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The Bottom Line on E-Cigarettes

The logic behind the use of e-cigarettes is that they're better than traditional cigarettes and that vaping will help people quit smoking. Let's take a look.

The major benefit attributed to e-cigarettes is less exposure to toxic chemicals resulting in fewer harmful effects. In a few of the studies on chemicals found in the nicotine liquid, some metals such as cadmium, aluminum, and nickel were identified as well as the expected ingredients such as glycol and polyethylene glycol from glycerin usually found in e-cigarette liquid as a propellant (1). We don't know whether they're harmful; we just know that they're there. But there appear to be no pesticides, tar, or heavy metals as are often found in regular cigarettes.

The research on nicotine from vaping also seems to be non-threatening. I just can't bring myself to say beneficial because there's nothing beneficial about nicotine—it's a serious drug and highly addictive. It may also be bad for the cardiovascular system. In a small study, researchers examined the effects of traditional cigarettes and e-cigarettes on 40 volunteers (2). The most concerning finding is that both types of cigarettes interfered with the nitric oxide system, the system responsible for dilating blood vessels, especially in the cardiovascular system. Without the ability to dilate blood vessels when needed, the heart is stressed. While not as bad as traditional cigarettes, e-cigarettes had the same negative effect although to a lesser degree.

What about vaping and quitting smoking? Opinions vary. A lot. The United Kingdom just released a report recommending e-cigarettes as part of a smoking-cessation program (3). One of the keys to their recommendation was that e-cigarettes are 95% less harmful than traditional cigarettes. In the U.S., healthcare professionals are less likely to endorse that position. A recently published study suggested that vaping may lead to smoking traditional cigarettes in teenagers (4); this small study was done in a Los Angeles school district. But two opinion pieces accompanied the research paper: concerns about e-cigarettes and the lack of research on health risks, and a concern that it may initiate nicotine addiction that proceeds to traditional cigarette use in young people.

The Bottom Line

The easiest recommendation on vaping would be to wait until there's more research because that's absolutely the case. That's just too easy, so the bottom line is this.

- If you smoke cigarettes, and you want to try e-cigarettes as a step in quitting nicotine altogether, do it.
- If you smoke cigarettes and you want to switch to e-cigarettes to get the nicotine without the other chemicals of traditional smoking, do it. While we don't know everything, if nothing else it reduces exposure to the highly toxic chemicals in traditional cigarettes.
- If you don't smoke, don't try it—no matter what your age. This might be a good opportunity to open the discussion with your kids, and you can pass this message along to them either in print form or as an MP3. Nicotine is addictive and based on the current research, it's not as benign as some people think. You never have to worry about quitting if you never begin.



What are you prepared to do today?

Dr. Chet

References:

1. Rev Environ Health. 2016 Apr 21.
2. Chest. 2016 Apr 21.
3. <http://bit.ly/26rFqus>
4. JAMA. 2015;314(7):700-707.

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