

# The dangers of vaping with a heart condition

What young people need to know.



If you were born with a heart condition or developed one in childhood, it's important to understand the risks of vaping for your heart.

Vaping is when people use e-cigarettes to inhale a flavoured mist, often containing nicotine. Vaping is becoming more popular in recent years among young people, but research has shown it can harm your overall health, especially your heart.1

# Impact on heart function

Using e-cigarettes and vapes is very risky for people with heart conditions. Vaping immediately increases blood pressure, heart rate, and tightens blood vessels, straining the heart. For those with childhood heart disease, vaping can lead to additional problems like irregular heartbeats and blood clots, affecting the heart's ability to work properly.1



### Toxic substances in vapes

Vape products can contain thousands of harmful chemicals and substances. such as biofuel, paint thinner, and bug killer.<sup>2</sup> Some studies have identified toxic metals like lead, nickel, chromium, and manganese in these products as well.3 When you vape, there is a high risk of these toxic substances entering the bloodstream, and potentially causing damage to your cardiovascular system.

#### **Nicotine**

Many vapes contain nicotine, even when they say they are nicotine free, which is particularly bad for your heart health. Inhaling nicotine raises blood pressure, heart rate, and blood flow to the heart, increasing the risk of heart problems. Nicotine is also highly addictive, especially for young people, and can damage parts of your brain which control attention, learning and mood.4,5

#### **Lung Function - E-cigarette or Vaping Use-Associated Lung Injury (EVALI):**

Taking care of your lungs is important when you have a heart condition because your heart and lungs work closely together to move oxygen-rich blood around your body.

Worryingly, doctors have seen a pattern of lung injuries and deaths due to vaping. Many teenagers end up in the hospital with vaping-related lung problems.

In one month alone in the USA, there were 2,807 cases of EVALI, and 68 people died from these lung issues.6



In 2020, a 15-year-old girl from Sydney got very sick from vaping. She was taken to the hospital with a high temperature, fast heart rate, and was struggling to breath.

Her condition quickly worsened, causing severe lung problems. **Doctors found her condition** was due to her regularly vaping nicotine for seven months. While the patient did recover, she still has damage to her lungs. This story highlights how critical getting sick from vaping can be, even when you don't have a heart condition!7

# **Making Informed Choices**

Regular use of vapes with their harmful chemicals and nicotine, can seriously harm your heart, lungs and blood vessels. Knowing the risks of vaping, especially if you have a childhood heart condition, is really important. If you're already vaping and have a heart condition, we recommend you seek support to quit. Quitting vaping is a positive step to protect your heart and improve your heart health.

# **Get help:**

 For help guitting, connect with Quit on 13 78 48 or via guit. org.au.

Quit have specific resources to help you quit vaping.

- For more information on vaping, visit the Alcohol and Drug Foundation's info page.
- For non-judgmental and confidential information or advice, call the DrugInfo line on 1300 85 85 84.
- For mental and physical health support, visit headspace.org.au.

#### References

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3. National Center for Biotechnology Information. (2020). Electronic cigarettes and cardiovascular risk: Is there a causal relationship? [Link]

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5.Australian Heart Foundation. (2023). Government Commended for E-Cigarette Reforms. [Link]

6.American Heart Association. (2022). Cardiopulmonary Consequences of Vaping in Adolescents: A Scientific Statement From the American Heart Association. [Link]

7.Chan, B. S., Kiss, A., McIntosh, N., Sheppeard, V., & Dawson, A. H. (2021). Ecigarette or vaping product use associated lung injury in an adolescent. Medical Journal of Australia, 215(7), 313-314.e1. DOI: 10.5694/mja2.51244.

This fact sheet was reviewed and updated by HeartKids in February 2024. It was endorsed by our Clinical Advisory Committee at the time of publication. Clinical information might change after this date. The information in this fact sheet is general. It is not a substitute for medical advice from your doctor. Always talk to your doctor about matters that affect your health.