondary to decreased sleep quality or inadequate sleep quantity. For players who exhibit these kinds of symptoms, finding out more about a player’s sleep and the obstacles preventing adequate sleep is important.

Within this age group, children are often moving past their preadolescent sleep phases and developing the circadian delay commonly seen in adolescence. This delay results in children developing a tendency towards staying up later at night and getting up later the following day. These sleep/wake patterns can be in direct conflict with school schedules that often begin early in the morning. Allowing children to stay up late/sleep in late on the weekends can further disrupt sleep schedules and create a host of sleep issues for the child. Despite an increased sleep need in adolescence, these tendencies often cause children to experience a decreased amount of sleep. Furthermore, puberty can be associated with an increase in daytime sleepiness for some children which can be misinterpreted as a sleep problem. Being aware of these natural changes and tendencies may play a role in scheduling practices. For example, if a team is in need of extra practices prior to a late season tournament, understanding these circadian tendencies might lead a coach to reconsider a practice prior to the beginning of the school day.

Sleep in children, is typically composed of 3 distinct stages: light sleep, deep sleep, and REM sleep (dream sleep). These stages are important for various reasons. Deep sleep is most important for helping children feel rested, so conditions impairing deep sleep usually result in sleepiness. In young children, growth hormone (GH) is secreted during REM sleep, so REM disruptions can impact a child’s physical growth as well as mood and memory. For these stages to work and affect the child properly, sleep must flow in a relatively uninterrupted fashion. At this age, disruptions in sleep quality can be numerous. The high amounts of deep sleep that are so prevalent in the sleep of younger children begin to decline in adolescent children, and at this age the begin exhibiting lighter sleep with more frequent awakenings during the night. Previous modules have touched upon breathing disturbances (snoring, sleep apnea) as well as nocturnal enuresis (nighttime bedwetting) as other causes of sleep fragmentation.

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Nocturnal enuresis (nighttime bedwetting) is a common sleep disorder in children. Nighttime bedwetting is an embarrassing condition that can affect a player’s self confidence and esteem. It can also be a sign of other sleep disorders that can disrupt sleep quality leading to other negative daytime symptoms. As many as 25% of boys and 15% of girls remain enuretic at age 6 with those numbers dropping to 8% and 4% for boys and girls respectively by age 12. Proper referral and work-up for these children are important as parental punishment, fluid restriction and drugs used to treat the enuresis may have a negative effect on the player’s performance and is clearly a difficult problem for children to deal with psychologically.

By this age, coaches should begin focusing on hockey preparation both on and off the ice. In conjunction with sleep, nutritional factors are extremely important for optimal health and performance. It is important for coaches to reinforce the relationship between healthy nutrition and sleep. Caffeine containing products are frequent contributors to poor sleep quality, but also impaired sleep scheduling as their use, particularly at night, may lead to later bedtimes and secondary insomnia. The poor sleep that results often necessitates more caffeine use the following day to counteract the effects of the difficult night. In addition to dietary make-up, meal timing is another factor to consider. Players who eat sporadically and at inconsistent times may have more difficulty with their sleep and sleep diminished performance. Coaches should encourage their players to eat on a regular schedule and to avoid eating late at night. Eating at night can impair sleep and lead to weight gain in some individuals.

Dialogue about smart sleep choices at night should continue. With cell phones, digital music players, internet surfing, texting, email, and good old fashioned television viewing common at this age, the number of bad nighttime choices to be made are immeasurable. Encouragement to develop a healthy nighttime routine can be an invaluable tool for player performance at this age. It also begins to lay the foundation for a strong sleep ethic that a player can carry with him or her into future athletic endeavors.

7 Calamaro CJ, Mason TB, Ratcliffe SJ. Adolescents living the 24/7 lifestyle: effects of caffeine and technology on sleep duration and daytime functioning. Pediatrics (2009); 123(6): e1005-10.
Sleep and Its Effect on Performance

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