

## **THE INCREASED RISK OF DEVELOPING CARDIOVASCULAR CHALLENGES WITH LENGTHENED CIGARETTE AND VAPO USE**

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### **SYNOPSIS**

Smoking is one of the risk factors for the development of cardiovascular disease. Over 8 million deaths result from tobacco use every year, and it is one of the leading causes of preventable deaths worldwide. In 2020, a South African study found that the highest onset of smoking was between the ages of 15 and 22, however, there were some who began as early as 9 years old. Since their introduction in 2007, E-cigarettes, also known as vapes, have continuously become popular over the years, leading some to debate whether vaping is the safer option compared to smoking tobacco. However, both the use of tobacco and e-cigarettes is associated with an increased risk for heart attack, stroke and coronary heart disease.

### **INTRODUCTION**

Ashleigh Nothando Mwendaunya, a Physiology Honours student at the University of the Free State, is here to talk about smoking and vaping, and also raise awareness to the increased risk of developing cardiovascular challenges.

Welcome Miss Mwendaunya, we are excited to have this discussion with you today.

### **QUESTIONS AND ANSWERS**

#### **1. What is the difference between cigarettes and vapes?**

The difference between smoking and vaping is that smoking delivers nicotine by burning tobacco, and vaping delivers nicotine by heating a liquid. Vaping involves breathing in an aerosol that contains nicotine and flavoring through an e-cigarette.

#### **2. Is vaping safer than smoking?**

In theory, these products were created to be a safer alternative to smoking cigarettes, but vaping still has harmful effects. Neither smoking nor vaping is beneficial to human health. Vapes also contain nicotine which is very addictive and can affect brain development in teens. The nicotine in vapes can be increased to more than what one would normally find in a cigarette. Besides nicotine, e-cigarettes vapor includes harmful substances such as diacetyl (a chemical linked to serious lung disease) and cancer-causing chemicals. The long-term effects of vaping are not yet well understood.

#### **3. Can one quit smoking by vaping?**

Some people have used vaping as a way to quit smoking cigarettes. However, Risks associated with cigarettes are not reduced by vaping or smoking cigarettes with lower machine-measured quantities of tar and nicotine. It is possible that vaping to quit smoking may lead to dual use (smoking and vaping interchangeably).

#### **4. How does smoking affect your heart?**

When you breathe in cigarette smoke, the blood that is distributed to the rest of the body becomes contaminated with the chemicals produced by burning tobacco. These chemicals can cause fatty plaque buildup (also known as atherosclerosis), making it difficult for blood to flow through blood vessels to vital organs such as the heart. The blockage of blood flow to the heart can lead to a heart attack.

**5. How can one avoid smoke-related cardiovascular complications?**

The best way to protect your heart health is to refrain from smoking. If you are a smoker, quitting has been proved to improve heart and blood vessel complications that result from smoking. Although smoking is a difficult habit to quit, it is achievable, and medicinal quitting therapies like nicotine replacement therapy (NRT) may be able to help you on your quitting journey.

**6. How fast after one quits smoking does the risk of cardiovascular complications decrease?**

Results depend on how advanced the complications already are. For example, an individual with early stages of disease in the blood vessels supplying the heart should expect symptoms such as shortness of breath and chest tightness to improve quickly. Whereas an individual that has late stages of disease in the blood vessels supplying the heart and a history of heart attack, the risk of another heart attack goes down after they quit smoking. One to two years after quitting, the risk of another heart attack may be reduced by more than half.

**7. Why is vaping so popular among the youth (especially teens)?**

The three most popular reasons for vaping among the youth are that a friend or family member also used e-cigarettes, the wide range of flavours available and the belief that e-cigarettes are less harmful than cigarettes.

**8. Can you vape without nicotine?**

Yes, however, vaping has side effects whether or not the vape fluid contains nicotine. The side effects vary depending on the base fluid used, flavouring and other ingredients used. Some side effects of vaping without nicotine include irritation of mouth and airways, inflammation and toxicity to cells.

**9. Why do people keep smoking after they start?**

There's a part of your brain that tells you when something feels good, like when you are eating good food or feeling happy. Nicotine affects that part of your brain and makes you think that you like it. It does this while harmful chemicals destroy other parts of your brain and that is what makes it difficult to quit smoking.

**10. Is second-hand smoking a health hazard?**

Second-hand smoking (also called passive smoking) is a health hazard for both smokers and non-smokers. According to the better health channel, non-smokers living with

smokers have approximately a 30% increase in the risk of heart disease. Exposure to second-hand smoke is mostly risky for children and babies and it increases the risk of sudden unexplained death in infants. It also increases the likelihood of developing asthma.

## **OUTRO**

Thank you, Miss Mwendaunya.

Thank you for listening, to learn more about the risks of smoking and vaping, the internet is a great place to start. If you would like help to stop smoking or vaping please visit the Heart and Stroke foundation South Africa on [heartfoundation.co.za](http://heartfoundation.co.za), or CANSA on [cansa.org.za](http://cansa.org.za), alternatively, consult your local hospitals and clinics for more information.

Thank you and have a healthy day.