

E-cigarettes (Vaping)

This sheet is about exposure to e-cigarettes in pregnancy and while breastfeeding. This information is based on available published literature. 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 might also 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 not 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. E-cigarettes are largely unregulated, so the amount of nicotine varies widely and may not match what the label says. Nicotine has been found in e-cigarettes labeled as not having nicotine, and some e-cigarettes reported to have nicotine do not. It is possible that someone could receive a higher amount of nicotine with e-cigarettes compared to traditional cigarettes.

E-cigarettes are promoted as an aid to help quit smoking, but studies have not shown them to be effective. For this reason, plus uncertainty about the ingredients, the use of e-cigarettes is not recommended during pregnancy. Our fact sheet on tobacco cigarettes can be found at <https://mothertobaby.org/fact-sheets/cigarette-smoking-pregnancy/>.

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

It is not known if e-cigarettes can make it harder 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. Studies have not been done to see if e-cigarettes can increase the chance of miscarriage. Studies on traditional cigarettes that include nicotine have found an increase in the chance of miscarriage.

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

Every pregnancy starts out with a 3-5% chance of having a birth defect. This is called the background risk. It is not known if e-cigarettes can increase the chance of birth defects above the background risk. 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?

It is not known if using e-cigarettes can increase the chance of other pregnancy-related problems, such as preterm delivery (birth before week 37) or low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth). Studies have shown that people who used e-cigarettes during their pregnancy had a higher chance of giving birth to babies with poor growth (sometimes called “small for gestational age”).

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

One study reported more irritability in infants exposed to e-cigarettes during pregnancy compared to infants who were

not exposed to any maternal smoking during pregnancy. Some studies have linked traditional cigarettes with nicotine to higher chances for attention deficit hyperactivity disorder (ADHD) and learning disabilities.

Are there any resources or treatments 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. For this reason, the use of e-cigarettes 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 increased nicotine concentrations in milk. Be sure to talk to your healthcare provider about all of your breastfeeding questions.

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

The use of e-cigarettes can lower sperm counts, which may affect fertility (ability to get 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 the MotherToBaby fact sheet Paternal Exposures at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/>.

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

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