

E-cigarettes (Vaping)

This sheet is about exposure to e-cigarettes in pregnancy and while breastfeeding. This information is based on published research studies. It should not take the place of medical care and advice from your healthcare provider.

What are e-cigarettes?

Electronic cigarettes, or e-cigarettes, are battery-operated devices that heat a liquid solution into a fine spray (aerosol) that you inhale (breathe in), like you would inhale tobacco smoke from a traditional cigarette. E-cigarettes are known by many different names, such as “e-cigs,” “e-hookahs,” “mods,” “vape pens,” “vapes,” “tank systems,” and “electronic nicotine delivery systems (ENDS).” Using e-cigarettes is sometimes referred to as “vaping.”

The solutions in e-cigarettes can include chemicals such as nicotine, propylene glycol, ethylene glycol, polyethylene glycol, diacetyl, and/or glycerol, and heavy metals such as nickel, tin, and/or lead. Artificial flavorings might also be added. E-cigarettes can have contaminants that could pose a risk to both the health of the person using the e-cigarette and a pregnancy.

There are only a few studies that look at e-cigarette use while pregnant. The information is limited because not all e-cigarettes are the same and many have different ingredients. While sometimes there is information about individual ingredients, often there is no information on the effect of those ingredients in combination. That means it is not clear what effect, if any, the ingredients can have on a pregnancy.

Is the level of nicotine in e-cigarettes the same as traditional cigarettes?

It is not clear how much nicotine is in e-cigarettes, in part because they are not well regulated. Some labels say they have no nicotine but do, and other labels claim to have nicotine when they do not. There may be more nicotine in some brands of e-cigarettes than in regular cigarettes. Even though e-cigarettes are advertised to help people quit smoking, studies have not proved that they effective. Using e-cigarettes during pregnancy is not recommended.

I use e-cigarettes. Can they make it harder for me to get pregnant?

Studies have not been done to see if exposure to e-cigarettes in humans can make it harder to get pregnant. There are animal studies that show that nicotine and some of the flavoring ingredients found in e-cigarettes can lead to changes in the ovaries which can affect fertility (ability to get pregnant).

Does using e-cigarettes increase the chance of miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. One study that looked at exposure to e-cigarettes during pregnancy showed an increased chance of miscarriage. Other studies on traditional cigarettes that include nicotine have been found to increase the chance of miscarriage. Our fact sheet on tobacco cigarettes can be found at <https://mothertobaby.org/fact-sheets/cigarette-smoking-pregnancy/>.

Does using e-cigarettes increase the chance of birth defects?

Birth defects can happen in any pregnancy for different reasons. Out of all babies born each year, about 3 out of 100 (3%) will have a birth defect. We look at research studies to try to understand if an exposure, like e-cigarettes, might increase the chance of birth defects in a pregnancy.

It is not known if e-cigarettes can increase the chance of birth defects. Animal studies suggest that exposure to e-cigarettes during pregnancy can impact fetal development. Traditional cigarettes that have nicotine might increase the chance for cleft lip and/or palate (opening in the lip and/or roof of the mouth), and problems with the respiratory and digestive systems.

Does the use of e-cigarettes in pregnancy increase the chance of other pregnancy-related problems?

Studies have shown that people who used e-cigarettes during pregnancy have an increased chance of preterm delivery (birth before week 37), low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth), and poor growth. Another study suggests that using e-cigarettes before pregnancy can increase the risk for gestational

hypertension (high blood pressure during pregnancy).

Does using e-cigarettes in pregnancy affect future behavior or learning for the child?

It is not known if the use of e-cigarettes can increase the chance of learning or behavior issues for the child. Some studies have linked traditional cigarettes with nicotine to higher chances for attention deficit hyperactivity disorder (ADHD) and learning disabilities.

What resources or treatments are available to help me to quit e-cigarettes and tobacco cigarettes during pregnancy?

Talk with your healthcare provider about quitting. There is also free advice, support, and referrals with the Smoker's Quitline at 1-800-QUIT-NOW (1-800-784-8669). While these resources focus on tobacco cigarettes, nicotine is the addictive chemical in both e-cigarettes and tobacco cigarettes, so they can still provide help regarding e-cigarettes.

Breastfeeding while using e-cigarettes:

The use of e-cigarettes during breastfeeding has not been studied and is not recommended while breastfeeding. Nicotine passes into breast milk. Studies have shown that infant heart rate and blood pressure changes have been associated with higher nicotine concentrations in milk. Be sure to talk to your healthcare provider about all your breastfeeding questions.

If a man uses e-cigarettes, could it affect fertility or increase the chance of birth defects?

The use of e-cigarettes can lower the number of sperm, which can affect men's fertility (ability to get a partner pregnant). It is not known if e-cigarette use could increase the chance of birth defects in a partner's pregnancy. For more general information about paternal exposures, please see our fact sheet Paternal Exposures at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/>.

Please click here for references.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://mothertobaby.org).

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