



Full of Potential: Your Brain Nicotine Free

# Nicotine and the Brain

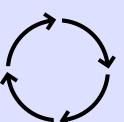
- Nicotine is a
   stimulant drug that
   is highly addictive
- It mimics natural chemicals like acetylcholine, disrupting brain signalling
- It hijacks the reward pathway, flooding the brain with dopamine and creating dependency

This leaflet summarises what your teenager will learn in You and Me NI Vape Free Lesson 1. It focuses on brain development, the effects of nicotine and how to stay nicotine free.

## Understanding the Brain



- The brain continues developing until around age 25
- The prefrontal cortex, responsible for decision-making and impulse control, matures last
- Teen brains are full of potential learning, creativity and planning for the future



## **Addiction Cycle**

- Nicotine causes a temporary 'feel-good' effect
- As levels drop, cravings increase, leading to repeated use
- Over time, the brain struggles to feel pleasure without nicotine





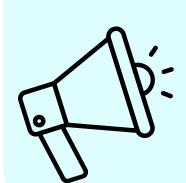
#### Temporary effects vs Real risks

- Mood boost vs Addiction
- Alertness vs Anxiety
- Stress relief vs Poor sleep
- Light-headedness vs
  Disrupted brain
  development



#### **The Good News**

- It's never too late to quit
- Within a month of quitting:
  - Brain begins to heal and rewire
  - Mental clarity and mood improved



 Cravings reduce significantly

## Why Teens Are More Vulnerable



- The adolescent brain is still forming connections
- Early nicotine use strengthens pathways that lead to addiction
- Avoiding nicotine allows unused receptors to be pruned, reducing future risk

## Support Is Available



- Talk to your GP or pharmacist about Nicotine Replacement Therapies (NRTs)
- Talk to Frank textline (82111)
- Stanford My Healthy Futures
- Cancer Focus quit services



## **Key Takeaways for Parents**

- Your teen's brain is amazing and still developing
- Nicotine can cause lasting harm to brain function and mental health
- Education and support can empower teens to stay nicotine-free



