

**Supporting smoking cessation during pregnancy -
nicotine replacement therapy (NRT)**
Health services version



Target audience

This guideline applies to clinicians who are supporting pregnant women who smoke to quit. The content is intended to be relevant to those clinicians working in health services as well as the primary care setting.

Definitions

CO – carbon monoxide

Faster-acting NRT includes lozenge, mini lozenge, gum, inhalator and mouth spray

GORD – Gastroesophageal reflux disease

HSI – Heaviness of Smoking Index

NICU - neonatal intensive care unit

NRT – nicotine replacement therapy

PBS – Pharmaceutical Benefits Scheme

PKU – phenylketonuria

Responsibilities [Health services to contextualise]

This guideline is for all clinicians involved in the management of pregnancy, which may include:

Nurse/midwife:

[Health service to contextualise]

Medical officer:

[Health service to contextualise]

Pharmacist:

[Health service to contextualise]

Background

Tobacco smoking during pregnancy has been associated with an increased risk of obstetric complications, adverse birth outcomes and infant mortality (1, 2).

The benefits of smoking cessation during pregnancy include reduced rates of low birth weight, preterm birth and neonatal intensive care unit (NICU) admission (3).

Women should be encouraged to stop smoking as early as possible using effective, evidence-informed treatments.



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| | <ul style="list-style-type: none">• Consider use of sugar free faster-acting NRT. |
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Pregnant women can be referred to Quitline either via fax (1800 931 739) or an online referral form (visit

NRT formulation	Strengths	Recommended dose	Directions for use
			<ul style="list-style-type: none"> Gum containing aspartame is not suitable for women with PKU
Inhalator	15mg	The contents of one cartridge to be inhaled as required (up to six cartridges per 24 hours)	<ul style="list-style-type: none"> Take short and shallow inhalations Avoid deep inhalation as it may cause coughing and/or throat irritation Nicotine in the inhalator is absorbed buccally About eight to ten inhalator puffs substitute for one cigarette puff (i.e. if a cigarette is smoked in eight puffs, 64 to 80 puffs of the inhalator is required) Each cartridge substitutes for seven cigarettes, after which a new cartridge should be used Cartridges should be regularly changed The inhalator should be used with caution in those with asthma and chronic throat conditions
Mouth spray	1mg	<p>One to two sprays every 30 to 60 minutes (up to 4 sprays per hour and up to 64 sprays per 24 hours)</p> <p>Maximum of two sprays per hour (up to 32 sprays per 24 hours) when used in combination with an NRT patch</p>	<p>This NRT formulation contains small amounts of alcohol (less than 100mg per spray), and therefore is not considered first line in pregnancy.</p> <ul style="list-style-type: none"> Prime the pump before initial use, or if it has not been used for several days Spray into the inside of the cheek or under the tongue; do not inhale whilst spraying Avoid swallowing for a few seconds to allow the nicotine to be absorbed

NRT patches

The NRT patch provides a steady dose of nicotine throughout the day. However, it may not be effective for the relief of breakthrough cravings (22). Intermittent use of faste9obr and



Adverse effects

NRT is generally safe and well tolerated. However, minor adverse effects may occur. Correct use of all NRT formulations is paramount, as many adverse effects may be due to poor technique.

Table 8: NRT formulations and common adverse effects



References

1. National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. The health consequences of smoking-50 years of progress: a report of the surgeon general. Atlanta (GA): Centers for Disease Control and Prevention (US); 2014.
2. Scollo M, Winstanley M. Tobacco in Australia: facts and issues. Melbourne: Cancer Council Victoria; 2019.
3. Chamberlain C, O'Mara-Eves A, Porter J, Coleman T, Perlen SM, Thomas J, et al. Psychosocial interventions for supporting women to stop smoking in pregnancy. Cochrane Database of Systematic Reviews. 2017;2:CD001055.
4. National Center for Chronic Disease Prevention and Health Promotion (US) Office on Smoking and Health. How tobacco smoke causes disease: the biology and behavioral basis for smoking-attributable disease: a report of the surgeon general. Atlanta (GA): Centers for Disease Control and Prevention (US); 2010.
5. Bruin JE, Gerstein HC, Holloway AC. Long-term consequences of fetal and neonatal nicotine exposure: a critical review. Toxicological Sciences. 2010;116(2):364-74.
6. Wickström R. Effects of nicotine during pregnancy: human and experimental evidence. Current Neuropharmacology. 2007;5(3):213-22.

7. E. 2009;14(2):193-206. doi:10.1186/1745-6215-14-206. Epub 2009 Jul 20. PMID: 19611111.

	<ul style="list-style-type: none">• Offer the woman's partner a referral to Quitline, if they currently smoke
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	measurable effect on prothrombin time	
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