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# Management of Uterine Hyperstimulation

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Specialty:  
Approval Body

Maternity  
Labour Ward Forum / Antenatal Ward Forum

Approval Date:  
Date for Review:

# Management of Uterine Hyperstimulation

## Definition:

**Hyperstimulation** is defined as **either**:

- > 5 contractions in ten minutes over a 30 minute period <sup>2</sup>  
OR
- Contractions lasting more than 2 minutes in duration  
**AND**
- Resulting in fetal heart rate changes (a risen or unstable baseline rate, decelerations, reduced variability)

NB: For women who have any increased uterine activity (frequency, duration or strength) associated with CTG changes hyperstimulation should be considered and the same process followed.

*Remember, some fetuses will have limited reserve to cope with even minimal uterine activity.*

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**Uterine Tachysystole** is defined as:

- > 5 contractions in 10 minutes over a 30-minute period  
**AND**
  - The CTG remains 'Normal' <sup>1</sup>
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Excessive uterine activity is the most frequent cause of fetal hypoxia/acidosis<sup>1</sup>, and must therefore be identified early on and managed effectively. In the presence of uterine tachysystole, consider tocolysis even where there are no current fetal heart rate concerns.

A CTG is unable to identify the strength or character of uterine activity and should not be relied upon to assess these features. The tocodynamometer will pick up any increases in intra-abdominal pressure, including maternal position change or breathing movements. In order to diagnose hyperstimulation the midwife or doctor must assess the contractions by palpating uterine activity over 10 minutes, recording in the notes the length, strength and frequency of contractions.

Hyperstimulation may occur naturally, although more rarely. Where contractions are >5 in 10 minutes over a 30-minute period during active labour a CTG is required to assess fetal wellbeing. The Normal Labour Care Pathway must be exited in this situation <sup>4</sup>

## Causes:

- Over-stimulation or hyper-sensitivity to oxytocin

- Hyper-sensitivity to Prostaglandins
- Hyper-stimulation of uterus due to build up effect of oxytocin by previously administered prostaglandin
- Spontaneous or syntocinon induced labours, particularly in multiparae, it may be a consequence of fetal malpresentation or malposition or cephalopelvic disproportion.
- Frequent, low amplitude, uterine contractions are observed with abruption of the placenta and may be associated with FHR changes and vaginal bleeding.

Consideration must be given to the **whole clinical picture**, including existing risk of hyperstimulation i.e. use of prostaglandins, PV bleeding. For women who have had a previous caesarean section, the likelihood of uterine rupture is increased and therefore a full assessment including a lower threshold for intervention considered.

## **Management:**

### **Induction of labour**

If uterine hyperstimulation occurs during induction of labour, request obstetric review and:

- Perform a fetal assessment using a CTG
- Position into left lateral (or right if more comfortable for the woman)
- Remove Propess (if applicable)
- Consider Terbutaline, particularly if there are fetal heart rate concerns

### **Do not discontinue the CTG until you can classify it as 'normal'**

Pharmacological methods of induction can cause hyperstimulation. Consideration should be given to the use of mechanical forms of induction e.g. a balloon catheter, in women or babies at higher risk i.e. previous caesarean section, growth <10<sup>th</sup> centile or abnormal dopplers (NICE, 2021).

Mechanical methods are less likely to cause hyperstimulation (NICE, 2021) and should be considered where hyperstimulation has already occurred.

National guidelines<sup>4</sup> recommend that:

'In the presence of abnormal FHR patterns and uterine hyper contractility not secondary to oxytocin infusion, tocolysis should be considered. If the FHR trace is normal, oxytocin may be continued until the woman is experiencing 4 or 5 contractions every 10 minutes. Oxytocin should be reduced if contractions occur more frequently than 5 contractions in 10 minutes. If the FHR trace is classified as abnormal, oxytocin should be stopped and a full assessment of the fetal condition undertaken by an obstetrician before oxytocin is recommenced.'

## **In Labour**

Where uterine hyperstimulation is identified immediate resuscitative action must be taken to improve utero-placental oxygenation, particularly in the presence of

- Acute hypoxia i.e. prolonged deceleration (follow the 'Rule of 3s')
- Sub-acute hypoxia i.e. persistent decelerations >50% of the time below the baseline rate

## **Management**

Request urgent obstetric review, and:

- Advise/continue continuous CTG monitoring
- Stop/reduce oxytocin infusion (depending on clinical assessment of fetal wellbeing/compensatory response)
- Position into left lateral (or right if more comfortable for woman)
- Consider acute tocolysis e.g. Terbutaline early
- Ensure the woman is kept fully informed of concerns and actions

Consider restarting oxytocin infusion only if necessary for the progress of the labour, and once the fetus is no longer needing to compensate. This decision must be made and documented by an Obstetrician BEFORE oxytocin is recommenced.

Continuous CTG monitoring is recommended with the use of Oxytocin (NICE, 2017).

## **Tocolysis**

### **1) Terbutaline (Bricanyl)**

Dose: 0.25mg (250mcg) administered by subcutaneous injection

Instructions: A Bricanyl vial comes in a preparation of 0.5mg/ml (A 1ml volume is in the vial). Draw up 0.5ml and administer under the skin (arm/stomach).

This dose can be repeated once after 15 minutes in the presence of ongoing concerns with fetal wellbeing.

### **2) Salbutamol**

100mcg IV or as aerosol inhalation.

### **3) Glyceryl trinitrate (GTN) administered as 200mcg IV bolus or as 400mcg as sublingual spray.**

NB: The above drugs are not licensed for use for this indication. NICE recommends informed consent should be obtained and documented.

Improvement usually begins within 5 minutes as utero-placental perfusion is restored due to the relaxation of the smooth uterine muscle. Side effects may include transient maternal tachycardia, flushing of skin and headache.

### **References:**

1. International Federation of Obstetricians and Gynaecologists. (2015). FIGO Consensus guidelines on intrapartum fetal monitoring: cardiotocograph. *International journal of Obstetrics & Gynaecology*.  
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2. National Institute for Health and Care Excellence. (2017). *Intrapartum Care for healthy women and babies*. Available at  
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3. National Institute for Health and Care Excellence. (2021). *Inducing Labour*. Available at  
<https://www.nice.org.uk/guidance/ng207/chapter/Recommendations>
4. All Wales Clinical Pathway for Normal Labour. (2021). *Maternity Network Guideline*. Available at  
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## Maternity Services

### Checklist for Clinical Guidelines being Submitted for Approval

Title of Guideline:	Protocol for the Management of Uterine Hyperstimulation
Name(s) of Author:	Labour Ward Forum / Antenatal Forum
Chair of Group or Committee approving submission:	Labour Ward Forum / Antenatal Forum
Brief outline giving reasons for document being submitted for ratification	To update current policy which has expired
Details of persons included in consultation process:	Consultant Obstetricians / Midwifery Staff
Name of Pharmacist (mandatory if drugs involved):	N/A
Issue / Version No:	4
Please list any policies/guidelines this document will supercede:	Protocol for the Management of Uterine Hyperstimulation – Dated 15 <sup>th</sup> November 2021
Date approved by Group:	
Next Review / Guideline Expiry:	
Please indicate key words you wish to be linked to document	Hyperstimulation, Management of Uterine
File Name: Used to locate where file is stores on hard drive	Z:\npt_fs2\Maternity Incidents Stats Etc\Policies\Ratified - Obs