

## Oxytocin (Syntocinon) for Induction and Augmentation of Labour

Document Type	Guideline
Function	Clinical practice
Healthcare Service Group (HSG)	National Women's Health
Department(s) affected	Maternity
Patients affected (if applicable)	Maternity patients as indicated
Staff members affected	All clinicians in maternity including access holder Lead Maternity Carers (LMCs)
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## 1. Purpose of guideline

The purpose of this guideline is to ensure that the use of oxytocin (Syntocinon) is safe and effective within Auckland District Health Board (ADHB).

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## 2. Guideline management principles and goals

- Oxytocin for augmentation or induction requires a formal consultation with the L&BS team on call, LMC and the woman
- Consent from the woman must be obtained and documented, including awareness of complication of uterine hyper-stimulation (see associated ADHB documents section for consent policy)
- Decision about ongoing clinical responsibility must be discussed with the woman and her LMC
- It is recommended that clinical responsibility be transferred to the L&BS team on call and clinical responsibility handover sticker placed in clinical record
- Oxytocin must be prescribed in writing by the L&BS team on call, including any changes to the standard guideline. See Table 1: Standard protocol for oxytocin infusion (see associated ADHB documents section for prescribing policy)
- In settings where oxytocin is to be used with caution (see precautions section), consultation with the obstetric consultant via the registrar is mandatory
- Individualised management plan regarding pain relief and reassessments must be documented
- Advise active management of third stage of labour
- If oxytocin is started in second stage, it is advised that vaginal exams be performed by L&BS team on call, every hour, to ensure progress and plan for delivery

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## 3. Precautions

- Women with previous uterine scar\*
- Multiparous women
- Women in second stage labour
- Within six hours of administration of vaginal prostaglandins
- With high risk women i.e. cardiac or severe eclampsia
- Multiple pregnancies

In the above settings, consultation with the obstetric consultant via the registrar is mandatory

\* Note: if a trial of labour after caesarean is judged safe then oxytocin may be used for either induction or augmentation if clinically appropriate

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## 4. Assessment

### Maternal assessment

- Vital signs: temperature, pulse, blood pressure and respirations
- Abdominal palpation for contractions and resting tone should be performed prior to, and after, increasing the dose: frequency, strength, duration
- Vaginal examination

### Fetal assessment

#### Continuous CTG

NOTE: It is important to interpret the findings of maternal and fetal assessments, and document a plan of management

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## 5. Administration

### Equipment

- Volumetric pump (Alaris)
- 10 units of oxytocin (Syntocinon)
- 500 mL 0.9% sodium chloride
- Mainline IV infusion of Plasmalyte

### Preparation

- Add 10 units of oxytocin (Syntocinon) to a 500 mL bag 0.9% sodium chloride
- Label bag with signed “medication added” label
- Document fluid volume and drug on the Fluid Balance Record
- Connect the infusion to the side arm of the mainline of Plasmalyte

### Administration

- Commence the oxytocin infusion via the Alaris infusion pump (see Table 1 for standard protocol for oxytocin infusion)
- Increase the rate (see Table 1: Standard protocol for oxytocin infusion) until reaching goal of four contractions in 10 minutes, lasting 40 - 90 seconds each
- Once 4 contractions in 10 minutes are achieved, maintain infusion rate. The infusion rate should be titrated as required to maintain four contractions in 10 minutes.
- Watch for uterine hyperstimulation, especially in second stage of labour

### Important considerations

- There is no need to stop infusion during procedures such as epidural insertion, consider decreasing rate if needed
- In multiparous women, consider decreasing rate once labour is established
- In women in second stage labour, consider increasing rate every 20 minutes
- In women with previous uterine scar, consider maximum dose of 20 milliunits/min

**Table 1: Standard protocol for oxytocin infusion**

Millilitres per hour	Milliunits per minute	Time
6	2	0
12	4	30 minutes
18	6	60 minutes
24	8	90 minutes
36	12	120 minutes
48	16	150 minutes
60	20	180 minutes
72	24	210 minutes
84	28	240 minutes
96	32	270 minutes

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## 6. Documentation

- Clinical record
- Partogram: record oxytocin rate in milliunits/minute (mu/min)
- CTG: add maternal observations and interventions on graph
- Medication chart (back page)

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## 7. Uterine hyperstimulation

### Definition

- More than 4 contractions in 10 minutes and/or
- Contractions lasting 2 minutes or more and/or
- Less than 60 - 90 seconds between each contraction

Note: Uterine hyperstimulation may occur with or without fetal compromise

### Management of hyperstimulation with suspected fetal compromise

- Cease oxytocin infusion
- Inform CCM and call L&BS team on call (see associated ADHB documents section)
- Commence intrauterine resuscitation i.e. position woman in left lateral, increase fluids
- Consider acute tocolysis: glyceryl trinitrate (GTN), nifedipine or salbutamol regime (see section 8 below)
- Consider fetal blood sampling (lactates)
- After review recommence oxytocin as per medical instructions (see associated ADHB documents section for intrapartum fetal monitoring)

### Management of hyperstimulation with normal CTG

- Decrease the oxytocin infusion rate until contractions settle
- Reassess the need for oxytocin infusion
- Notify L&BS team on call

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## 8. Options for acute tocolysis (emergency halting of contractions)

### Glyceryl trinitrate (GTN) regime

- GTN 400 microgram spray, administer one metered spray sublingually
- Check blood pressure
- Repeat further spray after 5 minutes if hyper-stimulation persists

### Nifedipine regime

- Check no contraindications to tocolysis (e.g. woman asthmatic, vaginal bleeding etc.)
- Check blood pressure and pulse following each dose
- Initial nifedipine dose: 2 x 5 mg sublingual (pierce capsule prior to administration)
- 15 minutes after initial dose give further 2 x 5 mg nifedipine capsules sublingually if still hyper-stimulated
- 30 minutes after initial dose give further 2 x 5 mg nifedipine capsules sublingually if still hyper-stimulated
- 45 minutes after initial dose give further 2 x 5 mg nifedipine capsules sublingually if still hyper-stimulated

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## 9. Third stage

Active management of the third stage is required for all women who have had oxytocin prescribed for induction or augmentation of labour (see associated ADHB documents – Intrapartum Care).

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## 10. Supporting evidence

- Burrows E; Anderson J N; Papacostas K; [What is best practice for Oxytocin infusion for induction of labour?](#) Medical journal of Australia (MJA) September 2001; 175: 336-337
- [Clinical Guidelines Southern health Australia](#) CP-MA16 2009
- [Guideline Induction of labour](#) Nice UK CG70 July 2008
- [Guideline Intrapartum Care](#) Nice UK June 2008
- [Maternity - Oxytocin for the induction of labour at or beyond term](#). Nov. 2011 NSW Health
- National Collaborating Centre for Women's and Children's: health - intrapartum Care; [Care of healthy women and their babies during childbirth](#) London RCOG Press September 2007
- RANZCOG 2006, [Intrapartum Fetal Surveillance](#), clinical guidelines second edition Melbourne, Australia
- [UpToDate Principals of labour induction](#). Deborah A Wing; Charles J Lockwood; Vanessa A Barss. Literature Review current through to July 2012

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## 11. Associated ADHB documents

- [Fetal Heart Rate - Intrapartum - Surveillance](#)
- [Group & Screen Requirements in Maternity](#)
- [Induction of Labour - RBP](#)
- [Informed Consent](#)
- [Intrapartum Care - Normal Labour & Birth](#)
- [Medications - Administration](#)
- [Medications - Intravenous & Infusions Administration](#)
- [Medications - Prescribing](#)
- [Postpartum Haemorrhage](#)

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## 12. Disclaimer

No guideline can cover all variations required for specific circumstances. It is the responsibility of the health care practitioners using this ADHB guideline to adapt it for safe use within their own institution, recognise the need for specialist help, and call for it without delay, when an individual patient falls outside of the boundaries of this guideline.

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## 13. Corrections and amendments

The next scheduled review of this document is as per the document classification table (page 1). However, if the reader notices any errors or believes that the document should be reviewed **before** the scheduled date, they should contact the owner or the [Clinical Policy Advisor](#) without delay.

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