

# The developing teen brain... and how parents can help



Serving young people  
in their community

## Aims of this presentation:

- To gain a basic understanding of the pre-teen / teen brain.
- To understand what happens to the brain during these years.
- To consider what parents and carers can do to help re-wire and develop our teenager's brains.

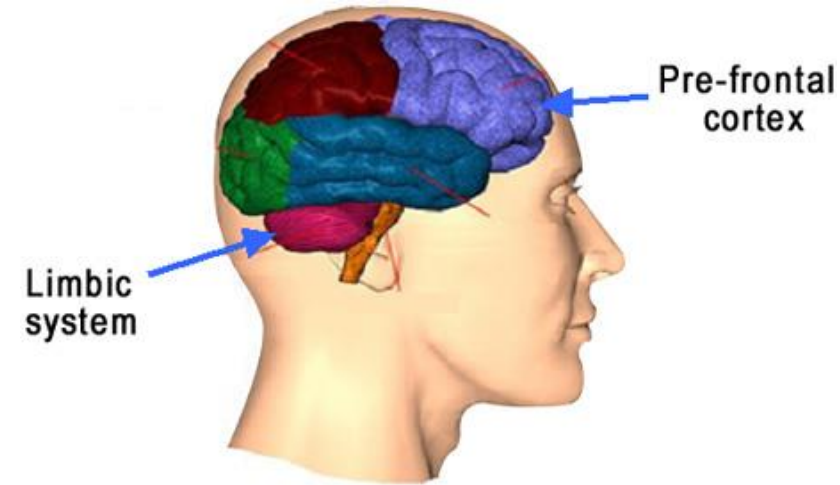


- Teenagers can get bad press and as such parents can feel judged.
- Thanks to scientific developments in MRI brain scanning, we now know that there **are biological reasons for 'typical' teen behaviours.**
- Apart from development between the ages of 0-3, the brain is most elastic during adolescent years. This means **between the ages of 10-24, the brain is developing and changing.**
- We also know that there are ways **parents and carers can help promote positive brain development of their child.**



# The science: areas of change in the brain

- The pre-frontal cortex is known as the **'rational brain'**. It is associated with thinking, planning and problem-solving. Some teenagers may **not be able to think ahead or consider consequences of their actions because this part of the brain is in development until age 25.**
- The limbic area of the brain is known as our **'emotional brain'** which **develops faster than the rational brain.** This may be an explanation **for risky behaviour, pleasure seeking and reduced logic/reason.**
- The brain matures not just through growth and experience, but by cells (synapses) sparking; making connections. These develop through childhood, but are then removed or 'pruned' in the teen years. **This means development can appear to go 'backwards' for a while during teen years.**



# During teen years, the brain is pruned like a rose



- This pruning or removal of nerve cells in the brain is a **normal and healthy part of development**. The brain is cut back to promote stronger growth.
- However, it can mean a **period of uncertainty for our teens, a difficulty in making decisions** or confusion over why they seemingly can't do things they used to do.
- They can be more **sensitive to external stress and pressure**.
- The two halves of the brain strengthen **to improve the ability to think abstractly** and to make connections between different ideas.
- The development of stronger synapses means **teenagers learn faster**.



Teens also have an influx & imbalance of hormones resulting in mood swings

## Thrill-seeking

- Dopamine is a 'feel good' hormone.
- A rapid increase can explain some risky or thrill-seeking behaviours.



## Sleep

- **Melatonin** is the hormone released at night to tell us to go to sleep. In adolescents, this is released later, which is why many teens go to bed late. They then can't get up in the morning because they haven't had enough sleep. It's like constant jet-lag!
- Sleep deficit (less than 7 hours a night) can influence both learning and behaviour.



## Anxiety

- Hormones such as **cortisol** and **serotonin** fluctuate considerably during pre-teen / teen years.
- The release of cortisol is linked to experiences of anxiety, whilst serotonin helps moderate anxiety.
- If these hormones are in flux, emotions may be difficult to manage.



# Drawbacks of changes in the brain

- Upheaval in the brain can cause:
  - Confusion
  - Difficulties with perspective taking, problem solving and planning
  - Not knowing what to think or how to decide.
- Hormone imbalance can lead to:
  - Mood swings
  - Wanting to have fun
  - Desire to take risks
  - Anxiety.



# Beneficial effects of brain change

Maturity leads to:

- Improved memory
- Logical thinking
- Greater vocabulary
- Scientific reasoning
- Better communication skills
- The two halves of the brain are more connected and work better together increasing abstract thinking.





5 top tips for parents and carers  
to help their pre-teen / teen...



# 1. Look after yourself – if you are strong, you can be strong for your pre-teen / teen



## 2. Show and encourage 'Protective Behaviours'

- Practice self-control
- Help them solve their own problems
- Show empathy
- Be positive – show faith, hope, belief
- Encourage close relationships with peers and key adults
- Be resilient – overcome challenges
- Be kind – to yourself and them!





## 3. Promote resilience

- Provide consistent limits and boundaries
- Recognise positives
- Value and encourage their interests
- Encourage positive peer group experiences
- Appreciate effort
- Let them make mistakes and help them learn from them
- Listen without giving advice
- Be approachable or ‘tellable’.



## 4. Help with routines

- Good sleep routines are important to overcome the 'jet-lag' syndrome and support the brain to repair, mature and embed learnings to the long term memory.
- Exercise routines and getting enough daylight help with sleep and get more oxygen to the brain.
- Moderate use of screens & social media.
- Be consistent.



# 5. Use it or lose it!

Remember how the brain prunes the bits we don't use?

- Encourage brain development by supporting your pre-teen / teen to try new experiences, learn new things and widen their interests.
- Help them practice choice and decision making.



# Summary: Teens are trainee-adults

- Some teenagers take risks or do things without thinking. Other teenagers will over-think and become cautious or anxious. This is to do with different rates of the brain development.
- The brain is not considered fully mature until age 25.
- There are other influences and explanations for behaviour, eg hormones, genetics, peers, and social circumstances.



# Further information & support:

- Your school
- Access and Referral Hub: 0300 300 8585 or 0300 300 8123 (out of hours)
- John Coleman website [www.jcoleman.co.uk](http://www.jcoleman.co.uk)
- Young minds [www.youngminds.org.uk](http://www.youngminds.org.uk)





# Background information:

- 4YP has been commissioned by Central Bedfordshire Council to deliver information sessions about the Teen Brain.
- This presentation has been adapted for remote information sharing during the current Covid-19 lockdown situation.
- The content is generic and is aimed to be helpful information to all parents/carers of pre-adolescent and adolescent young people (age 8-24).
- This presentation has been informed by psychologist Dr John Coleman (specialising in adolescence) and Protective Behaviours (a framework encouraging self-empowerment and resilience in children and young people).

**If you find yourself in a crisis situation or have concerns that a child is at risk of harm or being harmed, contact the Access and Referral Hub:**

**0300 300 8585 or 0300 300 8123 (out of hours)**



# 4YP's mission

To help young people become successful, contributing and aspirational members of society. To help them make the right choices for their futures and help regenerate areas and communities by offering services that improve personal well-being and increase social inclusion.

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