

Changes in the Frequency of Airway Infections in Smokers Who Switched To Vaping: Results of an Online Survey

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Abstract

Background and aim: Cell and animal studies suggested that use of e-cigarettes may increase vulnerability to respiratory infection, though the available studies have serious limitations. Limited data are available on respiratory health of vapers.

Methods: An on-line survey assessed subjective changes in respiratory symptoms in smokers who switched to vaping for at least two months.

Results: Among 941 responders, 29% reported no change in respiratory symptoms, 5% reported worsening, and 66% reported an improvement. Among qualitative comments, 232 elaborated on positive and 15 on negative experiences.

Conclusion: The switch from smoking to vaping was associated with a reduced incidence of self-reported respiratory infections. Further studies using objective measures in samples that are not self-selected are needed.

Keywords: E-cigarettes; Vaping; Airway infections; Smoking cessation; Survey

Introduction

E-cigarettes (EC) deliver nicotine without combustion chemicals and are therefore considered to be much safer than conventional cigarettes [1,2]. Some potential risks however have been flagged up in cell and animal studies suggesting that vaping may increase vulnerability to respiratory infections [3,4]. There are only limited data available on respiratory health of vapers. Human EC trials reported no significant adverse respiratory effects associated with EC use for up to 1.5 years and a follow-up study of smokers with asthma who switched to vaping found significant improvements. We conducted an on-line survey to assess subjective changes in respiratory symptoms in smokers who switched to vaping for at least two months [5,6].

Methods

Design

The survey was posted by BM on two large German vape forums previously used by BM, E-Rauchen-Forum (<http://www.e-rauchen-forum.de/thread-82289.html>) and Dampfertref-Forum (<http://www.dampfertref.de/t118747f1379-Umfrage-Haefu-igkeit-von-Atemwegsinfektionen-quot-Schnupfen-quot-nach-Umstieg-auf-ECigs.html>). Most of the active members of these forums are ex-smokers using refillable 'tank' system EC products.

The pre-ambule to the survey explained that a recent article suggested that vaping could increase rates of common cold and respiratory

infections; that BM's experience was the opposite; and that the purpose of the survey is to find out about any changes in rates of respiratory infections vapers experience [3]. Responders were asked to respond honestly and to note that the survey concerns respiratory infections such as common cold and no other respiratory diseases such as asthma or COPD. Responses were invited only from vapers who stopped smoking completely or reduced smoking by at least 95% and who have been vaping for at least 2 months. Appendix A includes verbatim translation of the pre-ambule and a screenshot of the survey page.

The question asked was: Since switching to e-cigarettes, the frequency of any airways infections I get has: a) decreased; b) not markedly changed; c) increased. We calculated proportions for each answer and their confidence intervals for each answer using SPSS.



Figure 1: Self-reported changes in airway infections after switching from smoking to vaping (N=941).

There were 247 qualitative responses commenting on improvements or worsening in the rates of respiratory infections after switching from smoking to vaping. The total of 232 comments concerned positive and 15 concerned negative effects.

Here are some typical reports of positive changes: "As a smoker I had an almost continuous cold. I've been a vaper for almost 2 years, and for almost 2 years I've had no sniffing, no cough, nothing.."

"I've been vaping for 13 months and had none [infections] while earlier I had colds and sore throat 2-3 times a year."

"I've been vaping for 2 years and in this time I had one flu-like infection. As a smoker I used to have them at least twice a year, for weeks at a time. I used to have to deal with a persistent cough and mucus production. This year the infection had passed within 3 days."

Here are some examples of negative reports:

"I smoked for 15 years and in those 15 years I was never really ill. After quitting smoking I have already had 2 flu-like infections [...]."

"I have completely switched to vaping in 2009. At that time, the first 3 smoke-free years I was definitely sick less often than during my smoking years. But I have observed that I have been sick more often in the last 3-4 years (a cold about 4-5 times a year). However, I must say that I became a father 4 years ago. Maybe it has to do with my daughter - she often passes on her infections to me. I'm mostly ill after she has been ill."

Discussion

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