



Taming the Wild Adolescent Brain

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New research is changing our view of adolescence. Studies show that the brain undergoes significant changes during puberty. Grey matter thickens up to the teens, then begins to thin until the early twenties. At the same time, the fatty myelin sheath matures, making nerve transmission faster and more efficient.

This combination of maturing and pruning affects different parts of the brain at different stages. The pre-frontal cortex, which controls the ability to set priorities and weigh the consequences of actions, is the last area to develop. During this final phase, teenagers are least capable of making important decisions, and most vulnerable to biochemical and environmental influences. Ironically, many parents choose adolescence as the time to give teenagers total control over their own diets.

Improve Dietary Choices

The *bad news* is that left on their own, teenagers may make poor dietary choices, setting the stage for long-term health problems. Parents may not want to bug their kids about eating, but food companies have no such qualms. The soft drink industry alone has doubled soda consumption in girls and tripled it in boys, by using aggressive tactics such as placing vending machines in elementary schools.

Phosphoric acid in soda is sapping growing bones of calcium, contributing to an epidemic of osteopenia, the precursor to osteoporosis, and increased childhood bone fractures. Boys, ages 12-19, consume the most soft drinks, averaging almost two quarts a day. Sports drinks further increase intake of empty calories. Adolescents with attention problems use caffeinated soft drinks to self-medicate. One I saw recently was drinking 72 ounces of soda a day plus the three medications his doctor had prescribed for depression.

The *good news* is that diet, nutrition and adult behavior can have a profoundly positive affect on these brains in transition. Parents must talk to their teens about healthy eating in the same way they discuss smoking and drugs. Also:

- **Provide only healthy food choices at home.**
- **Rediscover your kitchen.** Cook and eat together as a family. Putting your energy into regular, balanced, healthy, home-cooked meals supports everyone nutritionally and emotionally.
- **Familiarize your family with new foods.** Think beyond pizza and chicken nuggets. Tempt everyone with fresh fruit or vegetables as snacks by keeping them visible in the refrigerator.
- **Add food preparation to household chores.** You probably won't convince many adolescents to wash and chop fresh produce, but they might make Sunday morning breakfast.

- **Push water.** Stop buying soda and sports drinks. Offer vitamin and no-calorie flavored water or 100% fruit juice as week-end treats.

With parental support and good information, teenagers can make better choices about what they eat and drink.

Consider Supplements to Enhance the Diet

The *bad news* is that despite brain growth during adolescence, many with developmental problems often experience a leveling off of skills. Before considering drugs, improve the biochemical environment by replenishing nutrients.

The *good news* is that teenagers are often open to taking supplements. Excellent multiple vitamin and mineral supplements such as those from **New Beginnings Nutritionals**, this newsletter's sponsor, can close the gap between what teens are eating and what their bodies need for optimal health.

- **Offer a multiple:** with iron for girls, but without for boys. Iron increases boys' risk of heart disease because they accumulate it after puberty.
- **Add extra vitamins C and E** (as mixed tocopherols.)
- **Consider products that make up for low vegetable consumption:** Perfect Food by Garden of Life, Nature's Balance Chlorella or Green Magma.

Experiment with Different Approaches

Just when adults throw up their hands in frustration, kids may become interested in their own destinies. One 10-year-old recently overcame a bipolar/mood disorder with a gluten-free diet. Although she talked obsessively about eating gluten again, her personality change was so dramatic, that she ultimately decided on her own to give it up permanently. With tears in his eyes, a 16-year-old recently told me, "I really want to get out of special ed." Another teenage boy was able to read with understanding for the first time after starting on piracetam. (Go to www.piracetam.com) In these cases, the kids agreed to participate in a specific plan for a trial period.

What studies do not show us is the high motivation some kids have to function better. All we need to do is give them the tools. Adolescence is a good time to present the scientific rationale for healthy eating and to enlist your teenager's support. Model good eating habits and keep talking!

To learn more read "Keeping Your Teenager in Top Health" in Galland's *SuperImmunity for Kids* and Lyons' *Is Your Child's Brain Starving*. (See booklist.)