PERI-PREGNANCY DRUG TREATMENT CONSIDERATIONS

Pre-conceived Notions

April 2012

GUIDELINES


OTHER RESOURCES


USEFUL LINKS

- FDA Pregnancy Exposure Registries: http://www.fda.gov/ForConsumers/byAudie nce/ForWomen/default.htm

SASKATCHEWAN LINKS

- Maternal Mental Health: https://sites.google.com/site/maternalmentalhealth/
- Saskatchewan Drug Information Service: http://druginfo.usask.ca/

RxFiles RELATED Q&A

Antidepressants During Pregnancy & Breastfeeding


Diabetes in Pregnancy & GDM


Vitamin D


RxFiles Related CHARTS s 8th ed

Acne (pg 18-19)
Antibiotics (pg 56-57)
Antifungals (pg 51-53)
Anxiety (pg 100-101)
Asthma (pg 112-113)
Contraception (pg 86-88)
Depression (pg 104-105)
Diabetes (pg 24-29b)
GERD (pg 41, 95)
HIV (pg 58-59)
HTN & CV Risk (pg 2-7,10-11,15)
Nausea & Vomiting (pg 44-45)
STIs (pg 55)
Substance Abuse (pg 124-125)
Thyroid (pg 34-35)
Urinary Tract Infections (pg 64)
Vaccinations (pg 50)
Vitamins & OTCs (pg 94-97)

Pre-Conception Patient Case

A 34 year old female with a history of T2DM, proteinuria & hypothyroidism, has a routine visit to refill her prescriptions. During your discussion with her, you find out she recently married. She & her husband would like to have a family, but have not yet started trying to conceive. She is currently on metformin 850mg po bid, losartan 100mg po daily & levothyroxine (LT4) 125mcg po daily. She does not take any herbs, vitamins or minerals. Her BP is currently 132/90mmHg, BMI 36kg/m², and most recent A1C was 8.2%, ACR 3.2mg/mmol, CrCl 118ml/min, and TSH 3.4mIU/L. She has had no prior pregnancies, does not exercise & has poor nutrition.

How do you address her pre-conception needs?

- Due to the high rate of unplanned pregnancies, consider pre-conception counseling during every patient visit with females of childbearing potential, especially when comorbid conditions exist.
- Her BMI > 35kg/m² & diabetes put her at high risk of fetal neural tube defects. Start folic acid 5mg po daily, ideally for 3 months prior to conception & continue throughout the 1st trimester. Reduce dose to 0.4-1mg po daily for 2nd & 3rd trimesters, & for 6 weeks postpartum or while breastfeeding.
- Continue metformin and add insulin. Target a pre-conception A1C <7% ( <6% if can be done safely and without hypoglycemia). Educate the patient regarding more frequent BG monitoring.
- Continue her losartan until pregnancy confirmed & then switch her to a safer alternative (see Hypertension: Peri-Pregnancy in next column).
- Increase her LT4 dose & target a pre-conception TSH <2.5mIU/L. Once pregnancy confirmed, she may increase her dose by 2 pills per week (i.e. ↑ from 7 to 9 pills/week).

Other considerations:

- Encourage activity (e.g. walking) & healthy nutrition.
- Assess & advise on smoking, alcohol & caffeine.
- Supplement with vitamin D 600 IU – 2000 IU/day.
- Promote adequate calcium 1000mg/day (diet ± supplement).

Quiz: (see inside chart for answers)

- When should pre-conception counseling start?
- Which patients should receive folic acid 5mg/day?
- Which blood glucose management medications can be used during pregnancy?
- What is the pre-conception target for TSH in hypothyroid patients?
- Should ACEI/ARBs always be discontinued prior to conception?

Diabetes: Peri-Pregnancy Management

- Elevated A1C prior to, & during pregnancy can cause maternal & fetal infant morbidity & mortality.
- Start folic acid 5mg po daily prior to conception.
- Insulin: most safety data e.g. NPH, lispro, aspart, regular.
- Metformin & glyburide may be continued in T2DM, or used in Gestational DM if non-adherent to or refuse insulin. Not thought be to be teratogenic, & similar to insulin in maternal & fetal outcomes. Add insulin to metformin if needed to achieve targets.
- Pregnancy Glycemic Targets:
  - FBG 3.8-5.2, 1-hr BG 5.5-7.7, 2-hr BG 5.6-6.6
- Females with GDM are at high risk of T2DM. Screen for T2DM between 6 weeks & 6 months postpartum. Consider annual screening thereafter.

Hypertension: Peri-Pregnancy Management

- Reassess the need for antihypertensive therapy before & during pregnancy as blood pressure tends to drop until 16-20 weeks gestation.
- Discontinue statins & atenolol prior to conception.
- Historically, ACEI/ARBs were contraindicated during pregnancy but recent evidence suggests these medications are safe during 1st trimester. It is reasonable to wait until pregnancy is confirmed before switching an ACEI/ARB to another agent, especially when used for nephropathy. If used for HTN, may switch prior to conception. ACEI/ARBs are still contraindicated during 2nd & 3rd trimester.
- Labetalol, methyldopa & nifedipine XL continue to be 1st line agents for the treatment of HTN disorders during pregnancy.
- Diastolic BP should not be ↓ too rapidly & ideally be ≥80mmHg to maintain placental perfusion.
- Low-dose ASA may be used for ↓ cardiovascular risk &/or preeclampsia in at risk patients see chart (pg 2).
- Continue antihypertensive postpartum to cover BP peak seen 3-5 days after delivery, then reasses.

Hypothyroid: Peri-Pregnancy Management

- TSH Pregnancy Goals: 1st trimester ≤2.5mIU/L, 2nd & 3rd trimester ≤3.5mIU/L.
- Aim for a pre-conception TSH of ≤2.5mIU/L.
- ↑ LT4 dose by 2 extra pills/week once pregnancy confirmed (i.e. ↑ from 7 to 9 pills/week). Check TSH in 4 weeks.
  - May instruct patient to increase the dose independent upon missed menstrual cycle or after a positive home pregnancy test, & to notify physician as soon as possible.
- Post-partum: return the patient to her pre-pregnancy LT4 dose. May need to adjust the dose depending on the amount of weight gained.

Motherisk: Treating the mother, protecting the unborn

- Excellent resource for both healthcare professionals & patients. Website: http://www.motherisk.org
- Hotlines: 1-877-327-4636 Alcohol & Substance 1-877-439-2744 Motherisk Helpline
  1-800-436-8477 Morning Sickness 1-888-246-5840 HIV & HIV Treatment
### Peri-Pregnancy Drug Treatment Considerations

#### Pre-Pregnancy (~3 Months Prior) &/Or Potential for Pregnancy

<table>
<thead>
<tr>
<th>Vitamin D</th>
<th>Calciferol (diet supplement) 1.3g/day 518 yd, 1g/day ≥ 19 yr.</th>
</tr>
</thead>
</table>

#### Pregnancy

- **Vitamin D Total 600 IU/day**: Supplement periodic 25(OH) level.

#### Lactation

- **Vitamin A retinol > 10,000 IU or 3000 mcg/day (teratogenic)**

#### Maternal Multivitamins

- **Fe**: 27mg, folate 1mg, Ca ~ 250mg, Vit D 400IU.

### Diabetes

#### Pregnancy

- **Metformin**: in insulin glunide, insulin detemir, insulin glargine limited data/thoretical risks.

### Hypertension

#### Pregnancy

- **Blood Pressure**:
  - **BP**: 120/80 mmHg.
  - **2nd trimester**: 130/80 mmHg.
  - **3rd trimester**: 140/90 mmHg.

### Thyroid

#### Pregnancy

- **Levothyroxine (LT4)**, preferred toothyroside (LT3).

### Hypothyroidism

- **TSH Goal**: 1st trimester ≤ 2.5mIU/L, 2nd & 3rd trimesters ≤ 3.5mIU/L.

#### Post-partum & Lactation

- **PTU**: risk of hepatotoxicity (0.1-0.2%).

### Other Considerations

- **Use pre-pregnancy blood glucose targets**
- **Continue antihypertensive(s) post-partum to cover BP peak seen 3-5 days after delivery, then reassess**.
- **BP goal**: as per non-pregnant
- **NSAIDs** may adversely impact BP control
- **Hydrochlorothiazide**
- **Hydralazine**
- **Methylodopa**
- **Peri-Pregnancy Drug Treatment Considerations**

---

**Note**: This information is not exhaustive and should be used as a guide. Always consult a healthcare professional for personalized advice.
### Infectious Diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>Antibiotics</th>
<th>1st Trimester</th>
<th>2nd Trimester</th>
<th>3rd Trimester</th>
<th>Lactation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acne</td>
<td>Clindamycin, benzoyl peroxide, salicylic acid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lactation</td>
<td>Acne</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>see chart pg 14-16, 20, 23</td>
<td>- isotretinoin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Avoid pregnancy treatment &amp; delay conception 1st</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>month after stopping (counsel re: birth control)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- tetracyclines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Erythromycin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>non-estolate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lactone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Risk of maternal hepatotoxicity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clindamycin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Malformations in animals &amp; humans, no definitive link</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>PENICILLINS ± clavulanate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TETRACYCLINES</td>
<td>abnormal teeth &amp; bone development, malformations, maternal hepatotoxicity</td>
<td>Tetracycline</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CLINDAMYCIN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cotrimoxazol</td>
<td>hemolytic anemia, neonatal jaundice, kernicterus</td>
<td>Ok in healthy term infants without G6PD deficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sulfamethoxazole</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>BACTRIM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trimethoprim</td>
<td>ic acid</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metronidazole</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oral 1st trimester; accumulated data suggests likely safe</td>
<td></td>
<td>May hold BF 12-24hr post-tx</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nitrofurantion</td>
<td>neonate hemolytic anemia</td>
<td>Avoid in G6PD deficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vancomycin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Pregnancy

<table>
<thead>
<tr>
<th>Symptomatic Bacterial Vaginosis</th>
<th>Screen &amp; treat at 12-16 weeks in high risk pregnancies (e.g. previous pre-term delivery or premature rupture of membranes). Re-test 1 month after treating.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genital Herpes Simplex Virus</td>
<td>1st Symptomatic Episode: acyclovir or valacyclovir. Consider cesarean section if episode occurs late in pregnancy.</td>
</tr>
<tr>
<td>Recurrent: Cesarean section is recommended if there is a lesion or prodrome at delivery.</td>
<td></td>
</tr>
<tr>
<td>Seizures: Eosinophils, neutrophils, mumps, rubella, mumps, rubella virus, chickenpox, Erysipelas, tetanus, diphtheria, pertussis</td>
<td></td>
</tr>
<tr>
<td>Immunizations: See chart pg 50 Update as required. Obtain rubella &amp; varicella antibodies if unsure of immunization history. Delay conception for 1-3 months after live vaccines (e.g. MMR, varicella)</td>
<td></td>
</tr>
<tr>
<td>Sexually transmitted infections (STI): See chart pg 55</td>
<td>Screen and treat.</td>
</tr>
</tbody>
</table>

### Acne in Pregnancy

- Topical: clindamycin, benzoyl peroxide, salicylic acid
- Isotretinoin: Avoid pregnancy treatment & delay conception 1 month after stopping (counsel re: birth control; tetracyclines)

### Allergy, Constipation & URI (Over-The-Counter Products)

- Antihistamine: 1st generation (e.g. chlorpheniramine, diphenhydramine)
- Constipation: Fiber, docusate, lactulose, senna, polyethylene glycol LAX-A-DAY
- Decongestant: Saline nasal spray SALTINESS, topical oxymetazoline

### Asthma

- Uncontrolled asthma: ↑ risk of low birth weight, small for gestational age, preterm labour & delivery, & preclampsia. Asthma will worsen in ~1/3 usually 2nd or 3rd trimester & return to pre-pregnancy state within 3 months post-partum.
- Intermittent asthma: Salbutamol
- Persistent asthma: Step 1: low dose inhaled corticosteroid, Step 2: LABA +/- medium dose inhaled corticosteroid, Step 3: LABA + high dose corticosteroid
- Budesonide: preferred, beclomethasone, fluticasone, formoterol, salmeterol

### Depression & Anxiety

- Consider risk vs benefit, & risk of not treating
- Screen: pre- & post-conception, & 6 weeks post-partum. Screen for thyroiditis (TSH, FT4) post-partum
- SSRIs (see below Q&A for PAXEL), bupropion, amitriptyline, nortriptyline, desipramine, SNRIs
- Benzodiazepines, chlorpromazine, methotrimeprazine, other antipsychotics
- St. John’s Wort: Limited human data. No teratogenicity reported. Buyer beware.

### Herbal/Natural Products

- Generally avoid herbal products. Less safety data on the use of herbas during pregnancy/lactation than conventional medications, & not all safe or have a NPN.
- Herbs for inducing labour: castor oil, raspberry leaf; blue cohosh
- Herbs for increasing lactation: none are considered safe or effective
- Omega-3: high dose, 2g/day, effectivness. Encourage dietary sources; walnuts, soybeans, salmon, etc.

### GERD/Heartburn in Pregnancy

- Ca²⁺ Carbonate TUMS, Mg²⁺, alginic acid sodium, Tums, Faniidine
- Omeprazole: max dose 40mg, pantoprazole, cimetidine

### Nausea & Vomiting

- Doxylamine/pyridoxine DICLECTIN ± dimenhydrinate ± phenothiazine or metoclopramide. May also add on additional pyridoxine 25mg po q8h.
- Ginger 250mg po q6h tablets - effectiveness similar to pyridoxine and dimenhydrinate. May have delayed onset (3-5 days). Buyer beware.

### Pain & Fever

- Opioids: Pain relief: codeine, tramadol. For other commonly used opioids. 3rd trimester use may cause neonatal depression & withdrawal. Abrupt discontinuation may cause premature labour & spontaneous abortion. Taper to lowest effective dose.
- Codeine: Risk of morphine toxicity in ultrapid CYP2D6 metabolizers. Limit use to 4 days. Monitor baby for sleep, difficulty breathing, feeding, or 8 sleep.
- Morphine, methadone, fentanyl; hydromorphone, oxycodone.
- Migraines: Migraines without aura tend to improve during pregnancy. Breastfeeding may protect against migraines. Acetaminophen, caffeine300mg/day, metoclopramide - consider combining all 3 if required.
- Sumatriptan IM/REVEX

### DICLECTIN

- Pregnancy Category: C
- Pregnancy: 5% incidence
- Lab Values: TSH, FT4
- Contraindicated: Selective serotonin receptor inhibitor (SSRI)
- Lactation: Reduced in breast milk
- Other Uses: motion sickness (e.g. morning sickness)
- Dose: 100mg po q6h in divided doses.
- Side Effects: Constipation, Drowsiness, Nausea, Diarrhea, Headache, Insomnia, Rash,GI Disturbances
- Overdose: May cause drowsiness, confusion, respiratory depression. Consult Poison Control Center.
- Pregnancy: Avoid exposure in the 3rd trimester.

### Q&A

- Vaccines: Varicella, influenza, meningococcal, Haemophilus influenzae Type B vaccine
- Genital Herpes: Symptomatic: if fever, MMR, varicella
- Re: Pregnancy: screen at 5 months & term if high-risk behaviour or mother & or partner STI, injected drug use, multiple partners, HIV, etc. Maternal ARV tx during pregnancy, delivery, infant ARV prophylaxis (6 wks) essential to mtct. Nausea (e.g. vomiting) & breast feeding associated with ARV: tx nausea aggressively to aid compliance (DICLECTIN ± dimenhydrinate ± metoclopramide). For planned cesarean scheduled section in 38 weeks if HIV RNA >1000 copies/mL near delivery. Immunizations: Avoid live vaccines e.g. MMR, varicella. For meningococcal, use polysaccharide. If no previous Td immunization, a 3 dose Td schedule should be given 0, 4 weeks & 6-12 months & Tdap should replace 1 of the doses (Td should be administered ≥220 weeks gestation). Influenza: Avoid. High recommended: Ex: zanamivir RELENZA

### STIs

- If treating during pregnancy, retest to ensure cure. Screen during 3rd trimester in patients at high risk of acquiring a STI. If patient acquires an STI >5 months gestation, re-screen for HIV.

### Urinary Tract Infection

- Infection: See chart pg 64 cephalaxin or amoxicillin x7days. Hospitalized patients: Nitrofurantoin x7days avoid ≥26 weeks pregnancy.
- Catheter: Avoid. Cautiously in 3rd trimester. Hypertension: May be treated with antihypertensives. Consider Cesarean section if hypertension >140/90 mm Hg or proteinuria >300mg/24hr. Consider delivery of hypertensive patients with renal insufficiency.
- Duration: Follow-up urine culture 1 week post-treatment, & then monthly for rest of pregnancy.

### Vulvovaginal Candidiasis

- Infection: See chart pg 51-53 Clotrimazole or miconazole x7days preferred, topical nystatin x14 days, Fluconazole 150mg po x1 single, low dose treatment appears safe

### Post-Partum/Lactation Immunizations

- All vaccines: Avoid breastfeeding to ↑ transmission risk (5-20% in developed countries).
- Nipple 1) candidiasis: miconazole 2% cream MICONAT, 2) fissures: mupirocin 2% ointment BACTROBAN, 3) inflammation: low-mid potency steroid (e.g. hydrocortisone). Apply after breastfeeding.
- Infant oral candidiasis: nystatin.
Pregnancy: If pregnancy occurs, continue same oral contraceptives. The risk of birth defects if obese & pre-existing DM. Use pills acid 4mg po daily if trying to conceive, or if on metformin & sexually active.

Syndrome to males:

• After stopping hormonal contraception, fertility is restored in:
  • 1-2 months with combined oral contraceptives
  • 3 months for progesterone only pills.
• Rate of conception after the last injection is 50% at 10 months, & 90% at 24 months.
• Intrauterine device (IUD) users, users do not risk of infertility.
• Pregnancy: IUD does not risk of ectopic pregnancy. However, if IUD is inserted, use barrier contraception while IUD is retained. If IUD is retained, it almost always results in pregnancy.

There is insufficient evidence to recommend if combined oral contraceptives impact the quality & supply of breast milk.

• Provera: during the first 3 weeks post partum. Avoid during breastfeeding, or breast milk production & lactation.
• Domperidone: 10 mg po t.i.d. during lactation.

Galactagogues for Breastfeeding:

• Frequent feeds. Frequency of feeds & milk removal at regular intervals will increase milk production.
• There is insufficient evidence to recommend the use of pharmacologic or herbal galactagogues.
• Trials investigating domperidone & metoclopramide were primarily of poor quality, small sample sizes, short duration, and had high drop-out rates.
• There is no evidence that T prolactin levels equate to T milk production.
• Anecdotally, medications may be of some benefit in adoptive mothers who wish to breastfeed.
• To re-establish breastfeeding after weaning, or mothers of babies in neonatal intensive care, refer other mothers experiencing difficulties with breastfeeding to a Lactation Consultant.

Herbal-supplements for breastfeeding:

• Fenugreek, blessed thistle, fennel, caraway, & Goats Rue. Use as you would for non-breastfeeding women.
• Barley is not recommended for the suppression of lactation due to the risk of stroke and myocardial infarctions when used postpartum.

Metrodin: 2nd line for oral antihypertensive, side effects.

• Hypertension in Pregnancy:
  • Pre-existing HTN: HTN diagnosed prior to conception or before 20 weeks gestation.
  • Pre-existing HTN + Preeclampsia: occurs after 20 weeks gestation with the following:
    • Gestational HTN: diagnosed after 20 weeks.
    • Gestational HTN + Preeclampsia: new onset proteinuria, or ≤ 3 adverse conditions.
    • Blood pressure targets: no comorbidities 130/80, 140 mmHg, with comorbidities (diabetes, renal disease, cardiovascular disease) 130/80-85 mmHg. May also consider:
      • Pre-existing HTN: consider SBP 135-140mmHg
      • Gestational HTN + Preeclampsia: SBP ≥ 150 mmHg

<table>
<thead>
<tr>
<th>Table: Adverse Conditions Pertain ing to Preeclampsia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal Symptoms: Persistent/new/unusual headache, visual disturbances, persistent abdominal or right upper quadrant pain, severe nausea or vomiting, chest pain or dyspnea.</td>
</tr>
<tr>
<td>Maternal Signs of End-Organ Damage: Eclampsia, severe hypertension, pulmonary edema, suspected placental abruption, seizures.</td>
</tr>
<tr>
<td>Abnormal Maternal Laboratory Tests: ↑ Scr, AST, ALT, or LDH with symptoms; ↓ platelets or albumin</td>
</tr>
<tr>
<td>Fetal Morbidity</td>
</tr>
</tbody>
</table>

• Maternal: Term delivery is preferred for non-ICP management & follow-up screening during pregnancy & post partum. However, blood pressure targets are similar to antihypertension therapy in the same regardless of type.
• Supplements for the prevention of preeclampsia:
  • Fish oils: supplements (e.g. evening primrose) have not been shown to ↓ risk of preeclampsia.
  • Watch mercury levels in dietary fish (e.g. tuna). Evening primrose may delay rupture of membranes, augment oxytocin, etc.
• Vitamin E & C: does not ↓ risk of preeclampsia; may ↑ risk of birth/PTC & premature rupture of membranes.
Acknowledgements: Contributors & Reviewers: Tessa Laubscher MD, CCFP (Academic Family Medicine, U of S, Saskatoon), Jill Newstead-Angel MD, FRCPC (Internal Medicine, Ob/Gyne, U of S, Saskatoon), Nora McKee RN, MD, CCFP (Academic Family Medicine, U of S, Saskatoon), Terra Arman MD, PhD, FRCPC (Adult Endocrinology, Saskatoon, SHR/UofS), Jocelyne Martel MD, FRCPC (Ob/Gyne College of Medicine, U of S, Saskatoon), Shanna Fenton MD, CCFP (Family Medicine, Saskatoon), Jonathan Hey MD (Family Medicine, Saskatoon), Karen Jensen BSP (SDIS, Saskatoon), Carmen Bell BSP (SDIS, Saskatoon) & the RxFiles Advisory Committee. Prepared by: L. D. Pollex et al., L. Regier et al., B. Antleth et al.

DISCLAIMER: The content of this newsletter represents the research, experience and opinions of the authors and not those of the Board of Directors or the Saskatchewan Health Region (SHR). Neither the authors nor Saskatchewan Health Region nor any other party who has been involved in the preparation or publication of this work warrants or represents that the information contained herein is accurate or complete, and they are not responsible for any errors or omissions or for any result obtained from the use of such information. Any use of the newsletter will constitute acknowledgment of the disclaimer and release and any responsibility of SHR, its employees, agents or assigns. Readers are encouraged to confirm the information contained herein with other sources. Additional information and references cited at www.RxFiles.ca

References: Peri-Pregnancy Drug Treatment Considerations

GENERAL REFERENCES:


OTHER REFERENCES:


Hypertension Guidelines:

Other Hypertension References:


Other Thyroid References:

Infectious Disease References:

Genital Herpes Simplex:

Urinary Tract Infections/Asymptomatic Bacteriuria:

Other Infectious Disease References:
Depression References:  
Shah N. Mood disorder in the perinatal period. BMJ. 2012 Mar 1;344:e1209. 


Hui A et al. Lifestyle intervention on diet and exercise reduced excessive gestational weight gain in pregnant women under a randomized controlled trial. BJOG 2012[1];119:70-77. 

Additional References:
Boyle EM et al. Effects of gestational age at birth on health outcomes at 3 and 5 years of age: population based cohort study. BMJ. 2012 Mar 1;344:e896.