



Key teen brain facts

- The brain does not fully develop until about the age of 24 years old.
- After infancy, the brain's most dramatic growth spurt occurs in adolescence.
- The amygdala is the one area of the brain which is almost fully developed in a baby – it works through instinct not logic.
- The amygdala is where all core emotions are (fear, anger etc). This is what we call our 'gut reaction'. The amygdala is often known as the caveman brain.
- Teens mainly use their amygdala (gut reaction) to make decisions whilst adults use their prefrontal cortex. So, teenagers often make decisions based on how they feel as opposed to reasoning out their decision.
- Teens often do not fully process cause and effect (another skill of the prefrontal cortex) so they really DO NOT know why they just did something daft or why they got in trouble for it.
- When our brain releases dopamine (the pleasure chemical) we start to seek even more excitement to feel even more pleasure.
- Teenagers need more dopamine to achieve the same levels of pleasure (excitement) as younger children or adults.
- Risk taking may be triggered by the desire for pleasure (excitement).
- Teens need 9-13 hours of sleep daily to concentrate, metabolise sugar and retain information effectively.
- As a teen, levels of the hormone melatonin, which promotes sleep, rises later in the evening (so you may not feel tired and ready for bed as early as adults do) and falls later in the morning than those of children and adults (so it's hard to get up).
- The teen brain can misinterpret instructions and emotions up to 40% of the time.
- The last part of the brain to develop is the prefrontal cortex. This controls our impulses, organisation, moral reasoning, emotional stability, concentration, and ability to prioritise. (As mentioned earlier this area of the brain is not fully developed until 24 years.)
- Information is only stored in short-term memory for about 20 minutes, however, when information is connected to prior knowledge and emotion, it can be stored in long-term memory.

Reference: Blame my brain. The amazing teenage brain Nicola Morgan 2013
Know your brain. Feed it, test it, stretch it Nicola Morgan 2007