



Important Points for the Middle Adolescent: 15-18 Years

Nutrition:

The adolescent growth spurt will require additional energy in the form of nutritious and balanced food. Your teen's intake actually depends on his or her age and activity level. Teenage boys who are active require about 2800 calories and should eat the highest range of servings. Teenage girls who are active require about 2200 calories and should eat servings in the middle of the range of servings. No more than 30% of your diet should come from fats. For a 2200 calorie diet, that would equal 73g of fat each day and for a 2800 calorie diet, 93g of fat each day. Adolescents require about 1200 to 1500 mg of calcium each day. Adolescents also require about 12 (males) to 15 (females) mg of iron each day. All menstruating females should take a multivitamin with iron every day. Please encourage your child to exercise for at least 30 minutes every day. Limit screen time to 1 hour a day; this means TV, computer games, Xbox, smartphones, and Internet time too! Get adequate sleep; during growth spurts, teens sleep more. Teens need an average of 8 ½ to 9 hours of sleep every night.

Puberty:

Girls between 10 and 16 will grow an average of 8 inches and gain 38 lbs.; boys between the ages of 12-18 will grow an average of 12 inches and gain close to 48 lbs. By middle adolescence, most girls have completed puberty and young men will continue to gain height, weight, muscle mass and body hair. The body demands more calories during adolescence than at any other time of life.

Touchpoints:

"The Mystery of the Teenage Brain"

The adolescent experiences dramatic changes in the brain, specifically within the prefrontal cortex which continues to grow, and "prune" until the mid-twenties. The prefrontal cortex is responsible for a range of higher level executive functions such as decision making, planning, flexibility and emotional control. Because this region is under development, *adults and teenagers think quite differently*. The teenage brain is like a Ferrari: it's sleek, shiny and fast, but it also has really crappy brakes. Teens are "driven" by their emotional and reward processing region called the limbic system. There are also shifts in the levels of neurotransmitters in the teenage brain. Dopamine stores decrease which result in mood changes and problems with emotional control. Also, a decrease in serotonin results in decreased impulse control, increased sensation seeking and risk taking. Finally, melatonin increases which results in a teens greater need for sleep. This sounds overwhelming for the parent and the teen but the truth is the teen brain is also primed more than any time in one's life for the acquisition of new skills; it is very adaptive and malleable which provides an excellent opportunity for educational and social development. This is also a very vulnerable time for the adolescent brain if it is exposed to drugs and alcohol as they dramatically slow the growth of the prefrontal cortex and therefore can have lifelong consequences as a result. As parents, we need to help our teens during this transitional time. Sometimes this will mean being their "surrogate prefrontal cortex" and sometimes this will mean letting them experience natural consequences. So how do we help our teens develop executive skills? All skills, including executive skills, improve with practice... The more you practice, the better the skill and the less effortful the task. Practice builds the neuronal connections in the brain supporting the skill so essentially the more often neuronal pathways fire, the stronger the connections will become. Since your teen wants increasing autonomy and you want your teen to become an effectively independent adult, this should be the central theme in your plans to teach your teen executive skills. Let your teen take the lead as much as possible and provide the minimum help necessary. When a problem arises, ask your teen to develop solutions instead of solving it for them. And finally, be supportive of your teen's decisions involving problems that aren't very serious. Even if he or she makes some wrong choices, it will teach responsibility for solving problems. Be more aggressive in intervening with more serious situations, such as drug, alcohol use or sexual activity.

Safety:

The #1 cause of death in teenagers is accidents, with motor vehicle accidents accounting for almost 75%. Alcohol occurs in 41% of motor vehicle deaths. The American Academy of Pediatrics recommends using driving contracts with your teen. An example can be found here: http://www.cdc.gov/Motorvehiclesafety/pdf/Driving_Contract-a.pdf . Nearly 50% of sexually transmitted infections occur in teens and young adults. Talk to your child about alcohol, tobacco, drugs, sex and peer pressure. Have rules about social media. Almost 95% of teens ages 12-17 are now online, and 92% post personal identifying information.

What to expect during this visit:

It is important to respect your child's growing need for privacy. Your son or daughter may now be at the age where he or she may want to discuss some issues with the provider alone. During this visit, your child may receive the Menactra vaccine and Gardasil and Tdap may be administered if not completed previously. Three wonderful books that we recommend for parenting the adolescent are: "The Five Languages of Teenagers"—Chapman; "Smart but Scattered Teens"—Guare and Dawson and "Parenting Teens with Love and Logic"—Cline and Fay.