

The Teenage Brain: Stress, Coping, and Natural Highs

During a workshop that I was facilitating on marijuana and the teen brain, a high school sophomore said to me, "I take Ritalin on weekdays for attention, but go off it on the weekends because that's when I smoke weed." I asked him, "Are you saying that you've got a mind-altering substance in your brain every day?" He answered with a concerned look, "Do you think I should get off the Ritalin?"

It's no surprise that young people are taking more psychoactive chemicals for psychological problems, such as poor attention, anxiety, and depression. In many cases, like the student above, they choose to self-medicate in addition to using a prescription drug. In some schools, I've been told that as many as 25-40% of their students are on medication for psychological and behavioral problems, and that does not include recreational use. In addition, when I meet with teens as part of my work speaking at schools across the country, the vast majority of them report that they have stress, anxiety, and trouble paying attention in class. Medication can save lives for those with severe and debilitating conditions, but for everyone else, I believe we can do better.

In order to foster a sense of resilience and encourage healthier ways to cope with life, we need to educate young people about natural highs. Over the past decade, neuroscience research has shown that exercise, meditation, positive social support, laughing, and many other factors can elevate mood and improve brain functioning. These activities don't require putting a chemical into your body, but they do take time and effort to have an impact.

The Teen Brain vs. the Adult Brain

Teenagers have lots of reasons for being more anxious, stressed, and distracted than adults. They deal with high expectations from parents, social pressure from friends, and the constant fear that their smartphone will go dead and totally ruin their life. To make things worse, the teenage brain is generally more anxious than the adult brain. This may be due to the rapid development of the amygdala, a brain structure involved in emotional expression, compared to the slower development of brain areas involved in decision making and reasoning. Also, the teen brain has a larger pleasure center than adults, which means that rewards feel -- well, more rewarding. This is particularly true of risks taken in unsupervised settings with their peers. As a result, the teenage brain is a contradiction of epicly exhausting proportions, both more anxious and more thrill seeking than its adult counterpart.

Teenage angst is nothing new, but using natural highs to alleviate it might be novel. One of the best-studied natural highs is running or any form of cardio exercise. My wife loves running. She even runs when it snows. I always tell her, "If you get lost, I'm not coming to get you." When I ask her why she runs, she says, "It makes me feel better, even when I'm tired. It also helps me focus at work." It turns out that there's a lot of research backing her up. Thirty minutes of any physical activity that elevates the heart rate helps to release endorphins and improve mood and cognitive functioning. Regular running has also been shown to increase the volume of the hippocampus, the most important brain structure for memory. It doesn't have to be intense physical activity, either. Taking a walk in the woods has shown benefits for memory, mood, and attention.

In my case, I love meditation, despite having been a skeptic for many years. Meditation has proven to be a powerful stress reliever for me, particularly at night. Students report some of the highest levels of stress during the evening hours when they're tired but expected to finish homework and fight off distractions. Meditation is like a cell phone charger for the brain. I encourage students to start out with 5-10 minutes in the late afternoon, before dinner, to test it out. The goal is to practice calming the mind. Nodding off is fine, even welcomed. I've presented this to students and staff for over a year, and the response has been tremendous. They are in a better mood after the meditation and report experiencing greater productivity that doesn't interfere with their sleep.

Exploring Your Own Natural High

Whether you love surfing, biking, cooking, or gardening, consider your favorite pursuits as means to your own natural high. Invite young people to experiment with perceiving the activities that make them happy through the lens of a natural high, and then report back to you about how it made them feel. This can be a great bonding experience for the classroom and teach skills for dealing with stress for years to come. Check out yoga and meditation classes in your community -- some might even be free. Visit websites such as [Inward Bound](#) or [Guided Mindfulness Meditation](#), along with meditation apps that you can download. For the classroom, check out [Natural High](#), an online source of free videos and curriculum for teachers to help youth identify and cultivate their passions.

Does your school have a dialogue with students about recognizing stress and exploring the best means of coping with it? What does that look like? Please share your thoughts in the comments section of this post.