



American Heart Association.

# The truth about how Tobacco and Nicotine Harm Mental Health + Brain Development

We know that **tobacco use and nicotine addiction** can harm heart and lung health, but emerging research shows it also negatively impacts **mental health and brain development**.

**USING E-CIGARETTES**, including vaping products **CAN WORSEN DEPRESSION** symptoms in youth.



– Frequent users of e-cigarettes have **2.4 TIMES HIGHER ODDS**

of reporting depression compared to people who have never used e-cigarettes.

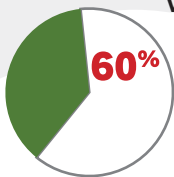


A study has shown **COLLEGE STUDENTS** who use **E-CIGARETTES — HAVE HIGHER RATES** of Attention deficit hyperactivity disorder (ADHD) symptoms.



More than **4 IN 5 YOUTH AND YOUNG ADULTS SURVEYED** said they started using e-cigarettes to decrease stress, anxiety or depression.

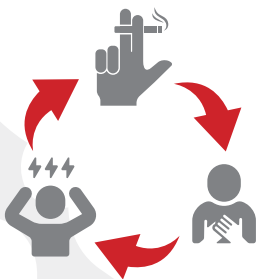
In a recent survey of 1,000, 15-to-24-year-olds who frequently use e-cigarettes,



say they **DIDN'T KNOW** that using these products could actually increase their anxiety and irritability.

Many tobacco users **MISTAKENLY BELIEVE** tobacco products can relieve stress or anxiety, or improve mental health or mood.

This could be due to the **CYCLE OF WITHDRAWAL SYMPTOMS** caused by tobacco use that are followed by temporary relief once they use again.



Studies have suggested that **NICOTINE ALTERS FEAR AND ANXIETY RESPONSES**, and contributes to the development, maintenance and recurrence of anxiety disorders.



**KICKING THE ADDICTION** to nicotine can reduce anxiety, depression and stress, and improve positive mood and quality of life.



## Nicotine/Tobacco Symptoms:

- Nicotine disrupts memory, attention and drug reward processing — and these effects are even more serious during brain development.
- Young people who use nicotine have a harder time paying attention in class and remembering what's being taught
- Youth exposed to nicotine experience increased difficulty regulating emotional responses well into adulthood.

