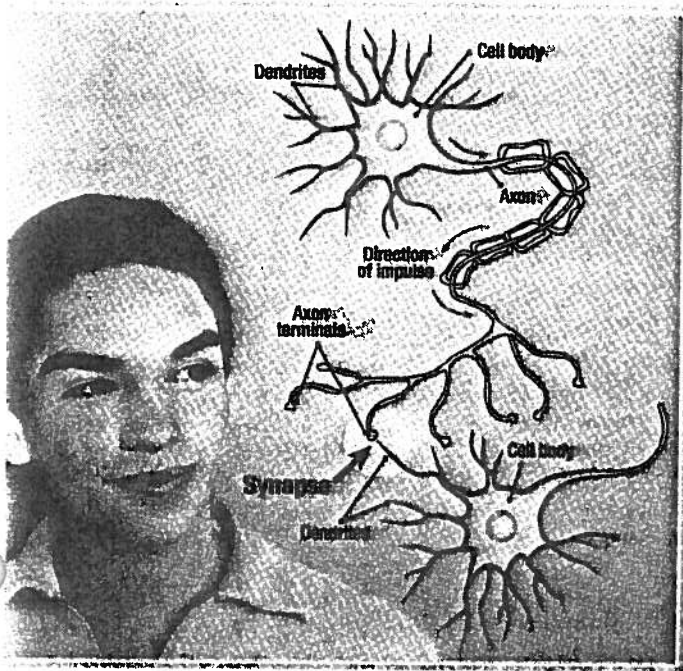


DID YOU KNOW? While the brain reaches its full size in early adolescence, parts of the brain continue to mature through a person's early twenties.

The Science of Teen Decision Making



Teenagers thrive on the spur of the moment. Whether it's jumping into the latest fad, rushing into a decision, or acting before thinking something through, teens are known for taking "risks." Science now provides answers on how the teen brain is particularly "wired" to do so.

First, a bit on how the brain works. The brain has a relay system in which different cells, called **neurons**, talk with each other by way of electrochemical impulses and chemical messengers, called **neurotransmitters**. Information flows through this system across small gaps called **synapses**. The signal originates in the cell body, travels down the **axon**, crosses the synapse to affect the **dendrites** on the neighboring cell. The ultimate outcome of this signaling system is a feeling or a thought or a behavior.

Research shows that one's brain reaches its full size between ages twelve and fourteen (depending on whether you are a girl or a boy). However, it also shows that a teen's brain development is not yet complete. Parts of the brain

continue to mature through a person's early twenties.

One part that matures late is the **prefrontal cortex**, located directly behind your forehead. It is important as a control center for thinking ahead and sizing up risks and rewards.

Meanwhile, a part of the brain that matures earlier is the **limbic system**, which plays a role in emotional responses. Since this system matures earlier, it is more likely to take control in teen decision making. When teens make choices in emotionally charged situations, those choices often have more to do with *feelings* (the mature limbic system) than with *logic* (the not-yet-mature prefrontal cortex). The result? Teens are more likely than adults to make impulsive, emotional decisions—rather than carefully considered, logical choices.

Learning how your brain works can help explain why you sometimes behave the way you do. With this knowledge, you can be better equipped to make smart choices.

Pick Your Brain: After reading the information above answer the following questions:

1. Brain cells, called _____, talk with each other through electrochemical impulses and chemical messengers called _____.
2. The _____ cortex, located directly behind your forehead, is an important _____ center for thinking ahead and sizing up risks and rewards.
3. One's brain reaches its full size between ages _____.
4. Parts of the brain continue to mature through a person's _____.
5. The brain's _____ system plays a role in _____ responses.

