

Oxytocic drugs			
	Oxytocin	Prostaglandins (PG)	Ergometrine
Nature	Nasal spray stimulates milk let-down	<ul style="list-style-type: none"> Production by amnion and decidua is increased near term. E.g. <ol style="list-style-type: none"> Gemeprost and Misoprostol [PGE1 analogues] Dinoprostone [PGE2] Carboprost [PGF2α] 	---
MOA	<ul style="list-style-type: none"> Acts on its receptors (G-Protein coupled) 	<ul style="list-style-type: none"> ripen and soften the cervix \rightarrow helps in expulsion of uterine contents Upregulate oxytocin receptors 	<ul style="list-style-type: none"> Causes V.C by α-adrenoceptor \rightarrow \downarrow hemorrhage Causes prolonged and forceful contraction of uterine smooth muscles
Uses	<ul style="list-style-type: none"> Induction of labor Bleeding due to incomplete abortion (Syntometrine [IM before surgery]) Induction of abortion: 	<ul style="list-style-type: none"> Induction of abortion: <ul style="list-style-type: none"> Gemeprost (intravaginally) Misoprostol (following Mifepristone) Induction of labor (Dinoprostone) 	<ul style="list-style-type: none"> Bleeding due to incomplete abortion (IM before surgery)
S/E	<ul style="list-style-type: none"> Hypotension Tachycardia ADH-Like activity \rightarrow water retention hyponatremia 	<ul style="list-style-type: none"> Carboprost Warning: Δ \uparrow Risk of uterine rupture during labor (in Women with previous cesarean section) \boxtimes CI in uterine scar 	<ul style="list-style-type: none"> HTN Angina (V.C of coronaries)

Tocolytic drugs					
	Ca Channel Blocker (CCBs)	Magnesium (Mg) Sulfate	Beta agonists	Oxytocin antagonist	NSAID
E.g.	Nifedipine	---	Terbutaline & Ritodrine	Atosiban	indomethacin
MOA	<ul style="list-style-type: none"> \times Ca influx \rightarrow contractions of myometrium. 	<ul style="list-style-type: none"> competes with Ca²⁺ in myometrial cell (As Mg is divalent) 	<ul style="list-style-type: none"> Binds to β₂- receptor \rightarrow \uparrow cAMP \rightarrow relaxation of myometrium 	<ul style="list-style-type: none"> Oxytocin receptor antagonist IV bolus then infusion (\leq 48h) \ominus Oxytocin action 	<ul style="list-style-type: none"> \times COX-1 & COX-2 \rightarrow \downarrow PGs.
Uses	<ul style="list-style-type: none"> Neonatal respiratory distress syndrome (RDS) (more than other tocolytics) 	<ul style="list-style-type: none"> Seizure in Preeclampsia 	<ul style="list-style-type: none"> Delay Labor by 48h which allows time to give: Glucocorticoids \rightarrow Fetal lung maturation \rightarrow \downarrow Risk of RDS 	---	<ul style="list-style-type: none"> Dysmenorrhea (\downarrow Cramps)
S/E	<ul style="list-style-type: none"> Preventive therapy: Progesterone + Tocolytic for women with prior spontaneous preterm birth Acute intervention: Suppress uterine contractions (associated with cervical change) which occur before 37 weeks of gestation 				
	Maternal S/E			Fetal S/E	
	<ul style="list-style-type: none"> Hypotension Muscle weakness 	---	<ul style="list-style-type: none"> Tachycardia Hypotension Pulmonary edema 	<ul style="list-style-type: none"> Nausea, vomiting Hyperglycemia 	<ul style="list-style-type: none"> Renal dysfunction Premature closure of the ductus arteriosus

Hydroxyprogesterone Caproate (Tocolytic)

- Once-weekly injection
- FDA-approved to \downarrow risk of preterm birth
- In women with \geq 1 prior spontaneous preterm delivery

Ergometrine

- Not for labor induction** (Given after placenta delivery (3rd stage of pregnancy))
- When given Before \rightarrow Uterine spasm + retained placenta

Mifepristone

progesterone receptor blocker used **with Misoprostol** in **medical abortion** (1st trimester)