

## THE AMAZING TEENAGE BRAIN

Jay N. Giedd's writings in the Scientific American \* tell us that the 'teen brain's often described an example of biology gone wrong.

Jay's article explained to us that neuroscientists in the past often explained the risky, aggressive or just plain baffling behaviour of teenagers as the product of a brain that is somehow compromised.

Research over the past 10 years, however, has shown that those past views were incorrect.

The teen brain is not defective. It is not a half-baked adult brain, either. It has been forged by evolution to function differently from that of a child or an adult.

Research has shown that, among the teen brain's features, the ability to change a response by modifying the communications networks that connect brain regions is especially important.

This special changeability, or plasticity, makes adolescence one of the most important periods of brain development. Neural pathways continue to be established, and these allow teenagers to make enormous strides in thinking and socialisation - but also makes them vulnerable to dangerous behaviours and serious mental disorders.

Behaviours such as risk taking, sensation seeking, and ignoring parents and other adults are a natural result of brain development, a normal part of adolescents learning how to negotiate a complex world.

Adolescents have dynamic, open, hungry minds that are creative, brave and curious. We must do more to help harness the restless creativity of the teenager. There will be good days, great days, dreadful days, with some days crazily challenging.

Our recently-developed knowledge could help to reduce the rates of teen addiction, sexually transmitted diseases, motor vehicle accidents, unwanted pregnancy, homicide, depression and suicide.



***'Sometimes I get told to 'act my age', but when I do they tell me to 'grow up'. I can't win!***

\* <https://www.scientificamerican.com/article/the-amazing-teen-brain/>

## **DON'T BLAME ME, BLAME MY BRAIN**

Have you noticed that sometimes a teenager's thinking and behaviour seems quite mature, but at other times he, or she, seems to behave or think in an illogical, impulsive or emotional way?

Recent brain research explains these fluctuations – teenagers are working with brains that are still under construction.

Neuroscience practitioners concerned about why the teenage brain is so vulnerable to anxiety disorders - the fear or nervousness that does not go away, even in the absence of any real threat.

Adolescence is the life stage when mental illnesses are most likely to occur, with recent estimates suggesting that approximately one in every three teenagers is struggling with anxiety that significantly interferes with their personal endeavours.

For teenagers and their parents, it can be hard to disentangle normal emotional changes from constant anxiety, worries, fears and nervousness about what others will think, relationships with 'friends', and wanting to 'fit in' with their peer groups.

Anxious teenagers are at heightened risk for a variety of long-term problems that include depression, substance abuse and suicide.

Studies of the brain are increasingly revealing why adolescence may be such a vulnerable time for anxiety.

Researchers believe there are mismatched connections between the brain's limbic system - including the amygdala which governs emotion - and the prefrontal cortex - the front most part of the brain.

These mismatches occur during adolescence because the brain is experiencing rapid changes in its shape and size and also in how it processes information and experiences.

The very structures and connections in the brain that help to manage emotions are in flux during this developmental period, making teenagers especially vulnerable to stress and anxiety.

Neuroscience researchers and practitioners are actively working to further understand the ways in which teenagers identify potential dangers in their everyday lives and how they attempt to control or regulate their responses to these threats.

A philosophy supported by [eteamlearnings.com](http://eteamlearnings.com). We welcome your comments.

## **WHAT TEENAGE BRAINS CAN TEACH US ABOUT THINKING CREATIVELY**

For years, conventional wisdom regarded teens as little more than hormonal waterspouts, swirling from one mishap to another. Then, advancements in neuroscience helped broaden our understanding of teen behavior. The public learned more about research into the brain's prefrontal cortex, which regulates planning and decision-making and doesn't mature until about age 25. This went a long way toward explaining adolescents' often-impulsive behaviour - but left adults more focused on the teenage brain's role in risk-taking rather than its role in learning and creating.

[https://www.washingtonpost.com/lifestyle/wellness/what-teenage-brains-can-teach-us-about-thinking-creatively/2020/03/02/c1d96556-574c-11ea-9b35-def5a027d470\\_story.html](https://www.washingtonpost.com/lifestyle/wellness/what-teenage-brains-can-teach-us-about-thinking-creatively/2020/03/02/c1d96556-574c-11ea-9b35-def5a027d470_story.html)

## **THE MENTAL HEALTH OF ADOLESCENTS : WORLD HEALTH ORGANISATION**

Adolescence is a unique and formative time. Physical, emotional and social changes, including exposure to poverty, abuse, or violence, can make adolescents vulnerable to mental health problems. Protecting adolescents from adversity, promoting socio-emotional learning and psychological well-being, and ensuring access to mental health care are critical for their health and well-being during adolescence and adulthood. Adolescents with mental health conditions are particularly vulnerable to social exclusion, discrimination, stigma (affecting readiness to seek help), educational difficulties, risk-taking behaviours, physical ill-health and human rights violations

<https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health>

## **ADOLESCENT DEVELOPMENT : AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY**

Every teenager is an individual with a unique personality and special interests, likes, and dislikes. There are numerous developmental issues to be faced during the adolescent years, usually ...

- Increased independent functioning
- Firmer and more cohesive sense of identity
- Examination of inner experiences
- A growing ability to think ideas through
- Conflict with parents begins to decrease
- Increased ability for delayed gratification and compromise
- Increased emotional stability
- Increased concern for others
- Increased self-reliance
- Peer relationships remain important and take an appropriate place among other interests
- Firmer religious and cultural belief system which may be different from their parents and family

[https://www.aacap.org/AACAP/Families\\_and\\_Youth/Facts\\_for\\_Families/FFF-Guide/Normal-Adolescent-Development-Part-II-058.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Normal-Adolescent-Development-Part-II-058.aspx)