

## THE TEEN BRAIN – SOME BASIC FACTS

- ❖ While brain size plateaus around age 5, with little subsequent growth, the most rapid and significant “remodeling” for changes in brain function occur during adolescence. As teens work toward becoming smarter, more skilled and independent, neural connections for speed and efficiency, as well as for inhibiting incorrect responding, are beginning to strengthen.
- ❖ However, the brain’s center for judgment, learning and decision-making (frontal lobe) doesn’t fully mature until the early 20’s – as nerve cells are improving in connectivity, leading to improved communication between different parts of the brain. This leaves teens especially vulnerable to making quick, often risky, impulsive choices.
- ❖ The teen brain’s emotional center (amygdala) is functional but not well controlled by the frontal lobe, perhaps making teens more susceptible to unpredictable behavior. It can also make them especially susceptible to peer pressure.
- ❖ This developmental process also helps explain why teens tend to have egocentric views of situations, less adept at assessing and appreciating the effects of their behavior on others.
- ❖ The adolescent brain is tuned for making fast responses and for quickly acquiring new information. While this may serve as a positive function, there is also risk for the development of negative habits. With a teen’s ongoing rapid brain development and quick responding to stimuli, substances like drugs and alcohol can “hijack” the brain’s development, which can increase the risk for brain rewiring and addiction.
- ❖ Though the outward signs of substance intoxication may pass quickly, the effects on cognitive abilities often linger beyond when the substances have been eliminated from the body, which may be more profound in teens compared to adults. For example, after recreationally smoking pot on the weekend, cognitive function in teens may be impaired well into the school week.
- ❖ Early exposure to alcohol during adolescence has been shown to impair memory ability, both for short term memory and consolidation of learning, by affecting the region of the brain called the hippocampus.

**The beauty of the adult brain is that if we keep a cool head, we can filter through all the facts and influences to help our children understand this developmental “big picture” and make safer choices.**

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