



smoking in pregnancy
challenge group ●

Use of
**electronic
cigarettes**
before, during
and after pregnancy

A guide for maternity and other
healthcare professionals

Smoking or exposure to secondhand smoke during pregnancy is responsible for an increased rate of stillbirths, complications during labour, premature birth, miscarriages, birth defects and Sudden Infant Death Syndrome (SIDS). Based on the latest evidence, e-cigarettes are significantly less harmful than cigarettes.¹ E-cigarette use continues to grow, and an estimated 7.1% of the adult population amounting to 3.6 million people in Great Britain currently use e-cigarettes (vape).²

E-cigarettes, also called vapes, are currently the most popular method for quitting smoking in England³ and evidence shows that they are an effective aid for quitting.⁴ Over a half, 54.1%, of current vapers are ex-smokers and the proportion has grown year on

year, while the proportion of vapers who also smoke (known as dual users) has declined to only 39.8% in 2019, with use among never smokers rare.^{5 6} E-cigarettes are also being used by women who smoke during pregnancy as an aid to quit and members of the midwifery team may be asked for advice.⁷

This short briefing has been produced by the **Smoking in Pregnancy Challenge Group**⁸ and provides a summary of the evidence on e-cigarettes, with suggested responses to some frequently asked questions. It is primarily aimed at practitioners working in England, but can be used by anyone across the UK. A summarised at-a-glance version of this briefing is available on the Challenge Group website. More detailed information is available from the National Centre for Smoking Cessation and Training (NCSCT): **Electronic Cigarettes: A briefing for stop smoking services**⁹ and **Smoking Cessation: A briefing for midwifery staff**.¹⁰



Summary

- » **E-cigarettes are significantly less harmful to health than cigarettes.**
- » Very little research exists regarding the safety of using e-cigarettes (vaping) during pregnancy, however evidence from adult smokers in general suggests that they are likely to be significantly less harmful to a pregnant woman and her baby than continuing to smoke. More research is needed in this area.
- » Smoking during pregnancy can harm the baby in the womb **from day one**. 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.
- » While licensed Nicotine Replacement Therapy (NRT) products such as nicotine patches, gum and inhalers are the recommended option, if a pregnant woman chooses to use an e-cigarette and if that helps her to quit smoking and stay smokefree, **she should be supported to do so.**
- » Using e-cigarettes without stopping smoking does not provide health benefits; anyone who is using both should be strongly encouraged to stop smoking as soon as they can.
- » For households with one or more smokers, e-cigarettes can be used as a way to maintain a smokefree home and protect children from secondhand smoke.
- » Based on the available evidence on e-cigarette safety, there is no reason to believe that using an e-cigarette would compromise breastfeeding. Women who vape following birth should not be discouraged from doing so if it enables them to stay quit and maintain a smokefree home.
- » For data recording purposes, a woman who has stopped smoking completely and switched to vaping is classified as a non-smoker.
- » Using an e-cigarette is much cheaper than smoking.

Frequently asked questions & suggested responses

General Information

1. What are e-cigarettes?

E-cigarettes, also called vapes, are designed for users to inhale nicotine through a vapour rather than smoke. They work by heating a solution that typically contains nicotine, propylene glycol and/or vegetable glycerine, and flavourings. They come in many different shapes and sizes from disposable 'cigalike' products to highly sophisticated larger devices which users can adapt and fill with their own liquid, as well as compact 'pod' systems which use e-liquid capsules. Unlike cigarettes, e-cigarettes don't contain or burn tobacco and don't produce tar or carbon monoxide, which are known to be harmful to babies. For data recording purposes, a woman who has stopped smoking completely and switched to vaping is classified as a non-smoker.

Further info:

E-cigarettes generally consist of a battery, a vapourising chamber and e-cigarette liquid. The liquid can be contained in a sealed cartridge or can be added by the user into a refillable tank. E-cigarettes can be disposable or rechargeable and they come in different types: some resemble real cigarettes, while others have a pen-like shape, a flash drive/pebble-like shape or a box-like shape with a mouthpiece.

E-cigarettes are not the same as heated tobacco or heat-not-burn products. Unlike e-cigarettes, heated tobacco products contain tobacco and although likely to be less harmful than cigarettes, they are not harmless. It is recommended that pregnant women who smoke stop tobacco use completely to maximise the benefits to their health.

2. How safe are e-cigarettes?

E-cigarettes are not risk free, however they carry a small fraction of the risk of smoking. Based on the available evidence, experts have estimated that vaping is at least 95% less harmful to health than smoking, a figure endorsed by Public Health England. E-cigarettes do not produce tar or carbon monoxide, two of the most harmful elements in tobacco smoke. Although the vapour has been found to contain some toxicants also found in tobacco smoke, these are either at much lower levels or at levels not associated with serious health risk. Most importantly, e-cigarettes do not contain carbon monoxide, which is particularly harmful to developing babies. While very little research has been conducted into the safety of e-cigarette use in pregnancy, current evidence suggests it's likely to be significantly less harmful to a pregnant woman and her baby than cigarettes. More research is required to ascertain the effects of e-cigarettes on pregnant women and the foetus. There is so far no evidence of harm to the health of bystanders from exposure to e-cigarette vapour and experts have assessed the risk to be extremely low.

Further info:

As relatively new products, long-term evidence on e-cigarettes does not yet exist. However, based on the available evidence, leading UK health and public health organisations agree that while not risk free, e-cigarette are far less harmful than tobacco cigarettes. Studies are currently underway to further investigate e-cigarette use in pregnancy.

An independent evidence review published by Public Health England (PHE) in 2018 found that "vaping poses only a small fraction of the risks of smoking and switching completely from smoking to vaping conveys substantial health

benefits".¹ On risks to bystanders, it found that: "to date, there have been no identified health risks of passive vaping to bystanders". Similarly, the 2016 Royal College of Physicians report 'Nicotine without smoke' concludes: "Harm to others from [e-cigarette] vapour exposure is negligible. The effects of maternal use on the fetus are unknown but, on the grounds of the very low levels of toxins in vapour, are probably close to those of NRT".¹¹

3. Is there carbon monoxide in e-cigarettes?

No. E-cigarettes do not contain carbon monoxide (CO) or many of the other harmful chemicals found in cigarettes. Someone who is only using e-cigarettes and is not exposed to other sources of CO, such as from secondhand smoke, should have the same low reading as any other non-smoker from a CO test. **CO is especially dangerous during pregnancy because it deprives the baby of oxygen, slows its growth and development, and increases the risk of miscarriage, stillbirth and sudden infant death.**

4. What about the risks from nicotine?

The great majority of the harm from smoking comes from inhaling tobacco smoke which contains over 4,000 chemicals, a significant number of which are toxic. While it is nicotine that makes tobacco so addictive, it is relatively harmless on its own and is significantly less addictive when delivered through nicotine replacement products such as patches, gum and inhalers.¹ NRT is widely used to help people stop smoking, can be prescribed to pregnant women, and is a safe form of treatment during pregnancy and in the long term.¹ Licensed NRT products are normally free when prescribed during pregnancy and may help some women quit successfully¹² ¹³ particularly when combined with support from a stop smoking specialist.

Vaping in pregnancy

5. Can I use an e-cigarette to help me quit smoking?

If you are pregnant and you smoke, quitting is the best thing you can do for yourself and your baby. Nicotine replacement therapy (NRT) products such as patches, lozenges and gum are the recommended quitting support option as these are medicines that are licensed as safe for use in pregnancy. However, if you find using an e-cigarette helpful for quitting and staying smokefree, it is far safer for you and your baby than continuing to smoke. Most stop smoking services are e-cigarette friendly and will be able to support you to stay smokefree while using an e-cigarette.

Evidence shows that e-cigarettes are effective at helping people quit smoking, particularly when combined with support from a stop smoking specialist.⁴ If you are using an e-cigarette to quit smoking you should use it as much as you feel necessary, in the same way as with NRT.

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

Further info:

A major UK clinical trial published in January 2019 found e-cigarettes, when combined with expert face-to-face support are up to twice as effective for quitting smoking as other nicotine replacement products such as patches or gum.⁴

Research shows that the most commonly reported reason for using e-cigarettes among current users is to quit or abstain from smoking.⁶ E-cigarettes are the most popular quitting method among smokers in England.³ For more information see ASH Fact sheet: Use of electronic cigarettes among adults in Great Britain. Further information on the effectiveness of e-cigarettes for quitting smoking can be found in the 2018 PHE evidence review.¹



6. Can I get an e-cigarette from my doctor?

There are currently no e-cigarettes with a medicinal licence available on the UK market, meaning they cannot be prescribed by GPs or other healthcare professionals. If you want to give e-cigarettes a go, it's a good idea to visit a specialist vape shop as they can provide advice on the different e-cigarettes and e-liquid products and how to use them.

7. Can I keep smoking a little bit if I'm also using an e-cigarette?

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 harm.

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

If you feel able to stop vaping or to switch to nicotine replacement therapy without going back to smoking then you could try to do

so. However, if you think stopping vaping is likely to cause you to relapse into smoking, you should continue to vape as existing evidence suggests that it is a much safer option for you and your baby.

9. Is second hand vapour from e-cigarettes harmful to pregnant women?

There is currently no evidence of harm to bystanders from exposure to e-cigarette vapour and any risks are likely to be extremely low. Whether you allow partners and others to vape near you is a decision for you to make. Household members who choose to stop smoking through using e-cigarettes pose significantly less risk to those around them than if they continued to smoke.

Exposure to secondhand smoke from cigarettes during pregnancy leads to many of the same adverse birth outcomes experienced by women who smoke, including stillbirths, miscarriages and increased likelihood of Sudden Infant Death Syndrome (SIDS).¹⁴ For further info see Question 2.

Vaping once the baby is born

10. Can I use an e-cigarette around the baby after it is born?

There is currently no evidence of harm to bystanders from exposure to e-cigarette vapour and any risks are likely to be extremely low.¹ For further info see Question 2.

The most important thing is to stay smokefree and protect your baby from the harm of secondhand smoke. If allowing the use of e-cigarettes indoors helps you or other members of your household to maintain a smokefree home, it is a far safer option than allowing smoking. However, newborns and young children have small, developing lungs and it may be advisable to take extra care around them. One way of achieving this would be not allowing vaping in confined spaces at home or in your car and using nicotine replacement products such as patches, gum and inhalers instead.

Further info:

Women who live with a smoker are six times more likely to smoke throughout pregnancy and those who live with a smoker and manage to quit are more likely to relapse to smoking once the baby is born. An estimated 20% of women are exposed to secondhand smoke in the home throughout their pregnancy, leading to many of the same adverse birth outcomes experienced by women who smoke.¹²

11. Can I use an e-cigarette if I'm breastfeeding?

Based on the available evidence on e-cigarette safety there is no reason to believe that using an e-cigarette would compromise breastfeeding. If vaping is helping you to quit smoking and stay smokefree, you should carry on with it, including while breastfeeding.¹⁵

12. What steps should I take to minimise any risks from e-cigarettes to babies and children?

You should take steps to prevent children from accidentally swallowing e-cigarette liquid or small parts of devices. As is the case with medicines and cleaning products, e-cigarettes and e-liquids should be kept out of the reach of children.¹⁶

As with all rechargeable electrical equipment, to reduce the risk of fire you should always use the correct charger and should not leave your e-cigarette charging unattended or overnight. E-cigarettes should be charged away from babies and toddlers.

Further info:

For more information on safe use of e-cigarettes in the home, see and ROSPA: Use of e-cigarettes (vaping) in the home: advice for parents and Electrical Safety First, Guidance on e-cigarette safety.^{14 17}

Further information available from:

- » McNeill A et al. **Evidence review of e-cigarettes and heated tobacco products 2018 A report commissioned by Public Health England.** PHE. 2018
- » **ASH Briefing: Electronic cigarettes**
- » Hajek P et al. **A Randomized Trial of E-Cigarettes versus Nicotine-Replacement Therapy.** The New England Journal of Medicine. 2019.
- » McRobbie H et al. **Electronic cigarettes for smoking cessation and reduction.** Cochrane Database of Systematic Reviews 2014, Issue 12.
- » **ROSPA: Use of e-cigarettes (vaping) in the home: advice for parents**
- » **'Making the Switch'** – short films for smokers considering a move to vaping developed by the New Nicotine Alliance and the NCSCT
- » **Electronic cigarettes: A briefing for stop smoking services** NCSCT, 2016
- » **Smoking Cessation: a briefing for midwifery staff** NCSCT, 2016
- » National Institute for Health and Care Excellence (NICE) guideline [NG92]: **Stop smoking interventions and services – includes advice on smoking cessation and e-cigarettes**

Notes and References

1. McNeill, A; Brose, L S; Calder, R; Bauld, L; Robson, D. **Evidence review of e-cigarettes and heated tobacco products 2018: A report commissioned by Public Health England**. PHE. 2018
2. Methodology: Calculations are by ASH and Dr Leonie Brose at King's College London. In each of the years we applied the proportions of e-cigarette use by smoking status in the YouGov survey to the most recent available ONS mid-year GB population estimates at the time the YouGov data was gathered. In 2019 **ONS mid-year GB population estimates for 2017** have been used.
3. Smoking Toolkit Study. Trends on electronic cigarette use in England. April 2019.
4. Hajek P, Phillips-Waller A, Przulj D, Pesola F, Myers Smith K, Bisal N, Li J, Parrott S, Sasieni P, Dawkins L, Ross L. **A Randomized Trial of E-Cigarettes versus Nicotine-Replacement Therapy**. The New England Journal of Medicine. 2019.
5. 2019 Total sample size was 12,393 adults in Great Britain. Fieldwork was undertaken online between 12th February 2017 and 10th March 2019. The figures have been weighted and are representative of all adults (aged 18+).
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7. SPCG. **Written evidence submitted by Smoking in Pregnancy Challenge Group**. Science and Technology Committee E-cigarettes Inquiry
8. About the Challenge Group <http://smokefreeaction.org.uk/smokefree-nhs/smoking-in-pregnancy-challenge-group/>

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

9. NCSCT, **Electronic cigarettes: A briefing for stop smoking services**, 2016
10. NCSCT, **Smoking Cessation: A briefing for midwifery staff**, 2016
11. Royal College of Physicians. **Nicotine without smoke: Tobacco harm reduction**. London:RCP, 2016.
12. 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
13. Coleman T. et al. **A Randomized Trial of Nicotine-Replacement Therapy Patches in Pregnancy** The New England Journal of Medicine, 2012
14. Smoking in Pregnancy Challenge Group. **Review of the Challenge**. 2018.
15. NHS. **E-cigarettes, vaping and breastfeeding**.
16. Royal Society for the Prevention of Accidents (ROSPA). **Use of e-cigarettes (vaping) in the home: advice for parents**. 2016
17. Electrical Safety First. **Guidance on e-cigarette safety**. 2017

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



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