

Survey Comparing Vaping with Smoking

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Introduction

The nicotine vaporizer (NV)--commonly called the "electronic cigarette"--comprises three parts: a battery, a heating component, and a cartridge containing a liquid solution. The battery activates the heating component, which vaporizes the liquid and creates a mist. The vaporized mist delivers nicotine to the body upon inhalation.

The NV was introduced in China in 2003 and has since become popular in many parts of the world, including Europe and, in 2009, the United States.

Aim

The purpose of the survey was to compare the habits and behaviors of smoking with those of "vaping."

Method

The link to the 9 question, online survey (through SurveyMonkey.com) was posted on several online forums dedicated to vaping. Most of these forums were specific to the U.S. Participation was voluntary and offered no incentive for completion.

Criteria for participation were as follows:

- Must have completely stopped smoking tobacco cigarettes.
- Must use an NV with a battery voltage of 3.6/3.7 (3.7 volts is the standard voltage of the batteries included with "e-cigarette" kits and for some of the modified NVs; e.g., the "Protege" and the "Laser Mod").
- Must use bottled nicotine liquid for filling cartridges or for dripping liquid directly onto the heating component
- Must not use pre-filled cartridges

Results

There were 181 respondents. One respondent did not answer any questions.

Responses to "How long has it been since you stopped smoking tobacco cigarettes?" showed a strong correlation with the responses to "How long has it been since you started vaping (using an e-cigarette)?" That is, 26.7% of respondents reported that they had stopped smoking tobacco cigarettes 7-9 months ago; the same percentage reported having started vaping within the same period. (See Fig. 1)

Respondents were asked "Are the puffs you take from the e-cigarette bigger, smaller, deeper, more shallow, or similar to the puffs you took from tobacco cigarettes?" and were allowed to choose as many answers as applied. The two options selected most (35% and 42%, respectively) were "similar" and "bigger," with 27% of respondents also selecting "deeper." Fewer than 15% selected "smaller" or "more shallow."

When asked, "Compared with the way you smoked tobacco cigarettes, how long do you hold the vapor from an e-cigarette in your lungs?" (the same, longer, shorter, I do not inhale into my lungs, or I do not hold it in), 64.4% answered "the same."

Nearly 40% of respondents say they use the e-cigarette "a little more" often than they smoked. An additional 23% said they use it about the same. Nearly 60% of respondents use between 1.5 and 2 ml of bottled nicotine liquid, with about 30% using more than that. Approximately 65% of respondents use a nicotine liquid strength between 13 mg and 24 mg; 13% use a higher strength.

Conclusion

The correlation between length of time since quitting smoking and length of time the person had been vaping suggests that most respondents quit smoking within 30-60 days after beginning use of the NV. (Quitting smoking was a condition for participation.) (See Fig. 1)

Results suggest that many of the respondents use the device as a replacement for cigarette smoking and use it in a similar manner to the way they smoked tobacco cigarettes.

Respondents who said they use the NV "much more" than they used tobacco cigarettes, as a whole, use substantially lower levels of nicotine than those who use it less or the same as tobacco cigarettes. Presumably, those using the device "much more" do so to increase nicotine intake.

Average nicotine consumption is around 30-40 mg per day, although at this time we cannot confirm how much nicotine is absorbed by the body through this method of delivery.

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