UNDERSTANDING THE TEEN BRAIN

We need to give it the space—and the safety—to grow

Some 36 million people in the US are between 12 and 24 years of age—a vital period of development many neuroscientists call the age of the adolescent brain, or the teenage brain. We've recently seen a profusion of books (see below) pointing out that many of us—and our institutions—have misapprehended the teenage brain *and* the human beings carrying one around. One high school board member put it to me that "Teenagers are idiots. They need to be protected from themselves." Idiots? Ouch!

What's really going on, according to brain scientists, is a vitally important period of heightened receptivity (so one seeks out novel experiences), risk taking (to stretch limits), social sensitivity (to form bonds and alliances), and high plasticity (allowing for rapid skills development), to name a few. These features are necessary for a next generation to pave new pathways for the future. But they also make teenagehood a high-wire act that carries big risks. To balance these positives and negatives, the authors of the books say, we need to give teens lots of room, while paying enough attention to helping prevent risks to physical and mental health with potential consequences that are hard to recover from. All generations benefit when a new generation is given room to grow and change the world, while being offered some protection that avoids smothering.

Drawing on the books below, here we summarize a few key neuroscience findings and highlight challenges and opportunities associated with this naturally wild and crazy time of life.

–Barry Boyce, Editor-in-Chief

A TIME OF RAPID AND RADICAL BRAIN DEVELOPMENT

- The **stimulation-seeking** part of the brain, the reward system, is highly sensitized during a time of hormonal surges. Emotion is heightened. As Laurence Steinberg writes, "Nothing...will ever feel as good as it did when you were a teenager." Or, as *bad*—when rewards prove elusive and hopes are unfulfilled.
- The self-regulatory systems develop slowly. **Risk-taking** in pursuit of rewarding feelings is likely. It's not a lack of intellect: risks are understood, but rewards loom large.
- A **highly sensitized social brain** is deeply attuned to others' expressions, feelings, and opinions.
- Steadily **growing capacity for reasoning and abstraction** can lead to bold creativity. It's not a stage to "get over," says Dan Siegel. "It's a stage to cultivate well."

A TIME OF VOLATILITY AND RISK

Drinking and Drugs
1 in 5 American high-school seniors abuses alcohol at least twice a month. Illegal drug use continues to rise.

Violence
40% of high-school boys have been in a physical fight in the past year.

Pregnancy
Nearly a third of young women will get pregnant by age 20.

Suicide
8% of high school students try to commit suicide.

Crime
Adolescents commit most of the crimes in the US; nearly $6 billion is spent every year incarcerating them.

Fatal Accidents
Nearly half of adolescent deaths are in accidents, and 6,000 are in car crashes.

WHAT CAN HELP TEENAGERS FLOURISH?

Understanding
Getting to know their brains: why they might be experiencing what they're experiencing; knowledge is power.

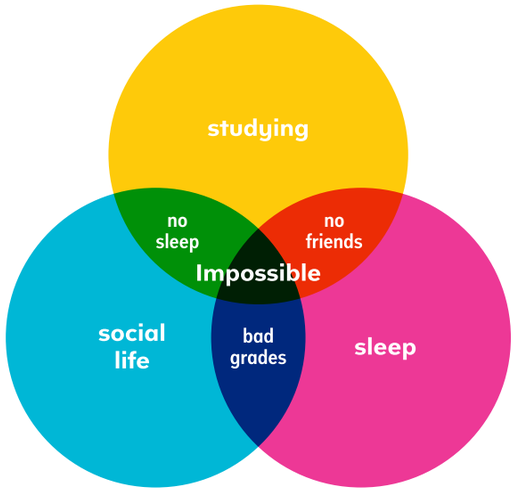
Trust and Respect
So they can trust and respect in return, and gain independent decision-making power.

Room to Take Risks
To be steered away from high risks, without aggression. And given room to take moderate risks. Preaching doesn't help.

Engage Body and Mind
Chances to develop more than their cognitive skills, so they can engage their whole body and mind: mindfulness, yoga, art, music, sports...

To Be Listened to
Deeply and consistently. Teens have novel, fresh ideas that the world needs. And they will inherit the earth.

THE TEEN TIME DILEMMA

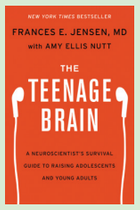


More Sleep!
Because they're learning so much so rapidly, the teen body and brain get a huge workout. They need refreshment: about 9-10 hours of sleep daily. But as the diagram above illustrates, many teens are expected to pull off a juggling act that wears them out. The resulting sleep deprivation can lead to a downward spiral of poor choices and weakening resilience.

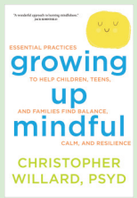
To see all of *Mindful*'s stories in our ongoing coverage of teenage empowerment, visit **mindful.org/teenagers**

MINDFUL RECOMMENDS

What's Up with Teen Brains?



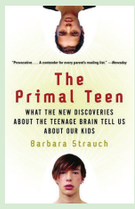
The Teenage Brain
A Neuroscientist's Survival Guide to Raising Adolescents and Young Adults
By Frances E. Jensen with Amy Ellis Nutt
Harper • 2015



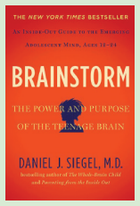
Growing Up Mindful
Essential Practices to Help Children, Teens, and Families Find Balance, Calm, and Resilience
By Christopher Willard
Sounds True • 2016

The Mindful Teen
Powerful Skills to Help You Handle Stress One Moment at a Time
By Dzung X. Vo
Instant Help • 2015

Age of Opportunity
Lessons from the New Science of Adolescence
By Laurence Steinberg
Eamon Dolan/Mariner Books • 2015



The Primal Teen
What the New Discoveries about the Teenage Brain Tell Us about Our Kids
By Barbara Strauch
Anchor • 2004



Brainstorm
The Power and Purpose of the Teenage Brain
By Daniel J. Siegel
TarcherPerigee • 2015

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