

Drugs affecting breast&Milk and lactation			
Drugs that should be avoided during lactation:		Drugs that can suppress lactation (inhibit prolactin)	
<ul style="list-style-type: none"><li>• Radioactive iodine</li><li>• Potassium iodide</li><li>• Anticancer drugs :<i>Doxorubicin, cyclophosphamide, methotrexate</i></li></ul>	<ul style="list-style-type: none"><li>• Lithium (anti -mania)</li><li>• Atenolol</li><li>• CNS acting drugs :<i>Amphetamine, heroin, cocaine</i></li></ul>	<ul style="list-style-type: none"><li>➤ Levodopa (dopamine precursor)</li><li>➤ Bromocriptine (dopamine agonists)</li><li>➤ Androgens</li></ul>	<ul style="list-style-type: none"><li>➤ Thiazide diuretics</li><li>➤ Ergot derivatives</li></ul> <p>Estrogen, oral contraceptives that contain high-dose of estrogen and a progestin.</p>
Neonatal Hyperbilirubinemia (Drugs that are contraindicated in infants with glucose -6 -phosphate dehydrogenase(G6PD))		Drugs that cause Neonatal Met-hemoglobinemia	
oxidizing drugs:-Antibiotics :(sulfonamides, trimethoprim, dapson_(anti-leprosy)_) -Antimalarials :(Primaquine)		<ul style="list-style-type: none"><li>➤ Antibiotics (sulfonamides, trimethoprim, dapson_)</li><li>➤ Topical anesthetic (benzocaine applied to the gums in baby teething gels).</li></ul>	
Antibiotics that have serious effects on the lactating infant or child			
Chloramphenicol		“Gray baby” syndrome	
Sulphonamides		hyperbilirubinemia -neonatal jaundice Should be avoided in premature infants or infants with G6PD deficiency	
Quinolones (ciprofloxacin)		Risk of arthropathies ;Should be avoided	
Tetracyclines		Absorption by the baby is probably prevented by chelation with milk calcium. Risk of tooth discoloration	
Sedative/hypnotics (high lipid soluble )			
single doses are unlikely to be harmful (but Clinical monitoring is recommended); ;Regular use of high doses should be avoided			
Barbiturates(phenobarbitone)		Lethargy, sedation, poor suck reflexes ;Clinical monitoring is recommended	
Benzodiazepines(diazepam)		Lethargy, sedation in infants ;Clinical monitoring is recommended	
Anti-diabetics			
Metformin		avoid due to lactic acidosis	
Oral CONTRACEPTIVE			
Non hormonal method should be used		Estrogens ↓ milk quantity	
Avoid estrogens containing pills		Progestin only pills or minipill are preferred for birth control.	
Antithyroid drugs:Propylthiouracil,Carbimazole , Methimazolepotassium iodide		May suppress thyroid function in infants. Propylthiouracil should be used rather than carbimazole or methimazole	
Anticonvulsants : Carbamazepine Phenytoin		Are preferable over othersAmounts entering breast milk; are not sufficient to produce adverse effects ; <i>Infants must be monitored</i>	
Anticoagulants:Heparin , Warfarin		Heparin is not present in breast milk. Warfarin can be used (very small quantities found in breast milk).	
Iodine (radioactive)		Permanent hypothyroidism in infant Breast-feeding is contraindicated	
Cytotoxic drugs		Breast feeding should be avoided	

Lithium	Large amounts can be detected in milk Avoid
CVS drugs Atenolol	Risk of bradycardia and hypoglycemia Avoid (but other beta blocker can be used)

## Drugs that can augment lactation

➤ <b>Metoclopramide</b> ( <i>antiemetic</i> ) ➤ <b>Haloperidol</b> ( <i>antipsychotic</i> ) ➤ <b>Phenothiazines</b> (antiemetic)	➤ <b>Methyl dopa</b> (antihypertensive drug) ➤ <b>Theophylline</b> (used in asthma)
<b>Drugs of choice in lactation</b>	
<b>Antibiotics</b>	Cephalosporins, penicillins are safe Avoid: chloramphenicol, quinolones, sulphonamides and tetracyclines
<b>Antidiabetics</b>	Insulin – oral antidiabetics are safe Avoid: metformin
<b>Anticoagulants</b>	Heparin – warfarin
<b>Analgesics</b>	Acetaminophen (paracetamol)
<b>Antithyroid drugs</b>	Propylthiouracil is preferable over others
<b>Anticonvulsants</b>	Carbamazepine - phenytoin
<b>Oral contraceptives</b>	Progestin only pills or minipills are preferred for birth control.
<b>Antiasthmatics</b>	Inhaled corticosteroids - prednisone

## Summary:

To minimize the ADRs of the drugs in lactation we use a drug having these characters :

- ✓ non lipid soluble (water soluble) → ionized
- ✓ High molecular weight
- ✓ acidic drug
- ✓ Short half life
- ✓ high volume of distribution

### General considerations to minimize risk to nursing infant:

- ✓ The safest drug should be chosen e.g. Acetaminophen than aspirin for analgesia
- ✓ Use, whenever possible, a topical form of medication instead of an oral form.
- ✓ Choose medications with the lowest lipid solubility.
- ✓ Choose medications with the shortest half-life and highest protein-binding ability.
- ✓ Lactating mother should take medication just after nursing and 3-4 hours before the next feeding.
- ✓ Drugs with no safety data should be avoided or lactation should be discontinued.