

# How do e-cigarettes affect teens' brains?

By Alli Kieckbusch

E-cigarettes contain harmful chemicals like formaldehyde, arsenic and nicotine. In Yellowstone County, 48% of local high schoolers and 26% of middle schoolers have tried an e-cigarette, according to the most recently published Montana Youth Risk Behavior Survey.

Healthcare professionals know vaping isn't safe for youth. When children or teens use a nicotine product, they are at higher risk than adults are for long-term addiction.

A person's brain is still developing until around age 25. This means the human brain, especially in teen years, is still learning important new skills. Teens are starting to develop their social tendencies, ability to respond to stress and tactical skills. Many critical developmental skills are hindered when nicotine is introduced to a young brain.

For example, nicotine can harm the parts of the brain that control attention, learning, mood and impulse control, according to the Centers for Disease Control and Prevention. Adults exposed to nicotine in their teen years will struggle to handle emotions and snap decisions. They will have more difficulty in learning and coping with life stressors than someone who didn't use a nicotine product.

Teen brains are more susceptible to long-term addiction. When nicotine is introduced to the brain before age 25, it becomes much harder to quit. E-cigarette manufacturers know that fewer people are smoking cigarettes. They market e-cigarettes to youth knowing they are likely to be long-term customers. The flavors and colorful packaging are carefully designed to hook the younger generation.

Vaping is also bad for our physical health and affects teen bodies significantly. Similar to smoking, vaping can lead to permanent lung damage, COPD (chronic obstructive pulmonary disease) and cancers of the lungs, mouth and throat. Vape products contain cancer-causing chemicals.

Although we know vaping is unhealthy, these products are so new that the long-term effects of the chemicals are still unknown.

What can parents do to protect their children and teens? Here are a few tips:

- Set a good example by being tobacco free yourself. Youth look to their parents for guidance and setting a healthy standard is important.
- Many kids turn to vaping when they feel anxious or depressed. Introduce healthy coping mechanisms so children will have the skills to maintain better mental health. For example, deep breathing or light exercise can help with stressful moments.
- Have open and honest conversation with your children about the harms of vaping. Frequent, healthy communication helps kids will feel comfortable talking with you about their choices.
- If your child uses e-cigarettes and you want to help them on their quitting journey, talk to them about the youth Quit Line, My Life My Quit, at [Quitlinemt.com](http://Quitlinemt.com) or call 800-784-8669.

Many Montana children are unaware of the danger of e-cigarettes. It's important that parents educate them to ensure they can live healthier and free of addiction.

*Alli Kieckbusch, a prevention health specialist at RiverStone Health, can be reached at [allison.kie@riverstonehealth.org](mailto:allison.kie@riverstonehealth.org).*