

Nitrous oxide and oxygen in labour

IMPORTANT: Consider individual clinical circumstances. Consult a pharmacopeia for complete drug information. Read the full disclaimer at <https://www.health.qld.gov.au/qcg>

Aspect	Consideration
Indications	<ul style="list-style-type: none"> • Women in labour who request pain management
Administration	<ul style="list-style-type: none"> • Requires adequate air ventilation¹ • Follow local protocols for approved equipment and delivery devices • Inhaled² via mask or mouthpiece <ul style="list-style-type: none"> ○ Self-administered (only woman to hold mouthpiece or mask) ○ Takes effect within 20–30 seconds • Titrate using incremental doses^{3,4} according to effect and sensitivity <ul style="list-style-type: none"> ○ Aim for conscious, relaxed, comfortable and co-operative state³ ○ Maximum dose of 70% nitrous oxide is associated with obstetric anaesthesia rather than analgesia²
Care provision	<ul style="list-style-type: none"> • Support and encourage the woman for effective administration <ul style="list-style-type: none"> ○ Commence with onset of contraction (or 30 seconds prior to contraction when possible) ○ Breathe deeply at normal rate ○ Cease when contractions ease • Observe for signs of overdose (decreased respiratory effort) <ul style="list-style-type: none"> ○ Give supplementary oxygen in the event of overdose
Benefits	<ul style="list-style-type: none"> • Provides mild analgesia and sedation⁴ • Minimal toxicity • Fast acting with rapid elimination^{4,5} • No effect on uterine contractility • No known fetal or neonatal effects^{5,6} • Effective for labour pain^{7,8} • Can assist relaxation (breathing techniques)
Risk	<ul style="list-style-type: none"> • Overdose causes respiratory depression <ul style="list-style-type: none"> ○ Risk increased when used with opioid • Associated with: <ul style="list-style-type: none"> ○ Vomiting, nausea, headache and dizziness^{1,5,7,8} ○ Disorientation and claustrophobia⁸ • Can be minimised by careful titration⁴

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