

Medications Commonly used in Maternal Newborn

N432 Maternal-NB

Cindy Ho

Medication	Mechanism of Action/Use	Nursing considerations
Methotrexate	<p>Action: Inhibits an enzyme that reduces folic acid, which is needed for nucleic acid synthesis in all cells, specific to S phase of cell cycle, immunosuppressive.</p> <p>Uses: Acute lymphocytic leukemia; in combination for gestational choriocarcinoma (Jones & Bartlett 2022).</p>	<ul style="list-style-type: none">-Drug can cause fetal harm such as embryotoxicity and fetal defects or death.-Contraindicated in pregnant women with psoriasis or rheumatoid arthritis and should be used in the treatment of neoplastic disease only if benefit to mother outweighs the risk to the fetus.-Drug may be present in breast milk.-Monitor results of CBC, CXR, liver and renal function tests, and urinalysis before and during treatment.-Increase patient's fluid intake to 2-3L daily to reduce risk of adverse GU response (Jones & Bartlett 2022).
Mifepristone	<p>Works by being an antagonist of glucocorticoid and progesterone receptors. At low doses, it works by being a selective antagonist of progesterone. At high doses, it blocks cortisol at the glucocorticoid receptor. In instance of pregnancy termination, it works by interrupting progesterone. Progesterone is the primary hormone in preparing the endometrium for implantation as well as sensitizing the body to the effects of prostaglandins by increasing their synthesis and decreasing their metabolism. The increase in prostaglandins results in menstrual bleeding, disruption of the endometrium, and then termination (Autry &</p>	<p>Monitor for prolonged, heavy bleeding.</p> <p>Monitor for infection.</p> <p>Monitor QT interval (Autry & Wadhwa, 2022).</p>

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	Wadhwa, 2022).	
Rhogam	Suppresses immune response of nensensitized Rh0 – negative patients who are exposed to Rh0 – positive blood Uses: Prevention of isoimmunization in Rh negative women who give birth to Rh positive blood after abortions, miscarriages, amniocentesis (Skidmore-Roth, 2022).	Assess for allergies, reactions to immunizations. Type, crossmatch mother and newborn’s cord blood (Skidmore-Roth, 2022).
Promethazine	Action: Acts on blood vessels, GI, respiratory system by competing with histamine for H1-receptor sites; decreases allergic response by blocking histamine (Skidmore-Roth, 2022). Uses: Motion sickness, sedation, nausea (Skidmore-Roth, 2022).	I&O ratio, anticholinergic effects, antiemetic/motion sickness, respiratory depression/sedation, monitor cardiac status (Skidmore-Roth, 2022).
Pyridoxine and Doxylamine	Nausea and vomiting of pregnancy in women who do not respond to other treatment (Skidmore-Roth, 2022).	Do not breastfeed. Monitor for anticholinergic effects, CNS changes. Evaluate therapeutic response (Skidmore-Roth, 2022).
Ondansetron	Prevents nausea, vomiting by blocking serotonin peripherally, centrally, and in the small intestine (Skidmore-Roth, 2022).	Identify whether pregnancy is planned or suspended, cardiac malformations, oral clefts may occur is used in 1 st trimester; cautious use in breastfeeding (Skidmore-Roth, 2022).
Betamethasone	Inflammation/itching corticoidsteroid-responsive dermatoses on the skin/scalp (Skidmore-Roth, 2022).	Assess skin reactions (burning, pruritus, folliculitis, dermatitis. Evaluate decreased itching, inflammation on the skin, scalp (Skidmore-Roth, 2022).
Indomethacin	Action: Inhibits prostaglandin synthesis by decreasing enzyme needed for biosynthesis; analgesic, antiinflammation, antipyretic Uses: Closure of patent ductus	Patent ductus arteriosus: respiratory rate, character, heart sounds. Pregnancy/breastfeeding: do not use after 30 weeks gestation; use only if benefits outweigh fetal

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	arteriosus in premature infants (IV), bone pain, headache (Skidmore-Roth, 2022).	risk <30 wks gestation; do not breastfeed, excreted in breastmilk (Skidmore-Roth, 2022).
Magnesium Sulfate	Anticonvulsant for preeclampsia, eclampsia (Skidmore-Roth, 2022).	Eclampsia: seizure precaution, B/P, ECG, magnesium toxicity: thirst, confusion, decrease in reflexes; I&O ratio, check for decrease in urinary output. Contraindicated in labor, toxemia during 2 hr prior to delivery, appears in breast milk (Skidmore-Roth, 2022).
Terbutaline Sulfate	Relaxes bronchial smooth muscle by direct action on β 2-adrenergic receptors through the accumulation of cAMP at β -adrenergic receptor sites; bronchodilation, diuresis, CNS, cardiac stimulation occur, relaxes uterine smooth muscle Unlabeled uses: Premature labor, nonresponsive status asthmaticus in children (IV) (Skidmore-Roth, 2022).	Black Box Warning: Labor: maternal heart rate, B/P, contraction, fetal heart rate; can inhibit uterine contractions, labor, monitor for hypoglycemia, do not use injectable product for prevention or treatment over 72 hours in preterm labor; do not use oral product for preterm labor; avoid breastfeeding (Skidmore-Roth, 2022).
Glyburide	Action: Causes functioning β cells in pancreas to release insulin. Unlabeled use: Gestational diabetes not controlled by diet (Skidmore-Roth, 2022).	Breastfed infant may be hypoglycemic, insulin should be used in pregnancy (Skidmore-Roth, 2022).
Insulin	Decreases blood glucose; by transport of glucose into cells and the conversion of glucose to glycogen, indirectly increases blood pyruvate to lactate, decreases phosphate and potassium Uses: gestational diabetes (Skidmore-Roth, 2022).	Assess fasting blood glucose, A1c may be drawn to identify treatment effectiveness q30mo, hypoglycemic reaction that can occur during peak time (Skidmore-Roth, 2022).
Hydralazine hydrochloride	Action: Vasodilates arteriolar smooth muscle by direct relaxation; reduction in blood pressure with reflex increases	Use only if benefits outweigh fetal risk; 3 rd trimester toxicity has occurred, use caution in breastfeeding (Skidmore-Roth,

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	in heart rate Unlabeled use: preeclampsia (Skidmore-Roth, 2022).	2022).
Labetalol	Action: Produces decreases in B/P without reflex tachycardia or significant reduction in heart rate through mixture of α -blocking, β -blocking effects Unlabeled use: hypertensive emergency in pregnancy/postpartum (Skidmore-Roth, 2022).	Hypertension: monitor B/P before starting treatment, periodically thereafter. Use only if benefits outweigh fetal risk; use caution in breastfeeding (Skidmore-Roth, 2022).
Nifedipine	Hypertensive emergency in pregnancy or postpartum (Skidmore-Roth, 2022).	Use only if benefits outweigh fetal risk; do not breastfeed (Skidmore-Roth, 2022).
Calcium gluconate	Action: Calcium needed for maintenance of nervous, muscular, skeletal function Uses: neonatal tetany (Skidmore-Roth, 2022).	Assess ECG for decreased QT and T wave inversion, evaluate therapeutic response: decreased twitching, paresthesias, muscle spasms; absence of tremors, seizures (Skidmore-Roth, 2022).
Misoprostol	Unlabeled use: Pregnancy termination, postpartum hemorrhage, cervical ripening/labor induction (vaginal) (Skidmore-Roth, 2022).	Vaginal bleeding and uterine cramping (Skidmore-Roth, 2022).
Dinoprostone (Cervidil)	Abortifacient, cervical ripening (Skidmore-Roth, 2022).	Pregnancy/breastfeeding: no well-controlled studies; use only if benefit outweighs fetal risk; avoid breastfeeding, excreted in breast milk (Skidmore-Roth, 2022).
Penicillin G	Action: Interferes with cell wall replication of susceptible organisms Uses: Skin and soft tissue infections, gonorrhea; effective for gram positive cocci (<i>Staphylococcus</i>) (Skidmore-Roth, 2022).	Assess: infection: temperature, urine, stools before, during, and after treatment, C&S before therapy; product may be given as soon as culture is taken. (Skidmore-Roth, 2022).
Methylergonovine	Action: Stimulates uterine, vascular, and smooth muscle, thereby causing contractions; decreases bleeding	Assess B/P, pulse, character and amount of vaginal bleeding; watch for indications of hemorrhage, uterine relaxation;

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	Uses: Prevention, treatment of hemorrhage postpartum or postabortion, uterine contractions (Skidmore-Roth, 2022).	observe for severe cramping, do not use in pregnancy except following obstetric delivery or abortion to reduce postpartum hemorrhagic risk; may breastfeed 1 wk postpartum (Skidmore-Roth, 2022).
Nalbuphine (Nubain)	Action: Depresses pain impulse transmission at the spinal cord level by interacting with opioid receptors Uses: Moderate to severe pain, supplement to anesthesia, sedation prior to surgery (Skidmore-Roth, 2022).	Assess: Pain: type, location, intensity before and 30-60 min after administration, withdrawal reaction in opiate dependent individuals Pregnancy/breastfeeding: use only if clearly needed; cautious use in breastfeeding (Skidmore-Roth, 2022).
Naloxone--	Action: Competes with opioids at opiate receptor sites Unlabeled use: nausea, vomiting (Skidmore-Roth, 2022).	Respiratory dysfunction: monitor LOC, EGC, B/P Pregnancy/breastfeeding: use only if clearly needed; cautious use in breastfeeding (Skidmore-Roth, 2022).
Fentanyl	Action: Inhibits ascending pain pathways in CNS, increases pain threshold, alters pain perception by binding to opiate receptors Uses: Controls moderate to severe pain (Skidmore-Roth, 2022).	Pregnancy/breastfeeding: no-well controlled studies; use only if benefits outweigh fetal risk; if used for prolonged periods, neonatal withdrawal syndrome may occur; discontinue breastfeeding or product, excreted in breast milk (Skidmore-Roth, 2022).
Ibuprofen	Analgesic, antiinflammarotory, antipyretic, patent ductus arteriosus (Skidmore-Roth, 2022).	Pregnancy: Do not use after 30 wk gestation; use only if benefits outweigh fetal risk before 30 wk gestation; do not breastfeed (Skidmore-Roth, 2022).
acetaminophen	May block pain impulses peripherally that occur in response to inhibition of prostagladins synthesis; antipyretic action results from inhibition of prostagladins in the CNS	For fever and pain: type of pain, location, intensity, duration, aggravating/alleviating factors; assess for diaphoresis, fever, baseline and periodically Pregnancy/breastfeeding: cautious use in pregnancy,

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	Uses: Mild to moderate pain or fever, dysmenorrhea	breastfeeding (PO), use only if clearly needed (IV) (Skidmore-Roth, 2022).
oxycodone	Action: Inhibits ascending pain pathways in CNS, increases pain threshold, alters pain perception Uses: Moderate to severe pain (Skidmore-Roth, 2022).	Use only if benefits outweigh fetal risk; neonatal opioid withdrawal syndrome may occur with extended use; avoid breastfeeding, excreted in breast milk (Skidmore-Roth, 2022).
hydrocodone	Action: Binds to opiate receptors in CNS to reduce pain Uses: Moderate to severe pain (Skidmore-Roth, 2022).	Pain: type, location, intensity, other characteristics before, 1 hr after giving product Black box warning: Neonatal opioid withdrawal syndrome: monitor neonate for withdrawal Pain: type, location, intensity (Skidmore-Roth, 2022).
ketorolac	Action: Reversibly inhibits cyclooxygenase-1 and -2 enzymes; analgesic, antiinflammatory, antipyretic effects Uses: mild to moderate pain (short term) (Skidmore-Roth, 2022).	Black box warning: Do not use epidurally, intrathecally; alcohol is present in the solution Pregnancy/breastfeeding: to notify prescriber if pregnancy is planned or suspected; not to breastfeed; contraindicated during labor and delivery (Skidmore-Roth, 2022).
Hepatitis B vaccine	Uses: Prevention of hepatitis B virus in exposed patients, including passive immunity in neonates born to HbsAg-positive mother (Skidmore-Roth, 2022).	
Erythromycin eye ointment	Actions: Inhibits protein synthesis, thereby decreasing bacterial replication Uses: Prevention of ophthalmic neonatorum Skidmore-Roth, 2022).	Assess: Allergic reaction: assess for hypersensitivity; discontinue product (Skidmore-Roth, 2022).
Phytonadione	Action: Needed for blood clotting Uses: Vit K malabsorption, prevention of hemorrhagic disease of the newborn (Skidmore-Roth, 2022).	Pregnancy/breastfeeding: usually not needed in pregnancy; may breastfeed (Skidmore-Roth, 2022).

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Prenatal vitamins	Prevents neural tube defects, supports the development of the placenta and fetus (Mayo Clinic, 2022).	Iron in prenats contributes to constipation; encourage drinking plenty of fluid, include fiber in your diet (Mayo Clinic, 2022).
MMR vaccine	Stimulates the immune system to protect against measles, mumps, rubella (Bailey & Sapa, 2022).	Monitor for seizures and anaphylaxis following administration (Bailey & Sapa, 2022).
Tetanus & reduced diphtheria toxoids/acellular pertussis vaccine	Produces an active immune response of the body developing antibodies and antitoxins against diphtheria and tetanus toxoids (inactivated toxins) and acellular pertussis antigens (Ogden et al., 2022).	Monitor for an Arthus reaction (type III hypersensitivity reaction) (Ogden et al., 2022).
Lidocaine mucosal gel	Stabilizes the neuronal membrane by inhibiting the ionic fluxes required for the initiation and conduction of impulses, thereby effecting local anesthetic action (Drugs.com., n.d.).	Monitor for hypersensitivity to local anesthetic (Drugs.com., n.d.).

References:

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