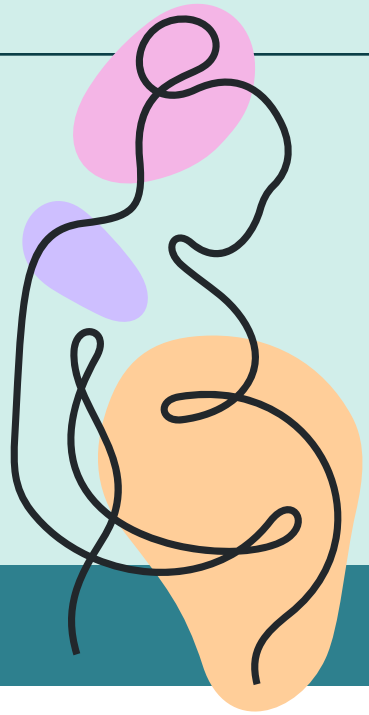
Vaping in pregnancy



Resource for clinicians

Key messages for clinicians

Note on terminology: The term 'vape(s)' is used instead of e-cigarettes in this resource to reflect the language that is understood by most people. Vapes supplied by a pharmacist are referred to as 'therapeutic vapes'.

Facts about vapes

- Vapes can contain toxins, heavy metals, and very fine particles that can cause adverse health effects. Chemicals include formaldehyde, acrolein, mercury, arsenic, benzene[1].
- Laboratory testing of seized vape products found that most products illegally contain nicotine, often in high concentrations and not listed on the ingredients[2].
- The amount of nicotine inhaled when vaping will depend on the type of vape, the concentration of nicotine in the vape and how deeply and frequently they inhale. You can't tell how much nicotine a vape contains from the label, unless it has been dispensed from a pharmacy.

Health impacts of vaping in pregnancy

Maternal impacts

- **Vaping is not safe for pregnant women.**
- Regular vape use has been linked with adverse maternal outcomes, such as nicotine addiction; nicotine poisoning; and acute nicotine toxicity. Other health harms associated with vaping include throat irritation, cough, breathlessness, dizziness, headaches, nausea and lung disease. Rechargeable vapes can explode causing serious burns and trauma[3].
- Vape use in pregnancy can have similar heart and lung effects to tobacco cigarettes[4].
- Exposure to second hand vape aerosol puts people at risk of inhaling the same nicotine and toxic chemicals as the person vaping, just like tobacco cigarettes[5,6].

Fetal impacts

- There is evidence that nicotine from vapes used during pregnancy may affect the developing baby in a similar way to tobacco[7].
- Nicotine from a vape passes easily from the mother to the baby via the placenta in the same way when tobacco is smoked[7].
- Vape use in pregnancy may adversely affect birth outcomes by reducing birth weight and causing premature delivery[4].
- It is safest to advise pregnant women to avoid exposure to second hand vape aerosol. The long-term effects of exposing babies to vaping during pregnancy or after birth are not yet fully known.

Vaping as a smoking cessation aid

- There is limited evidence supporting the effectiveness of therapeutic vapes to help people stop smoking.
- It is not recommended that pregnant women people use vapes during pregnancy, including therapeutic vapes provided by a pharmacist. Therapeutic vapes are not a first line of treatment for smoking cessation or the management of nicotine dependence, including vaping cessation.
- While switching to vaping may help some people quit smoking traditional tobacco cigarettes, there is concern that people who smoke may become dual users of both vapes and tobacco cigarettes. This is especially worrying in pregnancy as the baby is receiving nicotine from both the vape(s) and tobacco cigarettes.

Treatment pathways for nicotine dependence

- There are proven safe and effective options to help people to quit smoking and vaping such as behavioural therapies and nicotine replacement therapy (NRT) including, oral short-acting forms (e.g. gums, lozenges) and long-acting forms (e.g. patches).
- Women who want to quit are advised to speak with their antenatal care team, contact their GP, or call the NSW Quitline on 13 78 48 to seek tailored support.

Conversation prompts

'*Is vaping safe in pregnancy?*' Safety of vaping in pregnancy	• Vapes are not safe during pregnancy. • Vapes contain cancer-causing chemicals, and most contain nicotine.
'*How is vaping harmful to me?*' Impacts on maternal health	• The nicotine in vapes can cause addiction and nicotine poisoning. • You can't tell how much nicotine a vape contains from the label, unless it has been prescribed by a doctor and sold by a pharmacy. • Vaping in pregnancy can have similar effects on your heart and lungs to cigarettes.
'*How is vaping during pregnancy harmful for my baby?*' Impacts on fetal health	• Nicotine and the cancer-causing chemicals found in vapes are harmful to developing babies. • Nicotine from vapes passes easily from mother to baby via the placenta in the same way as when tobacco cigarettes are smoked. • Nicotine can cause babies to be underdeveloped, to be born too early, and to be sickly when they arrive. • Babies who are not exposed to nicotine in pregnancy will be safer and healthier.
'*My vape doesn't contain nicotine – can I continue to vape?*' Myths about vapes	• Vapes can contain a range of other chemicals that are harmful during pregnancy. • Most vapes contain nicotine even if it is not written on the packaging. • One sign that your vape may contain nicotine is a feeling of withdrawals. How long are you able to go without using your vape?
'*I've heard vaping is better than cigarettes*' Health impacts of vaping in pregnancy	• Vapes are not safe during pregnancy. • There is limited evidence to confirm vapes are better than smoking. • The concentration of nicotine in illicit vapes is not regulated. • The health impacts of other toxic chemicals that may be in the vape are not yet understood.
'*I'm using a vape to cut down the number of cigarettes I'm smoking*' Vaping as a smoking cessation tool	• Many people who use vapes to cut down on smoking find it even harder to give up smoking as they become even more addicted to the nicotine. This means that your body and the baby is getting a double dose of nicotine. • Using vapes to help quit smoking during pregnancy is not recommended. More research is needed to confirm the harms/benefits of using vapes to quit smoking. • There are proven safe and effective options to help people quit smoking in pregnancy. • Quitline counsellors are available on the phone to help you quit smoking/vaping. • Nicotine replacement therapy (NRT) is also an option to help people quit smoking. NRT delivers a therapeutic dose of nicotine that is approved for use in pregnancy. • NRT comes in different forms including gums, lozenges and patches.
'*Is the nicotine in NRT harmful for my baby?*' NRT in pregnancy	• NRT is approved by the Therapeutic Goods Administration (TGA), which means it has passed a rigorous assessment for quality, safety and efficacy. • NRT provides a controlled amount of nicotine without the additional harmful chemicals in vapes or cigarettes and is only used for a limited amount of time. • There is no evidence of people becoming addicted to NRT. NRT is most effective when used in combination with support from a smoking cessation counsellor.
'What if my partner or people in my household vape?' Exposure to second-hand vape aerosol	• Exposure to second hand vape aerosol (mist cloud) is not safe during pregnancy. • Inhaling other people's vape aerosol while you're pregnant means you can breathe in nicotine and other toxic chemicals that pass directly to your baby. • If people in your home vape and aren't ready to quit, ask them to vape outside the home and car.
'Does the CO monitor detect vaping?' CO monitor detection of vaping	• No, carbon monoxide is only produced from the burning of organic materials such as tobacco or cannabis. • A CO monitor reading will therefore not show if you are vaping or have been exposed to second hand vape aerosol.
'How can I manage staying quit after having my baby?' Staying quit in post-partum	• Staying quit is the best option to protect your health and the health of your baby. • If you do start vaping again it doesn't mean you can't breastfeed. Talk to your midwife or child and family health nurse for advice.

For clinicians

Resource	Resource type or Source	Overview
Reducing the impact of smoking and vaping on pregnancy and newborn outcomes	Policy directive Website: NSW Health	This policy directive establishes minimum requirements for NSW Health services and clinical staff to provide evidence-based and high-quality smoking and vaping cessation support to women before, during and after pregnancy.
Using an expired carbon monoxide monitor	Clinician factsheet Website: NSW Health	This factsheet includes information on the impact of carbon monoxide on both mother/fetus during pregnancy and describes how to offer the CO monitor in antenatal appointments.
Smoking in Pregnancy Learning Pathway	Self-paced online learning course Website: NSW Health – HETI HETI Course Code: 198038468	This training program will increase clinician's skills and confidence in providing evidence-based smoking and vaping cessation care to pregnant women. The learning pathway presents an online package (parts A and B) followed by an optional workshop. The workshop builds on the online content through guided practice by expert trainers.
Pregnancy and smoking, vaping and tobacco	Health topic Website: Australian Department of Health and Aged Care	This health topic provides patients a high-level overview of the risks of smoking/vaping on fertility, during pregnancy, post-partum and breastfeeding.

For families

Resource	Resource type or Source	Overview
Keep young people safe around vapes	Patient brochure	This patient brochure provides guidance on keeping children safe from e-cigarettes or vapes and information for parents in the event children are exposed.
Second-hand and third-hand smoke and vapour: effects on children	Patient resource Website: *Raising Children*	This website includes patient-facing information on the impact of exposure to second-hand and third-hand smoke and vapour on children.
Smoking and vaping in pregnancy: in pictures	Patient resource website and printable resources: *Raising Children*	This website includes a patient-facing information on the impact of smoking and vaping in pregnancy in a visual format.
Stronger Bubba Born – Quit Smokes for Bubba	Aboriginal resources website: *Stronger Bubba Born*	Video and flyer on the impact of smoking and vaping in pregnancy for Aboriginal families.
Quitline	Telephone counselling service through Cancer Institute NSW	Quitline is a free and confidential phone service with counsellors available to support people to who smoke and/or vape for information and support.
Koori Quitline or Aboriginal Quitline	Telephone counselling service through Cancer Institute NSW	Aboriginal Quitline is a free* and confidential phone service run by Mob for Mob. Aboriginal counsellors are available to support Aboriginal people who smoke and/or vape. Aboriginal Quitline is available to parents/families and carers of Aboriginal people who smoke and/or vape for information and support.

References

1. NHMRC. Inhalation toxicity of non-nicotine e-cigarette constituents: risk assessments, scoping review and evidence map. February 2022. https://www.nhmrc.gov.au/sites/default/files/documents/attachments/ecigarettes/Scoping_review_on_the_inhalation_toxicity_of_non-nicotine_e-cigarette_constituents.pdf
2. NSW Health. NSW E-Cigarette Analysis Project. NSW Health and the University of Wollongong, September 2023, https://www.health.nsw.gov.au/tobacco/Publications/e-cigarette-analysis-project-summary-report.pdf
3. Banks E, Yazidjoglou A, Brown S, Nguyen M, Martin M, Beckwith K, Daluwatta A, Campbell S, Joshy G. *Electronic cigarettes and health outcomes: systematic review of global evidence*. Report for the Australian Department of Health. National Centre for Epidemiology and Population Health, Canberra: April 2022.
4. Winnall, W, Greenhalgh, EM & Scollo, MM. 18.6.1 *Health effects of e-cigarette use during pregnancy.* In Greenhalgh, EM, Scollo, MM and Winstanley, MH [editors]. Tobacco in Australia: Facts and issues. Melbourne: Cancer Council Victoria; 2023. Available from: https://www.tobaccoinaustralia.org.au/chapter-18-e-cigarettes/18-6-the-health-effects-of-e-cigarette-use/18-6-1-health-effects-of-e-cigarette-use-during-pregnancy
5. US Department of Health and Human Services. *E-cigarette use among youth and young adults: A report of the Surgeon General*. Maryland: Office of the Surgeon General, 2016. https://www.cdc.gov/tobacco/data_statistics/sgr/e-cigarettes/pdfs/2016_sgr_entire_report_508.pdf.
6. American Heart Association. Cardiopulmonary Impact of Electronic Cigarettes and Vaping Products: A Scientific Statement, 2023;148:703–728. https://doi.org/10.1161/CIR.0000000000001160Circulation.
7. The Royal Women's Hospital. *Vaping and E-Cigarettes during Pregnancy and Breastfeeding What Are E-Cigarettes?* The Royal Women's Hospital. September 2021, https://thewomens.r.worldssl.net/images/uploads/fact-sheets/YAYB-VapingE-cigarettes.pdf.

August 2024 © NSW Health. SHPN (CPH) 240650.