

Understanding the Teenage Brain

Puberty, the Teenage Brain and Sleep



watch the video here

<https://www.youtube.com/watch?v=BzFOja7ZeXE>

The film is divided into three parts: **Puberty, The Teenage Brain and Sleep.**

Here are the main topics covered:

Puberty:

- A description of puberty
- the psychological effect of puberty
- the experiences of those who are either very early or very late developers

The teenage brain:

- A description of the main changes that take place during the teenage years
- the effects of those changes, both positive and more challenging
- The role of hormones
- Risk and reward
- Why this information can be of help to parents and carers

Sleep

- The teenager's body clock and melatonin
- What happens during sleep
- Why sleep really matters for teenagers
- Helping teens overcome the melatonin effect



Puberty



Many parents and carers will be aware that this is an important stage of development. Whilst the outward signs of sexual maturation are clear for all to see, puberty is a process that involves all major organs, and the body changes in a variety of ways at this time. There is wide variation in the timing of puberty – some start as early as 10, others may not begin puberty until 13 or 14. This variation is quite normal, and has no lasting influence.

Most young people go through puberty without any difficulty, but some do struggle. It is important for parents and carers to be aware of this, and to prepare their young people as best they can for the changes that they will experience.

The changes in the body and the emotions associated with puberty can have a psychological impact. Some may feel dissatisfied with their changing body, while others worry whether what is happening to them is normal. There are a few who are very early or very late in their development. These young people may feel out of step with their friends, and this may add to the worries. Again, parents and carers should be able to offer extra support to this group.



puberty



The teenage brain



It is only recently that we have learnt about the major changes that take place in the brain during the teenage years. These changes mean that this is a stage of significant restructuring and reorganization. The brain matures in all areas, which leads to improved thinking and better memory. However, the grey matter reduces in size, which is a necessary process but one that may lead to temporary uncertainty and confusion. In addition, many key hormones become active at this time. As a result, teenagers may experience moodiness and difficulties with emotion regulation.

As a result of the changing hormone balance, some teenagers may take risks or be unaware of the consequences of their actions. Others may be especially sensitive to rewards. This is an important finding, as it shows that adults should try and focus on the positives. For teenagers, recognition and endorsement is especially important, and is the most effective way to encourage motivation.

Our increasing knowledge about the teenage brain is proving a great help for parents and carers. Once it is understood that much of the “puzzling” behaviour can be readily explained by reference to the changes in the brain, it is easier for adults to forge more positive relationships. A better understanding of the background to teenage behaviour has the potential to make life much easier for those living or working with teenagers.

the
teenage
brain



Sleep



As a result of research on the brain we have learnt that the hormone that makes us sleepy – melatonin – works in a slightly different way for teenagers. The teenage body clock is set so that melatonin is released into the brain somewhat later at night for young people than it is for adults. This means that, for some teenagers, it is harder to get to sleep at night.

The consequence of this is that, for those who get up early to go to school, they may be missing much needed sleep. Teenagers need their sleep. Furthermore, we now know that a lot happens in the brain during sleep. One very important fact is that during sleep what has been learnt during the day becomes cemented. We call this memory consolidation.

There are many ways in which adults can help teenagers with their sleep. Having a quiet period of relaxation before bedtime can help, as can making sure that phones and other devices are switched off. The most important lesson is that good sleep routines help young people overcome the melatonin effect. Too little sleep can really affect learning and behaviour. Adults can play a big role by helping young people understand the importance of getting sufficient sleep.



sleep

TOP TIPS

Puberty

- Learn as much as you can about puberty
- This will help you provide reassurance when your child has worries or anxieties
- Make sure that your daughter or son knows about puberty before it occurs
- Keep an eye out for those who might either be very early or very late
- Those who fall into this group will need extra reassurance
- If necessary, get medical advice if puberty occurs before the age of 9 or after the age of 15

The Brain

- Recognize how much change is going to occur during the teenage years
- Note that there is wide variation between individual young people in the rate of development
- The more adults can inform themselves about the changes in the brain, the better
- Help young people understand these changes too
- This will prove reassuring for them when they experience moods or difficult emotions

Sleep

- Accept that many teenagers will find it difficult to get to sleep
- Learn about melatonin and its effects
- Help young people understand what happens during sleep
- Help young people understand that they need as much sleep as possible
- Help young people get into good sleep routines
- Act as a role model and switch your own phone off at night



Where to find further information

Websites

[www.nhs.uk/Live well/sexual health \(puberty\)](http://www.nhs.uk/Live%20well/sexual%20health%20(puberty))

www.brook.org.uk (puberty)

[www.nhs.uk/Live Well/sleep and tiredness \(sleep\)](http://www.nhs.uk/Live%20Well/sleep%20and%20tiredness%20(sleep))

www.youngpeopleshealth.org.uk (general health)

Further reading

Inventing Ourselves: The secret life of the teenage brain by Sarah Jayne Blakemore.
Penguin

The Teacher and the Teenage Brain by John Coleman.
Routledge

What's My Teenager Thinking? Tanith Carey.
Penguin Random House

Why We Sleep. Matthew Walker. *Penguin*