

## **Defending the Adolescent Brain**

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In the past five years neuroscientists have made remarkable progress in understanding the ongoing development of the human brain during adolescence. Scientists now know that the brain does not complete its physical growth – in fact dramatic changes still occur – until after the age of 24.

These findings show that adolescence is a critical time period in the process of brain development. The pre frontal cortex (sometimes referred to as the CEO of the brain because it controls decision making, as well as other higher order functions) goes through a period of growth, where synaptic connections are rapidly created. Next the brain goes through a “pruning” process where the connections that are most frequently used remain, but other—less well-established connections – are pruned away. Thus brain researchers note that the capabilities of the adolescent brain are in a “use it or lose it” state.

This science has profound implications for the youth field. In the late 1990s the US Supreme Court ruled, based on testimony from brain researchers, that youth were not eligible for the death penalty based on the state of their brain development. They argued that decision-making capacity, the domain of the pre-frontal cortex, was still forming during adolescence, meaning that young people should not necessarily be legally held to the same level of accountability as adults, where presumably, the brain’s architecture has completed development. The suit was successful; adolescents are no longer eligible for death penalty sentences.

Of concern to many in the youth community is how this information could be used to restrict the rights of youth. The logic used to protect youth from the death penalty also has profound implications for their access to reproductive health services and information, educational requirements, military enlistment, driving licensures, voting, and employment, to name a few.

Knowing that adolescent brain development continues into the mid-20s, particularly in the prefrontal cortex, offers numerous insights on adolescent behavior – “That’s why they do that ...” More importantly, this information can guide how parents, policy makers and the youth serving community support the healthy development of young people. Since we know, for example, that decision-making skills are being formed, parents, adults, schools and youth programs can provide opportunities to practice making those decisions. Caring adults can act as a sounding board and fresh set of eyes for youth in the process of weighing alternatives considering consequences and seeking best options.

Adolescent brain research is an emerging field with more questions than answers. Programming and policy implications are not fully evident. Encouragingly, communications research reveals that the public’s understanding of the adolescent brain actually makes them a more receptive audience to the need for youth development approaches and opportunities.

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This information demands action from the youth-serving community. Parents, health professionals and other adults can all promote positive adolescent development through the following:

- Encourage everyone who works with or supports youth to better understand and appreciate adolescent development – including the development of the brain.
- Discuss brain architecture and development in productive, applied ways. Focus energy on ideas and ways to support healthy adolescent development.
- Be answer-ready. If someone does ask “is it true adolescents can’t make decisions?” be prepared to offer context and direction.
- Remember that many factors affect our ability to make decisions – moods, knowledge and environmental concerns to name a few. For adolescents, the brain’s exuberant development is one of those factors.
- Support adolescents’ decision-making by:
  - Making available all the information adolescents need to make good decisions
  - Being present and available to help young people work through the pros/cons and implications of their decisions.
  - Providing adolescents with safe and positive ways to practice and experience decision-making because such opportunities will serve them now and in the future.