



## Get the Facts on ecigarettes...are they safer than smoking?

In 2004, a Chinese company started making a refillable "cigarette" with a battery and an electronic chip in it. It is designed to look like a cigarette, right down to the glowing tip. When the smoker puffs on it, the system delivers a mist of liquid, flavorings, and nicotine that looks something like smoke. The smoker inhales it like cigarette smoke, and the nicotine is absorbed into the lungs.

The electronic cigarette, or e-cigarette, is sold **with cartridges of nicotine and flavorings**. Several brands and varieties of the e-cigarette are now sold in the U.S. Here, the e-cigarette is usually sold as a way to get nicotine in places where smoking is not allowed, although some may sell it as a way to quit smoking. **The cartridges are sold as having different doses of nicotine, from high doses to no nicotine at all.**

**The e-cigarette has no published clinical trials that suggest it might work as a way to help smokers quit. No clinical trials have been submitted to the FDA. As of 2009, the FDA has not ruled as to whether e-cigarettes are medical devices but it is investigating.** There are also questions about how safe it is to inhale some substances in the nicotine mists into the lungs. **E-cigarettes are not labeled with their ingredients, so the consumer doesn't know what's in them. And even substances that are safe to eat can harm delicate tissues inside the lungs.**

Newer information from the FDA suggests that e-cigarettes are not safe. A 2009 analysis of 18 samples of cartridges from 2 leading e-cigarette brands found cancer-causing substances in half the samples. There were other impurities noted as well. For example, diethylene glycol, a toxic ingredient found in antifreeze, was found in one sample.

Information from the same testing suggests that there may be manufacturing problems with e-cigarettes. Nicotine levels from each puff varied a great deal, even between cartridges labeled as having the same nicotine amounts. Testing also found small amounts of nicotine in most of the cartridges labeled nicotine-free.

Like other forms of nicotine, the e-cigarettes and nicotine cartridges can be toxic to children or pets. They can also pose a choking hazard. *—medlineplus.gov, 11/23/09*