

## Brain Development and Adolescence

### This Material is Modified From the Following Resources:

[The Road to Adulthood - The Annie E. Casey Foundation \(aecf.org\)](#)

[Jim Casey Youth Opportunities Initiative - The Annie E. Casey Foundation \(aecf.org\)](#)

[Adolescent Development | Youth.gov](#)

<https://www.aecf.org/resources/the-adolescent-brain-foster-care/>

[www.socialworkerblog.org/wp-content/uploads/Integrating-adolescent-brain-development-into-child-welfare-practice-with-older-youth/](http://www.socialworkerblog.org/wp-content/uploads/Integrating-adolescent-brain-development-into-child-welfare-practice-with-older-youth/)

<https://youth.gov/youth-topics/adolescent-health/adolescent-development/>

[Racial Disproportionality and Disparity in Child Welfare - Child Welfare Information Gateway](#)

When shaping policy and practice related to young adults it is important to understand brain development during adolescence. During adolescence, grey matter is pruned away so that more efficient pathways between different parts of the brain are created. What is being reinforced/acted upon is strengthened through a process called myelination. Adolescence is known for being a time for teens to assert their independence from family and begin to make decisions on their own. This is largely due to developmental changes in the brain that create significant advances in cognitive abilities. What is occurring during this time is large numbers of neurons are growing rapidly and there is an increase in interconnectedness between neurons, which allows for more complex and sophisticated thinking. What can make things volatile during adolescence is that different parts of the brain are making these changes at different times. The frontal lobe that controls “executive functions” (e.g., planning, considering long-term consequences, controlling impulses) is one of the last parts of the brain to fully mature. This may result in lapses in judgement, increases in risk-taking behaviors, and mood swings ([Adolescent Development | Youth.gov](#)).

During adolescence, young persons experience heightened arousal in the brain regions that are sensitive to social acceptance and rejection. Adolescents are particularly attuned to emotional cues such as facial expressions. Social scenarios are often heightened and magnified during adolescence. This heightened social attunement paired with a continued development around emotional regulation may result in young people reacting strongly out of emotions. Sometimes adults view this as overreacting or attention-seeking. Young people are still developing the ability to use the skills in the prefrontal cortex. They are slowly relying less on emotion and impulse to drive decision-making and shift to using the skills in the prefrontal cortex to slow down, engage in reflection and think critically. The prefrontal cortex requires opportunities to practice those skills with supportive adults.

The brain develops in a sequence

- **Brain Stem:** First part of the brain to develop. Is developed by the time we are born. Controls unconscious functions such as heart rate, blood pressure, body temperature.
- **Mid Brain:** Second part of the brain to develop. Develops in early childhood. Controls auditory and visual processing, motor regulation, sleep and wake cycle and appetite.
- **Limbic System:** Third major part of the brain to develop is comprised of several specific structures of the brain such as the hippocampus and the amygdala. This is the emotional center of the brain housing attachment, pleasure, arousal, hormone release, memory and detection of fear.
- **Prefrontal Cortex:** Last part of the brain to develop. Located right behind the forehead. Houses what are often called executive functions including the ability to control impulses, regulate the emotions coming from the limbic system, engage in introspection, plan ahead, focus attention and think critically.

## **The Child Welfare System and Brain Development**

Despite what is known about emerging adulthood and gradual independence, however, young people in foster care may be forced into a rapid transition. While they are in the foster care system, decisions are typically made for them, often without their input. And when they age out of the foster care system at 18 or 21, young people are often suddenly and completely on their own, without having had the opportunity to build skills and experience self-reliance within a safe, nurturing environment. ([www.aecf.org/resources/the-road-to-adulthood/](http://www.aecf.org/resources/the-road-to-adulthood/)). Many youth-serving systems are typically risk averse and in child welfare, keeping young people physically safe is a top priority. However, because of that, it's possible to sometimes forget that young people want and deserve to do normal things (e.g., sleepovers, travel, learn to drive, etc.). Child welfare systems need to promote normalcy for young people as they have taken risks by entering the child welfare system, leaving their families, communities, and friends, and having to adjust to living with a new family. Policies should also account for youth making mistakes--as they inevitably will.

At the same time young people in foster care are poised to take on new challenges, many of them are dealing with the continuing effects of adverse childhood experiences, trauma and “ambiguous loss.” For example, childhood maltreatment can cause irritability in the brain’s limbic system, which tends to produce chronic low-level unhappiness, aggression and violence toward oneself or others. Separation from one’s parents or guardians, either literally through the separation and transition into foster care or figuratively when the caregiver remains in the home but is emotionally disconnected from the child, causes a young person to experience an ambiguous loss. Ambiguous loss is a form of loss in which there is no verification of death, no certainty that the person will come back or no assurance that the person will return to the way they used to be( [www.aecf.org/resources/the-road-to-adulthood/](http://www.aecf.org/resources/the-road-to-adulthood/)).

Placement in foster care causes trauma for the youth and their families. Three common elements characterize all forms of trauma: the event was unexpected, the individual was unprepared, and there was nothing that the person could do to prevent the event from happening. However, just as the brain can become “wired” to expect a traumatic environment, it can be “re-wired” through trauma-informed services and positive relationships with caring

adults to accept and expect safety and security. These relationships can serve as bridges for healing and growth and build the youth's social capital that supports them in adulthood. These supportive adults must be grounded in understanding trauma and the behavioral reactions to trauma. Misunderstanding trauma can lead to inaccurate labeling in schools, placement disruptions, school suspensions, and ineffective child welfare services. ([Jim Casey Youth Opportunities Initiative - The Annie E. Casey Foundation \(aecf.org\)](#))

Collectively, research also found that young adults emerging from foster care were able to identify and understand problems they were facing, yet struggle with decision-making and problem solving from a residual effect of being in foster care. Young persons in foster care describe being required to make decisions quickly while in care, often without supports to help them learn how to consider options in the face of a problem. This frames a common struggle as an environmental result rather than an individual deficit that is common among references to foster youth.

### **Planning with Young Adults in Child Welfare While Understanding Brain Development:**

Young people need positive youth development opportunities so that they can engage in healthy risk taking via constructive, meaningful activities. Specific suggestions on planning are listed below to augment existing approaches:

- Use a positive youth development approach for all young people in foster care, including those who may be experiencing developmental delays due to trauma and loss.
- Focus on the development of internal and external assets so that youth thrive.
- Continually provide young people with opportunities to connect with their families and communities.
- Intentionally create opportunities for involvement in extracurricular and community groups. Such activities ensure that young people spend time with multiple caring adults.
- Provide young people with the information, skills, and supports they need to drive the direction of their own lives. Help them see the results of their choices and actions.

- Frequently discuss with young people their strengths, interests, talents, goals, and aspirations. Help them clarify their goals and aspirations connections.
- Provide young people with the resources to pursue a passion that may lead to a sense of purpose in their lives. Examples of resources might include materials such as musical instruments or art supplies, the means to attend events related to their interests, or the opportunity to take classes that will help them develop their skills.

Providing young people with opportunities for healing and corrective relationship experiences helps to “rewire” adolescents’ brains for effective decision making as adults. Youth engagement in planning and decision making is widely known as best practice in meeting the needs of young people in foster care. Combining these two approaches by engaging young people in their own transition plans makes the most of a period of profound brain development. The resulting plan is more effective because it has the endorsement of the young person, and the planning process has provided a safe opportunity for the young person to practice adult roles alongside others on the team and, at times, learn from mistakes of judgement.