

smoking in pregnancy
challenge group ●

Use of electronic cigarettes in pregnancy

A guide for midwives and
other healthcare professionals



Use of electronic cigarettes in pregnancy

There are currently around 2.8 million electronic cigarette users in Great Britain and many smokers state they find them helpful when they are trying to quit. Anecdotally, we know women are using the devices during pregnancy as a replacement for smoking and members of the midwifery team may be asked for advice.

This short briefing has been produced by the [Smoking in Pregnancy Challenge Group](#)¹ and is intended to provide a summary of the evidence on electronic cigarettes, with suggested responses to some frequently asked questions about their use during pregnancy. More detailed information is available in [Electronic Cigarettes: A briefing for stop smoking services](#)² and [Smoking Cessation: A briefing for midwifery staff](#).³

This document is split into two sections:

1. Suggested responses to questions that may be raised to help healthcare professionals answer questions on the use of electronic cigarettes during pregnancy
2. Background information for healthcare professionals on electronic cigarettes



Key messages

Smoking in pregnancy, quitting and electronic cigarettes

- Little research has been conducted into the safety of electronic cigarettes in pregnancy, however they are likely to be significantly less harmful to a pregnant woman and her baby than cigarettes.
- Smoking during pregnancy can harm the baby in the womb from day one.
- In England, 11% of mothers were recorded as smoking at time of delivery in 2015,⁴ varying between 2% and 26% across the country.
- Stopping smoking is one of the best things a woman and her partner can do to protect the health of their baby through pregnancy and beyond.
- Electronic cigarettes are currently the most popular stop smoking aid⁵ in England and evidence indicates they can help people to quit.
- Licensed nicotine replacement products are safe to use during pregnancy and can increase the chances of quitting successfully. This is particularly the case when combined with specialist help from local stop smoking services. Nicotine replacement therapy (NRT) is free on prescription during pregnancy.
- Although not completely risk free, electronic cigarettes carry a fraction of the risk of smoking for users, with no known risks to bystanders.⁶
- Electronic cigarettes do not contain carbon monoxide (CO) or many of the other harmful chemicals found in cigarettes.
- While licensed NRT products are the recommended option, if a pregnant woman chooses to use an electronic cigarette and if that helps her to stay smokefree, she should not be discouraged from doing so.

Potential questions & suggested responses



Q. What are electronic cigarettes?
(see page 6, section 1 for more info)

A. Electronic cigarettes are designed for users to inhale nicotine through a vapour rather than smoke. They work by heating and vapourising a solution that typically contains nicotine, propylene glycol or vegetable glycerine, and flavourings.

Unlike cigarettes, electronic cigarettes do not burn tobacco and do not produce tar or carbon monoxide. They are 'vaped' rather than smoked and although the vapour has been found to contain some toxicants also found in cigarette smoke, these are at much lower levels.

Q. Are electronic cigarettes safe to use?
(see page 6, Section 4 for more info)

A. Electronic cigarettes are not completely risk free, however based on the current evidence they carry a fraction of the risk of smoking. If using an electronic cigarette helps you stay smokefree, it is much safer for you and your baby than continuing to smoke.

Whilst the vapour produced by electronic cigarettes contains some toxicants, these are either at much lower levels than those found in tobacco smoke or at levels not associated with serious health risk. Most importantly, electronic cigarettes do not contain carbon monoxide, which is particularly harmful to developing babies.

Electronic cigarettes are still fairly new and we don't yet have evidence on whether there are any effects of longer term use. We also don't know about any risks to unborn babies from exposure to vapour.

Mothers-to-be are advised to access support to stop smoking from a stop smoking service or other trained professional as this has been shown to be effective in helping smokers quit. If you need to, you can also use nicotine replacement therapy (NRT) products, which are licensed as medicines appropriate for use in pregnancy and are free when prescribed.

Q. Is there carbon monoxide in electronic cigarettes?

A. No. Electronic cigarettes do not contain carbon monoxide (CO) or many of the other harmful chemicals found in cigarettes. If you are using electronic cigarettes only and are not exposed to other sources of CO, such as from secondhand smoke, you should still have the same low reading as a non-smoker from a CO test.

Q. What about the risks from nicotine?
(see page 6 & 7, sections 4 & 7 for more info)

A. The great majority of the harm from smoking comes from inhaling tobacco smoke which contains around 4,000 chemicals, a significant number of which are toxic. While it is nicotine that makes tobacco so addictive, it is relatively harmless. Nicotine replacement therapy is widely used to help people stop smoking and is a safe form of treatment, including during pregnancy.

Q. Can I use an electronic cigarette to help me quit smoking? (See page 7, section 6 for more info)

A. Licensed nicotine replacement products such as patches and gum are safe for use in pregnancy. Currently there are no electronic cigarettes available that are licensed as medicines. We don't yet know about any potential risks to the foetus from exposure to electronic cigarette vapour.

However, many smokers find electronic cigarettes helpful for quitting smoking, and evidence shows that they can be effective. If you do choose to use an electronic cigarette and if that helps you to quit and stay smokefree, it is far safer for you and your baby than continuing to smoke. If you are using an electronic cigarette to quit smoking you should use it as often as you feel the need in the same way as with NRT use.

Whatever method you choose to quit smoking, you will give yourself the best chance if you get free help and support from a specialist stop smoking professional. Evidence shows that you are up to four times more likely to quit successfully with support from your local stop smoking service.





If using an electronic cigarette helps you quit and stay smokefree, this will be far safer for you and your baby than continuing to smoke.

Q. Is it OK for partners or other household members to vape around pregnant women? (see page 7, section 5 for more info)

A. Whether you allow partners and others to vape near you is a decision for you to make. There is currently no evidence of harm to bystanders from exposure to electronic cigarette vapour and any risks are likely to be extremely low. Household members who choose to stop smoking through using electronic cigarettes pose significantly less risk to those around them than if they continued to smoke. However, you could consider asking household members who vape not to do so in the same room as you or to go outside.

In addition, electronic cigarettes generally produce an odour. Women in pregnancy are often more sensitive to strong smells and may find the smell of some electronic cigarette vapours unpleasant.

Q. Can electronic cigarettes be used around the baby after it is born?

A. There is currently no evidence of harm to bystanders from exposure to electronic cigarette vapour and any risks are likely to be extremely low.

If you have any concerns, you could consider not allowing vaping in confined spaces at home or in your car and using licensed nicotine replacement products, such as patches or gum, instead. The most important thing is to stay smokefree and protect your baby from the harm of secondhand smoke. If allowing the use of electronic cigarettes indoors helps you to maintain a smokefree home, it is a far safer option than allowing smoking.

Nicotine in electronic cigarettes poses little danger to adult users however in order to prevent accidental poisoning of children, electronic cigarettes and liquids should be stored away safely (just as you would with household cleaning products and medicines, including NRT products).

Additionally, electronic cigarettes should only be charged with the correct charging equipment. They should not be left charging near babies and toddlers and should at all times be placed well out of the reach of young children. (For more information on safe charging of electronic cigarette devices see Electrical Safety First, [Guidance on charging electronic cigarettes safely](#), 2014).⁷

Q. Are there any recommended brands of electronic cigarettes for use in pregnancy?

A. There are currently no electronic cigarettes with a medicinal licence on the market, meaning they cannot be prescribed and no particular brand or product can be recommended. Specialist retailers and internet forums can provide more information about different types of electronic cigarettes and how best to use them. Some evidence suggests refillable 'tank' devices are better at delivering nicotine to help people stop smoking compared with disposable or rechargeable 'cigalikes'.

Q. Can I keep smoking a little bit if I'm also using an electronic cigarette?

A. No. Every cigarette causes damage both to you and your baby. The only way to prevent this damage is to stop smoking completely. Stopping smoking early in pregnancy can almost completely prevent damage to the baby and stopping at any time during pregnancy reduces the risk of damage.

If using an electronic cigarette helps you to stop smoking and to stay smokefree, this will be far safer for you and your baby than continuing to smoke. Whatever method you choose to quit smoking, you will give yourself the best chance if you get free help and support from a specialist stop smoking professional. Evidence shows that you are up to four times more likely to quit successfully with support from your local stop smoking service.

Q. I've been using an electronic cigarette to help me stop smoking - now I'm pregnant, should I stop using it?

A. If you feel able to stop using electronic cigarettes or to switch to nicotine replacement therapy without going back to smoking then you should try to do so. However, if you think stopping using electronic cigarettes is likely to cause you to relapse into smoking, you should continue to use your electronic cigarette. While not completely risk free, existing evidence suggests that using an electronic cigarette while you are pregnant is much safer than smoking.

Background information for midwives on electronic cigarettes



1. What are electronic cigarettes?

Electronic cigarettes are designed for users to inhale nicotine through vapour rather than smoke. They work by heating and vapourising a solution that typically contains nicotine, propylene glycol or vegetable glycerine, and flavourings. Unlike cigarettes, electronic cigarettes don't burn tobacco and don't produce tar and carbon monoxide. The vapour has been found to contain some toxicants also found in cigarette smoke, but at much lower levels.⁶

Electronic cigarettes generally consist of a battery, a vapourising chamber and electronic cigarette liquid. The liquid can be contained in a sealed cartridge or can be added to a tank system. Electronic cigarettes can be disposable or rechargeable and they come in different types: some look like real cigarettes, while others have a pen-like shape or a box-like shape with a mouthpiece.

Electronic cigarettes are known by a number of names including vapourisers, shisha pens and e-cigs. The act of using an electronic cigarette is called vaping.

2. Electronic cigarettes: use among adults

There are currently an estimated 2.8 million adults in Great Britain using electronic cigarettes. Users are fairly evenly divided between smokers (1.4 million) and ex-smokers (1.3 million).⁸

Regular use is almost exclusively among smokers or ex-smokers and electronic cigarette use among long-term ex-smokers is considerably lower than among recent ex-smokers.⁸

3. Electronic cigarettes: use among children

Concerns have been raised by some that electronic cigarettes may be a gateway to smoking for young people. However, there is no evidence of this to date. Data from the ASH Smokefree GB Youth survey indicates that regular use of electronic cigarettes has remained rare. In 2015, 2.4% of young people surveyed said they used electronic cigarettes at least once a month and almost all of those reporting regular use were young people who had been or were currently smokers.⁹ These findings are supported by other UK youth surveys.¹⁰

4. Safety for users and during pregnancy

Though electronic cigarettes are not completely risk free, a review of the evidence commissioned by Public Health England (PHE) in 2014 found that the hazard associated with electronic cigarette products currently on the market "is likely to be extremely low, and certainly much lower than smoking".¹¹ Other reviews have drawn similar conclusions - a review of the evidence internationally concluded that "Electronic cigarette [EC] aerosol can contain some of the toxicants present in tobacco smoke but at levels which are much lower. Long term health effects of EC use are unknown but compared with cigarettes, EC are likely to be much less, if at all, harmful to users or bystanders."¹² Most importantly in relation to pregnancy, electronic cigarette vapour doesn't contain carbon monoxide, which is particularly harmful to developing babies.

That said, because electronic cigarettes are relatively new, there is no evidence yet about the effects of longer term use. The risks to a foetus from exposure to vapour are unknown and there are currently no reliable studies providing information in this context.

Pregnant women who smoke should be advised to access behavioural support and, if needed, licensed nicotine replacement therapy (NRT) products, which are free when prescribed, to help them quit smoking and stay smokefree. However, if they choose to use an electronic cigarette and this helps them to quit and stay smokefree, it is safer for both them and their unborn baby than continuing to smoke.



...the hazard associated with electronic cigarette products currently on the market “is likely to be extremely low, and certainly much lower than smoking” ...

5. Safety for bystanders – secondhand vapour

Although electronic cigarettes do not produce smoke, users exhale a vapour which consists mainly of propylene glycol and/or glycerine. Any health risks of secondhand exposure to propylene glycol vapour are likely to be limited to irritation of the throat. A recent review of the impact of electronic cigarettes noted that passive exposure to the aerosol can expose non-users to nicotine but at concentrations that are unlikely to have any pharmacological significance. The 2015 PHE evidence review agreed, noting that the amount of nicotine released into the ambient air poses no identifiable risk to bystanders.

6. Effectiveness for quitting smoking

Recent research shows that the most commonly reported reason for using electronic cigarettes (among all who report using or having tried them) was “to help me stop smoking tobacco entirely”.⁸ Current smokers also report that they use the devices to “help me reduce the amount I smoke but not stop completely”. For more information see: [ASH Fact sheet: Use of electronic cigarettes among adults in Great Britain](#).

The 2015 PHE evidence review concluded that electronic cigarettes can help people to quit smoking and reduce their cigarette consumption and that there is also evidence that using electronic cigarettes can encourage quitting or cigarette consumption reduction even among those not intending to quit or rejecting other support. It is not known whether current electronic cigarettes products are more or less effective than licensed stop-smoking medications, but as they are more popular they present an opportunity to expand the number of smokers stopping successfully. Additionally, recent data has shown that smokers using stop smoking services who quit with the help of electronic cigarettes had higher success rates than smokers using other quitting aids, although the number of service clients taking this approach was small.¹³

7. Safety of Nicotine Replacement Therapy (NRT) for use in pregnancy

Licensed nicotine replacement products are safe to use during pregnancy and may help some women quit successfully^{14 15} particularly when combined with specialist help from local stop smoking services.

8. Prescription of electronic cigarettes licensed as medicines

There are currently no electronic cigarettes with a medicinal licence on the market, meaning they cannot be prescribed and no particular brand or product can be recommended. Specialist retailers and internet forums can provide more information about different types of electronic cigarettes and how best to use them.

The MHRA has granted a medicinal licence to one electronic cigarette to date. The licence includes use by pregnant women and lactating women making a quit attempt. However, this product is not yet on the market and it is not known when it will be. When licensed electronic cigarettes do come onto the market, they could be available via the NHS on prescription alongside other stop smoking medicines.

Further information available from

- [Electronic cigarettes: A briefing for stop smoking services](#) NCSCCT 2016
- [Smoking Cessation: A briefing for midwifery staff](#) NCSCCT 2015
- [ASH Briefing: Electronic cigarettes](#) ASH 2016

This document has been endorsed by the following member organisations of the Smoking in Pregnancy Challenge Group:

References

1. About the Challenge Group

<http://www.smokefreeaction.org.uk/SiP.html>

The Smoking in Pregnancy Challenge Group was established in 2012 in response to a challenge from the then Public Health Minister to produce recommendations on how the smoking in pregnancy ambition contained in the Government's tobacco strategy could be realised. The Group, a partnership between the Royal College of Midwives and the Royal College of Paediatrics and Child Health, the third sector and academia, presented their report and recommendations to the Public Health Minister in June 2013 and continues to meet annually to review progress.

2. NCSCT [Electronic cigarettes: A briefing for stop smoking services](#) 2016
3. NCSCT [Smoking Cessation: A briefing for midwifery staff](#) 2016
4. HSCIC [Smoking Status at Time of Delivery Collection](#) 2016
5. West, R. et Brown, J. [Monthly tracking of key performance indicators](#) Smoking Toolkit Study, 2016
6. McNeill, A. et al. [Electronic cigarettes: an evidence update. A report commissioned by Public Health England Public Health England](#) 2015
7. Electrical Safety First, [Electrical Safety First issues guidance on charging electronic cigarettes safely](#) 2014
8. ASH/YouGov [Smokefree GB Survey](#) 2016
9. ASH/YouGov [Smokefree Youth GB Survey](#) 2015
10. Bauld, L. et al. [Electronic cigarette uptake among UK youth: experimentation, but little or no regular use in non smokers](#) Nicotine & Tobacco Research, 2015
11. Britton, J. and Bogdanovica, I. [Electronic cigarettes: A report commissioned by Public Health England Public Health England](#) 2014
12. Hajek, P. et al. [Electronic cigarettes: review of use, content, safety, effects on smokers and potential for harm and benefit](#) Addiction, 2014
13. HSCIC [Statistics on NHS Stop Smoking Services in England - April 2014 to March 2015](#) 2016
14. Cooper, S. et al. [Effect of nicotine patches in pregnancy on infant and maternal outcomes at 2 years: follow-up from the randomised, double-blind, placebo-controlled SNAP trial](#) The Lancet Respiratory Medicine, 2014
15. Coleman, T. et al. [A Randomized Trial of Nicotine-Replacement Therapy Patches in Pregnancy](#) The New England Journal of Medicine, 2012

