
**About the Author:** Barbara Strauch is the medical science and health editor for the New York Times. She has also covered science and medicine in Boston and Houston and directed Pulitzer Prize-winning news at Newsday. She is the mother of two teenagers.

**Summary:** Strauch presents an overview of recent neuroscience research on the teenage brain. As a science editor and mother of two teenagers, she was intrigued by what she was learning from reports from the neurosciences on adolescent brain functioning. She has summarized much of that research here and what the findings mean for teenagers and those who love them.

For many years, scientists believed that brain development was completed by the age of four or five. However, with the advent of new imaging technologies like MRI, functional MRI (fMRI), and PET scanning, much more can be learned about brain functions. Scientists are finding that significant brain restructuring occurs during adolescence, rivaling the development that occurs in the first few years of life. Understanding these changes may lead to better understanding of teens’ behaviors and thinking abilities. Understanding normal adolescent brain development also aids scientists in recognizing possible genetic and biological contributors to the mental illnesses that frequently arise during late adolescence, such as schizophrenia and depression.

The area of the teen brain that is of most interest to neuroscientists is the cerebral cortex, in particular, the frontal lobes. Scientists have found that the frontal lobes continue to grow until puberty, reaching a size much greater than that seen in adults. Development of the frontal lobes is incomplete until early twenties. Because this area is responsible for impulse control and planning, its incomplete development may explain much about adolescent behavior. Sex hormones produced prior to and during puberty effect the brain and may account for some gender differences. Neurotransmitters levels also change during puberty, which may account for widely-recognized adolescent mood swings and teens’ penchant for staying up late and then sleeping late in the morning. Strauch’s essential message is that some teen behavior may be beyond their control because of the profound brain changes occurring during adolescence. Parents must become their teens’ “frontal lobes” and act to regulate and control their behavior.

**Reviewer** Cindy Peterson has a B.S. degree in chemical engineering from the University of Illinois. She is the mother of two daughters.