



Hospital Name/Logo

Patient Identification

Labor and Delivery Order Set Oxytocin Induction and Augmentation

Allergies <input type="checkbox"/> No Known Allergies <input type="checkbox"/> _____	
Date prescribed: Month / Day / Year	Time: 00:00
Admission <input type="checkbox"/> Admit to Labour and Delivery Unit under attending MRP. Refer to hospital Admission Order set.	
Prior to Commencing Oxytocin: <input type="checkbox"/> Patient consent for the administration of oxytocin for the induction or augmentation of labour is documented. <input type="checkbox"/> Patient is examined vaginally and has a Bishop score documented. <input type="checkbox"/> Patient has no contraindications to vaginal birth, such as placenta previa or vasa previa, prior classic uterine incision or other uterine surgeries that contraindicate attempts at vaginal delivery, and/or prolapsed cord. <input type="checkbox"/> Continuous electronic fetal monitoring (EFM) for at least 20 minutes (to confirm a normal fetal heart rate (FHR) pattern and uterine activity (UA)). If EFM tracing is atypical or abnormal, notify the MRP immediately. <input type="checkbox"/> 6 hours has passed since the last dose of prostaglandins gel (Prostin, Prepidil). <input type="checkbox"/> 4 hours has passed since the last dose of misoprostol. <input type="checkbox"/> 30mins has passed since the removal of a dinpoprostone insert (Cervidil).	
Monitoring During Oxytocin Infusion: <input type="checkbox"/> Continuous electronic fetal monitoring. <input type="checkbox"/> Electronic fetal monitoring may be interrupted for periods of up to 30 minutes in the first stage of labour (if tracing is normal, maternal-fetal condition is stable, and the infusion rate of oxytocin has not been increased in the last 30 minutes) to allow for ambulation, personal care, and hydrotherapy. <input type="checkbox"/> Assess and document the FHR and UA assessment findings: <ul style="list-style-type: none"> ○ q15 minutes during first stage of labour and before the onset of pushing in the second stage. ○ q15 minutes during active second stage, once the woman has begun pushing. ○ Maternal heart rate, respirations, and blood pressure q30min and prn. Notify MRP if vitals outside normal limits. ○ Maternal temperature q4h if membranes intact, q2h once membranes have ruptured and prn. Notify MRP if temperature is greater than 38°C. ○ Monitor intake and output and observe for signs of water intoxication/hyponatremia (e.g., lethargy, ataxia, confusion, seizures). ○ Vaginal examination q2-4h or PRN for labour progress in the first stage. ○ Vaginal examination q1h in the active second stage. <input type="checkbox"/> Notify MRP immediately when any signs of the following occur: <ul style="list-style-type: none"> ○ Atypical or abnormal FHR ○ Tachysystole (defined over 30 minutes) ○ Excessive vaginal bleeding 	

Medication

- Primary IV initiated with maintenance infusion of 0.9% Sodium Chloride OR Ringers Lactate at _____ mL/hr on IV smart pump
- Oxytocin infusion 10 units in 500 mL of 0.9% Sodium Chloride **OR** Ringers Lactate on IV smart pump
 - o Note: Final concentration of solution is **Oxytocin 20 milliunits/mL**.
- Piggyback oxytocin infusion onto primary IV line connected at port closest to the patient.
- Independent double check performed for initial pump set up as per table 2.
- Low Dose Protocol
 - o Start oxytocin infusion at **1 milliunits/minute (3 mL/hour)** OR **2 milliunits/minute (6 mL/hour)**.
 - o Increase the rate by **1 milliunits/minute (3 mL/hour)** OR **2 milliunits/minute (6 mL/hour) q 30 minutes**, as needed, until a normal uterine contraction pattern is achieved. Refer to table 1 for dosage chart and table 3 for definition of normal uterine contraction pattern.
 - o Do not exceed a rate of **12 milliunits/minute** without reassessment and/or verbal order from MRP.
 - o Do not exceed a rate of **20 milliunits/minute** without a **written order from the MRP**. MRP reassessment required at 20 milliunits/minute, and if required a maximum infusion rate of 30 milliunits/minute may be ordered.

Reduce Oxytocin

- In the event of atypical FHS (as defined in table 4), reduce the oxytocin infusion rate by half or stop oxytocin infusion.
- In the event of tachystole **with a normal or atypical FHS, decrease oxytocin to half the rate or stop oxytocin infusion.**
- Apply intrauterine resuscitation intervention (as defined in table 5).
- Document clinical actions and notify MRP when oxytocin decreased.

Stop Oxytocin

- In the event of an abnormal FHS (as defined in table 4), **stop oxytocin immediately.**
- In the event of tachystole **with an abnormal FHS, stop oxytocin immediately.**
- Apply intrauterine resuscitation interventions (as defined in table 5).
- Document clinical actions and notify MRP when oxytocin discontinued.

Restart Orders

- Restart oxytocin at half the rate IF: it has been discontinued for less than 30mins, and the FHR tracing and contraction pattern are normal.
- Restart oxytocin at initial starting dose IF: it has been discontinued for 30mins or longer, the FHR tracing and contraction pattern are normal, and a complete fetal and maternal assessment has been discussed with the MRP prior to restarting.

Additional Order

Ordering MRP

Print Name: _____ Signature: _____

Table 1: Oxytocin Dosage Rate

Oxytocin 10 International Units (IU) in 500 mL of IV fluid (20 milliunits/mL)			
Dose	Rate / Hour	Dose	Rate / Hour
1 milliunits/minute	3 mL/h	11 milliunits/minute	33 mL/h
2 milliunits/minute	6 mL/h	12 milliunits/minute	36 mL/h
3 milliunits/minute	9 mL/h	13 milliunits/minute	39 mL/h
4 milliunits/minute	12 mL/h	14 milliunits/minute	42 mL/h
5 milliunits/minute	15 mL/h	15 milliunits/minute	45 mL/h
6 milliunits/minute	18 mL/h	16 milliunits/minute	48 mL/h
7 milliunits/minute	21 mL/h	17 milliunits/minute	51 mL/h
8 milliunits/minute	24 mL/h	18 milliunits/minute	54 mL/h
9 milliunits/minute	27 mL/h	19 milliunits/minute	57 mL/h
10 milliunits/minute	30 mL/h	20 milliunits/minute	60 mL/h

Table 2: Independent Double Check for Initial Pump Set Up

Independent Double Check for Initial Pump Set Up

To be performed and signed by two regulated health care professionals (e.g., RN, MW, MD).

CHECK 1		CHECK 2
	Correct Patient	
	Correct Drug	
	Correct Drug Concentration (on bag)	
	Correct Programmed Concentration on Smart Pump	
	Correct rate (in milliunits/minute)	
	Correct IV Line and Port Connection	
Check 1:	_____	_____
	Printed Name	Signature
Check 2:	_____	_____
	Printed Name	Signature

Table 3: Definitions: Normal Uterine Activity and Tachysystole

Normal Uterine Contraction

- **Frequency:** 3 to 5 contractions in a 10-minute period, averaged over a 30-minute time period.
- **Duration:** lasting no greater than 90 seconds.
- **Configuration:** Regular and symmetrical.
- **Intensity:** patient perception, **or** moderate to strong by palpation by clinician, **or** 25-80 mmHg via IUPC.
- **Resting tone:** Uterus soft by clinician palpation, or less than 25 mmHg via IUPC, between contractions for a minimum of 30 seconds.

Tachysystole

- 6 or more uterine contractions in 10-minute period averaged over a 30 minute, and/or contractions that last 90 seconds or longer (>90 sec), and/or when the uterine resting tone does not soften (by palpation) for at least 30 seconds between contractions and/or resting tone remains firm by palpation or the intrauterine pressure remains at or greater than 25 mmHg.
- Clinician assessment will be warranted as some women will have uterine activity as per this definition but will not be moderate to strong upon palpation and/or actively laboring in early administration of oxytocin.
- Fetal heart rate characteristics and associated with uterine activity should be classified and documented.

Source: SOGC, 2020; CPPC, 2018

Note: This table is for reference only and meant to inform the information within the order set.

Table 4: Intrauterine resuscitation

The goal of intrauterine resuscitation is to improve uterine blood flow, umbilical circulation, fetal/maternal oxygenation and decrease uterine activity. Actions may include:

- **Stop or decrease oxytocin**
- Change maternal position to left or right lateral
- Check maternal vital signs, including differentiation of maternal heart rate from fetal heart rate
- Provide supportive care to reduce maternal anxiety (to lessen catecholamine impact)
- Modify or pause pushing efforts in the active second stage of labour
- Perform vaginal examination to rule out cord prolapse and assess progress
- Consider tocolysis in the presence of tachysystole with atypical or abnormal tracing (e.g., with IV nitroglycerin)
- Consider amnioinfusion in the presence of complicated variable decelerations
- Improve maternal hydration, with an intravenous fluid bolus, only if indicated, i.e., maternal hypovolemia and/or hypotension; be aware of maternal fluid balance
- **Consider** oxygen by mask **only when** maternal hypoxia and/or hypovolemia is suspected/confirmed. Oxygen is reserved for maternal resuscitation in the presence of maternal hypoxia or hypovolemia **NOT** for fetal resuscitation.

Source: SOGC, 2020

Note: This table is for reference only and meant to inform the information within the order set.

Table 5: Classification of Intrapartum EFM Tracings

Parameter	<u>NORMAL</u> Tracing	<u>ATYPICAL</u> Tracing	<u>ABNORMAL</u> Tracing
UTERINE ACTIVITY	<ul style="list-style-type: none"> Normal contractions Tachysystole may be present with normal, atypical or abnormal tracings. Monitor closely for concerning FHR characteristics. 		
BASELINE	<ul style="list-style-type: none"> 110-160 bpm 	<ul style="list-style-type: none"> 100-110 bpm Greater than 160 bpm for 30-80 minutes Rising baseline Arrhythmia (irregular rhythm) 	<ul style="list-style-type: none"> Less than 100 bpm Greater than 160 bpm for more than 80 minutes Erratic baseline
VARIABILITY	<ul style="list-style-type: none"> Moderate (6-25 bpm) Minimal or absent (less than or equal to 5 bpm) for less than 40 minutes 	<ul style="list-style-type: none"> Minimal or absent (less than or equal to 5 bpm) for 40-80 minutes 	<ul style="list-style-type: none"> Minimal or absent (less than or equal to 5 bpm) for more than 80 minutes Marked (greater than 25 bpm) for more than 10 minutes Sinusoidal
ACCELERATIONS	<ul style="list-style-type: none"> Spontaneous acceleration(s) (not required to classify tracing as normal) Acceleration with scalp stimulation 	<ul style="list-style-type: none"> Absence of acceleration with scalp stimulation 	<ul style="list-style-type: none"> Usually absent Accelerations if present, do not change classification of tracing based on other characteristics
DECELERATIONS	<ul style="list-style-type: none"> None Non-repetitive uncomplicated variables decelerations Early decelerations 	<ul style="list-style-type: none"> Repetitive uncomplicated variable decelerations Non-repetitive complicated variables Intermittent late decelerations Single prolonged deceleration lasting more than 2 minutes but less than 3 minutes 	<ul style="list-style-type: none"> Repetitive complicated variables decelerations Recurrent late decelerations Single prolonged deceleration lasting more than 3 minutes but less than 10 minutes
INTERPRET CLINICALLY (In light of total clinical picture)	<ul style="list-style-type: none"> No evidence of fetal compromise 	<ul style="list-style-type: none"> Physiologic response reflecting activation of compensatory mechanisms 	<ul style="list-style-type: none"> Possible fetal compromise
TERMINOLOGY	<p>Non-repetitive: 1 or maximum 2 in a row Repetitive: Greater than or equal to 3 in a row Intermittent: Decelerations occur with less than 50% of uterine contractions in any 20-minute window Recurrent: Decelerations occur with greater than or equal to 50% of uterine contractions in any 20-minute window</p>		

Source: SOGC, 2020, **Note:** This table is for reference only and meant to inform the information within the order set.