

For Teenagers

We all remember what it was like entering puberty. Our brain and body undergo many changes that, for the most part, had very noticeable effects on our developing bodies. For boys it's their voices breaking and becoming more 'filled out'. For girls it's their bodies growing to fit a more mature outlook.

One of our growing aspects that the adults really tune into is the erratic, challenging emotions that take over our personalities. We get called 'childish' and 'melodramatic'. What our parents have got to understand is that our brain is not only growing at a quick pace but also experiences a moment of trying to find itself. Becoming teenagers feels like we have to abandon everything we knew as a child and start afresh. We have to enter a completely alien world with responsibilities, exams and out of control hormones.

As it turns out, the part of the brain that controls reasoning (the frontal part) is not yet fully developed. This is why some of the decisions we make might seem irresponsible or a bit stupid, as they would say.

However, the reasoning part of the brain is not the only part of our brain that is still developing. The speech area of our brain is not yet fully developed and so is, for the time being, controlled by the 'gut reaction'. It's a very reactive part of the brain that responds to feelings of fear and danger. This might be why teenagers have a tendency to say the first thing that comes to mind. This kind of control is similar to the way we read facial expressions. Which is why, same as speech, we may misinterpret situations without meaning to. Making some people very annoyed.



An aspect that always seems to drive our parents up the wall is that when we enter puberty, our body chemistry changes. This means our body clock is altered so we sleep later but for longer periods of time. This also means we get very hungry after our 12 hour nap. During this time our bodies release a hormone needed to grow. Also known as somatotropin. Amazingly, about 80% of growth hormone is released during sleep. So our beauty sleep is very important, otherwise we will get very cranky. In some ways we are still like the young babies we once were, who sleep for hours on end and then demand food the second they wake up.

During this period of time a regular bedtime routine can be helpful. Especially on a school night. I know you think it's juvenile to have a bedtime, even a late one, but unless you want to be sleep walking through lessons, it's something to consider. These routines should really be avoiding screens or caffeinated drinks, as these can stimulate the body, about half an hour before bedtime. Now this is probably not going to happen because we like our screens. So to start off with, I suggest you dim the brightness of the screens you are using. As time passes, our hormones will reprogram our internal body clocks so we will need less sleep and will be more capable of waking up earlier in the morning. Then you can watch all the TV your heart desires as you will find it a lot easier to fall asleep at night (ok, not literally!).

What's good about all of this is if you had a childhood with lots of fun and exciting experiences, then a secure foundation has been set to help you through the challenges our teenage brains experience during development. However, if you had a bit of a difficult childhood where your brain had to cope with hard circumstances, then during your teenage development, especially during your growth spurt, parts of your brain will be very reactive and sensitive to these changes. What you would need is to have calm, understanding adults to help your brain understand and mature to help with reasoning and decision making.

Lily, Age 16.

YouTube videos about the baby's brain

The Centre for the Developing Child at Harvard University has made a series of excellent videos, less than 2 minutes each, about the developing brain.

The first, *Experiences build brain architecture*, is a general introduction to the development of the brain. The second one shows how important the interaction between the baby and their parents is for encouraging brain development.

Experiences build brain architecture (YouTube)

<http://www.youtube.com/watch?v=VNNsN9lJkws>

Serve and returns interactions shapes brain circuitry (You Tube)

http://www.youtube.com/watch?v=m_5u8-QSh6A