

TITLE: **MISOPROSTOL INDUCTION OF LABOUR (VIALE PREGNANCY)**

APPLICABILITY: All acute care sites using induction agents

RELATED POLICIES: 1-1-3-020: [Perinatal Loss](#)

DEFINITIONS:

Cervical ripening: The use of mechanical or pharmacological means to soften, efface, or dilate the cervix to increase the likelihood of a vaginal delivery.

Induction of labour: The artificial initiation of labour before its spontaneous onset to help a woman achieve a vaginal delivery within 24 to 48 hours.

Tachysystole: Greater than five contractions per ten minute period averaged over 30 minutes. This is further subdivided into two categories, one with and one without fetal heart rate changes.

COMPETENCY REQUIREMENTS: Prior to administering Misoprostol Registered Nurses have successfully completed the Fundamentals of Fetal Health Surveillance Course (or equivalent).

DOCUMENT QUICK LINKS

- [Bishop's Score](#)
- [Intrauterine Resuscitation Measures](#)

KEY POINTS

- Induction of labour is indicated when the risk of continuing the pregnancy, for the mother or the fetus, exceeds the risk associated with induction of labour and delivery.
- The goal of induction is to achieve a successful vaginal delivery that is as natural as possible.
- Misoprostol (Cytotec) is a synthetic prostaglandin E1 analogue that has been approved and marketed for the prevention and treatment of gastric ulcers associated with the use of non-steroidal anti-inflammatory drugs. Misoprostol has also been found to be a safe and effective agent for cervical ripening and labour induction and these off-label uses have been widely adopted.⁵
- Misoprostol is inexpensive, stable at room temperature and easy to administer.⁴

- Misoprostol appears to be at least as effective as other induction methods but with lower caesarean section rates.¹
- Misoprostol is considered a safe and effective agent for labour induction with intact membranes and a singleton pregnancy. There is insufficient evidence to support use of Misoprostol in women with ruptured membranes.⁵
- Misoprostol should not be used in the setting of vaginal birth after Caesarean section due to the increased risk of uterine rupture.⁹
- Misoprostol appears to be safer when given orally rather than vaginally. Women have also reported greater satisfaction with the oral route compared to the vaginal route.^{1,5}
- All doses of Misoprostol can cause tachysystole.⁵ Tachysystole is defined as greater than five contractions in ten minutes, averaged over a 30-minute.¹³
- The dosage for the oral route is Misoprostol 50 micrograms (mcg) and the dosage for the vaginal route is 25 mcg⁵.
- Prepare Misoprostol by dissolving in 10 mL of water and giving the appropriate amount of medication (Putting a 100 mcg tablet in 10 mL of water gives 10 mcg per mL. For 50 mcg of Misoprostol, 5 mL of solution would be given) or by splitting with a tablet splitter.
- Oxytocin should not be started any earlier than four hours after the last dose of Misoprostol⁵.
- Misoprostol induction should be conducted on an **inpatient** basis for a viable fetus.^{5, 11}
- The physician should be within 30 minutes of the hospital during an induction.
- Eligibility for Misoprostol induction includes greater than 35 weeks gestation for viable pregnancies with intact membranes.⁹
- The reason for and method of induction is discussed between the care provider and the woman in order to obtain clear consent.
- Relative exclusion criteria:
 - Parity greater than or equal to four prior vaginal births
 - Vaginal bleeding
 - Abnormal fetal heart rate
 - Fetal growth restriction
 - Regular painful contractions
 - Rupture of membranes
- Exclusion criteria:
 - Previous C-section or other significant uterine surgery

POLICY STATEMENT (ALL STAFF MUST COMPLY)

The indication for an induction and the consent must be documented.

Prior to starting an induction, a written physician order must be obtained.

Induction will be prioritized by the health care team according to the urgency of the clinical situation and the availability of resources.

EQUIPMENT

- Misoprostol tablets (preferably 100 mcg tablets)
- Tablet splitter (or 10 mL of water in container to dissolve tablet)
- Fetal monitor
- Glass of water (if tablet and oral route) or gloves (if vaginal route)

CLINICAL PRACTICE STANDARD (ALWAYS USE PROFESSIONAL JUDGMENT AND DOCUMENT ANY DEVIATION FROM THE STANDARD)

1. Encourage patient to void prior to positioning before monitoring.
2. Position left or right lateral.
3. Monitor fetal heart for 20 to 30 minutes prior to Misoprostol induction. Fetal heart strip should be “normal” prior to administration of Misoprostol.
4. Vaginal examination for Bishop’s Score ¹² and presentation of fetus. The fetus must be in the vertex position and this should be established prior to the first dose of medication.

Oral administration (Registered Nurse)

5. Give Misoprostol 50 micrograms (mcg) orally with a drink of water.
 - a. Ensure it is swallowed quickly to avoid sublingual absorption.
 - b. Misoprostol serum levels peak at 30 minutes following oral ingestion but if inadvertently administered sublingually, the blood levels are higher leading to a greater risk of uterine tachysystole.
6. The registered nurse repeats the Misoprostol administration every four hours as long as contractions are absent or non-painful, fetal heart remains normal or until a maximum of six doses.

Vaginal administration (Physician or Midwife)

7. Administer 25 micrograms vaginally in posterior fornix (one quarter of a 100 mcg tablet).
8. The physician/midwife repeats every four hours as long as contractions are absent or non-painful and fetal heart remains normal.

Monitoring

9. Monitor for at least 30 minutes after administration of Misoprostol and for 60 minutes after any episode of tachysystole.
10. Monitor maternal vital signs before first dose, every hour for four hours, then every four hours until in active labour then follow [PSBC Guidelines for Registered Nurses](#).
11. Initiate intrauterine resuscitation measures with tachysystole or fetal heart rate abnormalities.
12. Notify physician or midwife of vaginal bleeding, increased uterine resting tone, atypical or abnormal fetal heart, and tachysystole.
13. Notify physician for reassessment if after six doses woman not in active labour.

DOCUMENTATION

- Prior to administration of medication, document normal fetal heart strip, vital signs, cervical status (Bishop's Score) and presentation.
- Document dosage and route of medication, fetal heart, pain rating, contraction pattern and vital signs on appropriate records and at appropriate times.

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Keywords

medical induction

Bishop's Score

Criteria	Score		
	0	1	2
Cervical dilation (cm)	0	1-2	3-4
Cervical effacement (%)	0-30	40-50	60-70
Thickness/length (cm)	greater than 3	1-3	less than 1
Cervical consistency	firm	medium	soft
Cervical position	posterior	Central or midposition	anterior
Station (in relation to spines)	Spines -3	Spines -2	Spines -1 or lower

Intrauterine Resuscitation Measures

Intrauterine Resuscitation Measures interventions promote four physiologic goals.

- improve uterine blood flow,
- improve umbilical blood flow,
- improve maternal/fetal oxygenation, and
- decrease uterine activity.

1. Reposition to side and continue to reposition in different positions if fetal heart does not improve.

2. Continue to or initiate electronic fetal heart rate monitoring.
3. Notify responsible physician or midwife.
4. Initiate intravenous and consider increasing fluids depending on maternal condition.
5. Consider oxygen with non-rebreather mask if maternal oxygen desaturation in conjunction with fetal heart rate decelerations.
6. Attempt to identify cause of abnormal/atypical fetal heart rate by assessing maternal vital signs including SpO₂, uterine contractions, pain, cervical dilatation and blood loss.
7. Obtain order for and administer tocolytic agent. Prepare for possible caesarean section delivery if fetal heart rate pattern remains abnormal.
8. Reduce maternal anxiety and coach with breathing or pushing techniques.
9. Assess and document maternal and fetal responses to interventions.