CEP | Providers

Preconception Health Care Tool

Patient Name: _____

Birth Date: _____ dd/mm/yy

Preconception health care involves identifying potential physical, genetic, psychosocial, environmental and behavioural risk factors for adverse pregnancy outcomes, and reducing those risks prior to conception through counselling, education and intervention. Preconception Health Care focuses on health promotion and illness prevention for everyone of reproductive age. It is an important opportunity for primary care providers to improve maternal and infant outcomes, as the critical period for fetal development often occurs before prenatal care begins. **Each of the preconception topics below should be addressed with every individual of reproductive age on an ongoing basis.**

Prevent & promote	Screen	Manage
Reproductive life plan: Ask all individuals of reproductive age, "Would you like to have a child in the next year?" Encourage all individuals to make a Reproductive Life Plan.[1]		
❑ No → Discuss contraception options. ❑ Not sure → Choosing Wisely Tool.[2] ❑ **Inform women of reproductive age that natural fertility and assisted reproductive technology success is significantly lower for women in their late 30-40s.**[3]	❑ Yes.[4] LMP:_____ ❑ Discuss family planning and conception.	❑ If positive pregnancy test, discuss options for prenatal care and refer accordingly.
Reproductive history: A detailed reproductive history should be obtained for all individuals.		
Gravida (G):_____ Abortions (A):_____ Full-term (T):_____ Living children (L): _____ Premature (P):_____ Details:	**Inquire about previous pregnancies:** ❑ Preterm Birth ❑ Stillbirth ❑ Gestational DM ❑ Preeclampsia ❑ Miscarriage ❑ Caesarean birth ❑ Congenital anomalies ❑ Assisted reproductive technologies ❑ Uterine anomalies ❑ High/low birth weight	❑ Provide appropriate referrals. ❑ Inform women who have had prior caesarean sections that vaginal birth is an option for their next pregnancy.[40] ❑ Recommend folic acid 5mg daily prior to conception and for 12 weeks after conception if positive history of neural tube defect. ❑ Recommend >18 and <59 month interpregnancy interval (IPI).
Sexual health:		
Inform all individuals of sexual health risks associated with travel to countries with reported Zika infection. Recommend patients wait 6 months following travel to attempt conception due to potential for transmission through sperm.[41]	**Screen if high risk:** ❑ Chlamydia ❑ Syphilis ❑ Trichomoniasis ❑ Gonorrhea ❑ Genital herpes (if lesions)	❑ Provide treatment according to Canadian Guidelines on Sexually Transmitted Infections.[5] ❑ Inform women with genital herpes of risk of vertical transmission.

Chronic medical conditions: Optimize management for the following diseases, as suboptimal control or treatments can increase risk for adverse maternal and/or infant outcomes.

Motherisk[6] should be consulted for the safety of any medications taken by patients with chronic conditions.
Motherisk Helpline: 1-877-439-2744

❑ **Asthma:** Delay conception until good control is achieved.

❑ **Cancer:** All individuals with cancer should be counselled regarding the potential effects of treatment on fertility and informed of options to preserve fertility, if desired, and referred appropriately.

❑ **Diabetes:** Increased risk of birth defects can be mitigated with good preconception glycemic control. Encourage contraception for those without good control. Folic acid 5mg daily prior to conception and for 12 weeks after conception. ACE-Is and statins are contraindicated. Estrogen-containing contraception options should be avoided for those with DM >20 years or target end-organ damage.

❑ **HIV:** Transmission risk to fetus is ~2% with antiretroviral therapy. Efavirenz is contraindicated. Antiretroviral drugs may interfere with hormonal contraceptive methods. Refer to specialist.

❑ **Hypertension:** Increased risk for adverse fetal and maternal outcomes. Assess for target-end organ damage in those with long-standing hypertension. Alternatives to ACE-Is are recommended in women of reproductive age. Avoid estrogen-containing contraception options for women with severe hypertension.

❑ **Inflammatory bowel disease:** Counsel women to delay conception until disease is in remission. Conception during active episode increases risk of miscarriage, premature delivery, still birth or low birth weight.

❑ **Phenylketonuria:** Encourage maintenance of low phenylalanine level during reproductive years and especially prior to conception.

❑ **Renal disease:** Encourage optimal control prior to conception, including normal BP. Use alternative to ACE-Is. Consult with specialist.

❑ **Seizure disorder:** Discuss potential pregnancy outcomes related to seizures and seizure medications. Take folic acid 4-5mg daily prior to conception and for 12 weeks after conception. Lowest dose of one medication recommended, when possible. Valproic acid, lithium and topiramate are contraindicated. Many antiepileptic medications may interfere with hormonal contraceptive methods.

❑ **Systemic lupus erythematosus, rheumatoid arthritis, and other autoimmune diseases:** Delay conception until good control is achieved. Discuss natural history of disease during/after pregnancy. Cyclophosphamide, Methotrexate and Leflunomide are contraindicated. Avoid estrogen-containing contraception options in women with SLE and positive/unknown antiphospholipid antibody. Discuss use of aspirin and heparin with rheumatologist for women with SLE and antiphospholipid antibody syndrome.

❑ **Thromboembolic disease:** Counsel women that risk for VTE during pregnancy and postpartum is increased, and many will require anticoagulation treatment. Coumadin is contraindicated. Avoid estrogen-containing contraceptive options.

❑ **Thyroid disease:** Achieve euthyroid state prior to conception. Women with hypothyroidism should increase their dose of levothyroxine by 30% as soon as pregnancy occurs. Radioactive iodine is contraindicated. Screen all women for CBC and TSH, prior to conception.

For more information regarding preconception chronic disease management, visit the Before, Between, & Beyond Pregnancy Preconception Care Clinical Toolkit.[7]

Medications:		
Human teratogenicity risk is unknown for the majority of medications. Use caution when prescribing for women of reproductive age. Consult Motherisk.[5]	**Screen for teratogenic medication use:** ❑ Prescribed medications ❑ Over-the-counter medications ❑ Complementary and alternative therapy (herbal, natural, weight loss, athletic products or supplements, etc.)	Potentially teratogenic medications should be changed to safer options. Women should be counselled not to stop prescribed medications without consulting with their provider. ❑ Recommend folic acid 5mg daily prior to conception and for 12 weeks after conception for women taking folate antagonists (ex. methotrexate, sulfonamides and antiepileptics).
Mental health:		
Promote mental health wellness through adequate sleep, work-life balance, stress reduction and social connectedness.	**Screen:** ❑ Depression[8] ❑ Anxiety[9] ❑ Other[10] ❑ Screen for family history of mental health issues.	❑ Bipolar disorder ❑ Mood disorder ❑ Schizophrenia ❑ Counsel women with mental health diagnoses of risks of pregnancy and relapse. Strategize management. ❑ Stabilize/optimize mood and anxiety level; discuss risks and benefits of medications.
Tobacco use:		
Encourage all individuals to be tobacco free prior to conception.	**Screen:** ❑ Tobacco (all forms) ❑ Tobacco exposure (second-hand smoke)	❑ Provide brief intervention and provide appropriate referrals.[11] ❑ Inform women of available patient resources[12] and Smokers' Helpline 1-877-513-5333. ❑ Consult Canadian Smoking Cessation Guidelines.[13] ❑ Counsel women with tobacco addictions of risks of pregnancy and relapse. ❑ Strategize management. ❑ Recommend an extra 35 µg of vitamin C daily for smokers.

Prevent & promote	Screen	Manage
Alcohol and other substance use:		
Encourage all individuals to be substance free prior to conception.	**Screen:** ❑ Alcohol ❑ Other substances	❑ Provide brief intervention[14] and provide appropriate referrals. ❑ Recommend folic acid 5mg daily prior to conception for those with addictions.[15] ❑ Inform women of available patient resources[16] and Drug and Alcohol Helpline 1-800-565-8603. ❑ Consult low risk drinking guidelines.[17] ❑ Consult low risk cannabis use guidelines.[42]
Vaccinations and immunity: All individuals of reproductive age should have their immunization status reviewed and updated[18] as required.		
Vaccinate: ❑ Varicella ❑ Rubella ❑ HPV ❑ Influenza ❑ Hepatitis B ❑ Tetanus, Diphtheria, B Pertussis ❑ Measles, Mumps	**Screen for immunity:** ❑ Rubella ❑ Hepatitis B ❑ Varicella	❑ Provide all immunizations required prior to conception with the exception of the flu vaccine, which can be administered before and/or during pregnancy.
Infectious diseases: Prevention and screening of these infectious diseases[19] are important for those of reproductive age.		
❑ HIV ❑ Hepatitis B ❑ Tuberculosis ❑ Toxoplasmosis ❑ Parvovirus ❑ Hepatitis C ❑ Cytomegalovirus	**Screen:** ❑ HIV **Screen if high risk:** ❑ Hepatitis C ❑ Tuberculosis	❑ Inform women who screen positive for HIV, Hepatitis B or C of risk for vertical transmission, and offer appropriate treatment.[20] ❑ Treat women with Tuberculosis prior to conception.[20]
Family and genetic history:		
Obtain 3 generation family history to identify[21]: ❑ Congenital malformations, birth defects. ❑ Developmental delays, learning disabilities. ❑ Ethnicity. ❑ Genetic disorders.[22] ❑ Family history of a genetic condition. ❑ Consanguinity (first cousins or closer). ❑ Children who died at a young age (may reveal a metabolic condition). ❑ History of sudden unexplained death (may indicate cardiomyopathy or metabolic condition). ❑ History of infertility, multiple miscarriages (>3 or all male fetuses).	**Ethnicity Based Screening Considerations[23]:** ❑ CBC and/or Hgb Electrophoresis for hemoglobinopathies in African, Mediterranean, Middle Eastern, Asian, Southeast Asian, and Hispanic/South/Central American individuals. ❑ Cystic Fibrosis mutation in Caucasian individuals if family history present. ❑ Tay-Sachs in French Canadian individuals if family history present. ❑ Hematopoietic stem cells screening (Ashkenazi Jewish Screening Panel) for those with Ashkenazi Jewish ancestry.	❑ Provide referral to specialist for those with family and genetic history risk factors. ❑ Recommend folic acid 5mg daily prior to conception and for 12 weeks after conception if positive family history of neural tube defects or high risk ethnic group (ex. Sikh, Celtic, Northern Chinese).
Nutrition: Eat well with Canada's Food Guide[24].		
❑ **Recommend folic acid 0.4-1.0mg daily (through a multivitamin or supplement)[15] and folate rich diet, prior to conception and throughout pregnancy.** ❑ Recommend calcium 1000mg daily[25] through food and/or supplements. ❑ Recommend essential fatty acid rich diet, including omega 3 and 6. ❑ Recommend avoiding raw/undercooked meat and fish and unpasteurized milk and cheese.[26] ❑ Caffeine <300mg/day.[27] ❑ Recommend vitamin D 600 IU (15 µg) supplementation daily.[28] ❑ Recommend 2.6 µg of vitamin B12 daily through supplement or multivitamin.	❑ Screen for issues regarding access to food, nutrition, storage, cooking facilities and folic acid. ❑ Screen for iron deficiency anemia if at risk.	❑ Provide referral to Dietitian or appropriate community agencies.
Weight status: Weight can increase risk of adverse pregnancy outcomes and developing chronic disease.		
Target Body Mass Index (BMI) = 18.5-24.9 (for ages ≥19) Waist Circumference (WC)[29] European, African, Eastern Mediterranean, Middle Eastern: Male target <102cm, Female target <88cm South Asian, Asian, South and Central American: Male target <90cm, Female target <80cm Target BMI for ages <19[30]	❑ Screen BMI[31] annually. BMI = weight(kg)/height(m)^2 Weight:_____ Height: _____ BMI: _____ WC: _____	❑ Underweight (BMI <18.5) ❑ Overweight (BMI = 25-29.9) ❑ Obese (BMI >30) ❑ Provide appropriate referrals for management. ❑ Recommend folic acid 5mg daily prior to conception and for 12 weeks after conception for obese individuals. ❑ Discuss recommended healthy weight gain[32] during pregnancy and recommend contacting EatRight Ontario 1-877-510-5102.
Physical activity: Being physically active prepares the body for the physical demands of pregnancy and can assist with stress management.		
❑ Recommend at least 150 minutes of moderate to vigorous aerobic physical activity per week, in episodes of 10 minutes or more. Add muscle and bone strengthening activities at least 2 days per week. See the Canadian Physical Activity Guidelines.[33]		
Psychosocial stressors: Stress can have negative affects on pregnancy outcomes.		
❑ Identify stressors and discuss strategies to reduce impact.	**Screen:** ❑ Access to care ❑ Social isolation (newcomers, language barriers)[34] ❑ Social support ❑ Workplace stress ❑ Housing ❑ Intimate partner violence[35] ❑ Unemployment ❑ Finances ❑ Unhealthy relationship	❑ Inform women that violence often worsens during pregnancy and discuss safety plan. ❑ Provide appropriate referrals.[36]
Environmental exposure: Discuss potential exposure to toxins in occupational and recreational activities.[37]		
❑ Recommend avoiding fish high in mercury[38]: Choose "light" verses "white" tuna and limit consumption to 4 x 2.5oz/week, and avoid barracuda, marlin, tilefish, tuna steak and any raw fish or shellfish. ❑ Convey tips for reducing exposures in the home.[39] ❑ Advise patients to avoid travelling to countries with risk of Zika infection when planning pregnancy. If travel is necessary, both partners should practice strict mosquito bite prevention measures.[43,44]	**Inquire about exposures to:** ❑ Solvents (ask about use) ❑ Plastics ❑ Metals (lead, mercury) ❑ Pollutants ❑ Pesticides ❑ Teratogenic and/or gonadotoxic treatments (chemotherapy, radiation therapy) ❑ Gases ❑ Radiation	Health Canada's blood methylmercury guidance level in pregnancy or reproductive age: <8mcg/L (40nmol/L). ❑ Refer to local health department if potential water/soil exposure. ❑ Refer to occupational health specialist as needed.

indicates Canadian resources
indicates provider resources
indicates patient resources

Supporting Material*

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