COLORADO CLINICAL GUIDELINES COLLABORATIVE

Guideline for Preconception and Interconception Care

Why should women, menarche to menopause, have preconception screening?

- Half of all pregnancies in the United States are unplanned.
- Most fetal organs and placental vessels are developing before the first prenatal visit.
- Many interventions to prevent birth defects or adverse outcomes must happen before early pregnancy to be effective.

Colorado Department of Public Health and Environment

Has patient had hysterectomy or permanent sterilization?

Yes: See CCGC Prevention Guideline

No: Discuss contraception options in addition to routine interventions.

50% of all pregnancies in the United States are unplanned.

Factors	Recommendations
Folic Acid	All women should take a multi-vitamin with **0.4 mg (400 mcg) of folic acid daily**. This can reduce severe anomalies by 46%. Preconception intake of folic acid is crucial because neural tube development is essentially complete by 4 weeks after conception (6 weeks from last menstrual period). Women with a seizure disorder or history of neural tube defects should take 4.0 mg/day.
Body Weight * (Ideal = 18.5 - 24.9)	**Underweight** (BMI = 18.4 and below) assess for eating, malabsorption and/or endocrine disorder. Counsel patients that they are at risk for an IUGR infant. **Overweight** (BMI = 25.0-29.9) offer specific strategies to decrease caloric intake and increase physical activity. **Overweight** (BMI = 25.0-29.9) **and one additional risk factor**, test for glucose intolerance with a FBS or a 2 hour OGTT with a 75 gram glucose load. (*Additional risk factors*: physical inactivity, family history of DM, HTN, CVD, dyslipidemia, history of gestational diabetes or a previous 9 lb. baby, polycystic ovary syndrome, insulin resistance, IGT or high risk ethnicity [African American, Native American, Latina, Asian American or Pacific Islander]). **Obesity** (BMI = 30.0 and above) increases the risk for hypertension, gestational diabetes, C-section and incision complications.
Smoking *	**ASK:** Do you currently smoke or use any form of tobacco? **ADVISE:** for the health of the pregnancy. **REFER:** to Quitline (1-800-784-8669) or access other community-based resources. Infant mortality could be reduced by 10% if smoking were eliminated. Associated with increased risk of miscarriage, premature rupture of membranes, preterm delivery, abruption, intra-uterine fetal demise, low birth weight, and SIDS. Smoking accounts for the highest proportion of preventable problems in pregnant women.
Alcohol & Drugs *	**ASK:** When was the last time you had more than 3 drinks in one day? (positive = in the past 3 months) How many drinks do you have per week? (positive = more than 7) Have you used drugs other than those required for medical reasons (illicit or prescription drug misuse) in the past year? Do a brief intervention to address hazardous or harmful use of alcohol or drugs; refer for more intensive treatment, if indicated. Discuss contraception options. Pregnancy should be delayed until individuals are alcohol and drug free. Alcohol is a teratogen. **COUNSEL:** ***No amount of alcohol is considered safe during pregnancy.***
Chlamydia	Screen sexually active women <25 years (CDC recommends at least annually). High risk women‡ of ANY age should be screened annually.
STIs & Other Infectious Diseases	Women at risk‡ for gonorrhea, HIV, TB, syphilis and Hepatitis B should be screened and treated.
Immunizations *	Women should be up to date on all immunizations. Check and document immunization status for MMR, varicella, TdaP, HPV and Hepatitis B.
Psychosocial Risks *	**ASK:** Over the past 2 weeks, have you felt down, depressed or hopeless? Over the past 2 weeks have you felt little interest or pleasure in doing things? If yes, use validated screening tool such as Edinburgh Postpartum Depression scale or PHQ-9. Treat or refer to specialist if indicated. Assess for intimate partner violence. **ASK:** Do you feel safe? If no, or ambivalent response, refer to the Colorado Coalition Against Domestic Violence (www.ncadv.org), a safe house and/or law enforcement.
Reproductive History	History of preterm delivery, stillbirth, recurrent pregnancy loss or uterine anomaly should be evaluated for modifiable risk factors. Women with a prior C-section should be counseled to wait at least 15 months before next conception. Postpartum women with a history of gestational diabetes should be screened for diabetes using a 2 hour OGTT with a 75 gram glucose load. After the postpartum period, perform a FBS every 1 to 3 years.
Family & Genetic History	Assess for genetic disorders, congenital malformations, mental retardation, and ethnicity of woman and partner. Refer to March of Dimes checklist.
Environmental / Occupational Exposures	Consider household, environmental and occupational exposures. Refer women with soil and/or water hazard concerns to the local health department for soil and water testing. Refer women with household or workplace exposure concerns to an occupational medicine specialist for modification of exposures.
Medical, Psychiatric History & Medications	See back page for specific conditions, appropriate testing, counseling and treatment.

*See CCGC guidelines for: *Adult Cardiovascular Disease and Stroke Prevention; Adult Diabetes Care; Adult Obesity; Alcohol and Substance Use Screening, Brief Intervention, Referral to Treatment; Depression Disorder in Adults; Gestational Diabetes; Immunizations; Preventive Health Recommendations;* and *Tobacco Cessation and Secondhand Smoke Exposure.*

‡See United States Preventive Services Task Force (USPSTF) definitions for high risk.

Assess for specific health conditions and contraception choices (review side two of this document).

This guideline is adapted from the AJOG Supplement, December 2008 and CDC Proceedings of the Preconception Health and Health Care Clinical, Public Health and Consumer Workgroup Meetings, June 2006, and USPSTF Recommendations 2009. The guideline is designed to assist the clinician in preconception and interconception care. It is not intended to replace a clinician's judgment or establish a protocol for all patients. For references and additional copies of the guideline go to www.coloradoguidelines.org or call 720-297-1681. Supported by Grant No. B04MC11264 from the Maternal and Child Health Bureau (Title V, Social Security Act), Health Resources & Services Administration, Department of Health and Human Services.

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Specific Health Conditions

Condition	Counsel	Tests	Contraindicated Medications §	Contraception †
Asthma *	Women with poor control of their asthma should use contraception until it is well controlled.	See CCGC Asthma Guideline.	No restrictions.	**Safe:** all methods.
Cardiovascular Disease *	Pregnancy is a stressor on the cardiovascular system. Discuss potential life-threatening risks especially with pulmonary hypertension. Contraception should be strongly recommended when pregnancy is contraindicated.	Consult with a Cardiac Specialist.	Find an alternate medication for ACE inhibitors and Coumadin beyond 6 weeks gestation.	**Safe:** Copper IUD, sterilization, LNG IUD, ETG implant, DMPA, and POPs. **Avoid:** estrogen containing methods.
Depression *	Screening prior to pregnancy allows for treatment and control of symptoms that may help prevent negative pregnancy and family outcomes.	Use PHQ-9 or other validated test to monitor.	Paroxetine.	**Safe:** all methods.
Diabetes *	Three-fold increase risk of birth defects, which may be reduced with good glycemic control prior to conception. Women with poor glycemic control should use effective birth control.	Patients should demonstrate good control of blood sugars with HgbA1c <6.5. Use effective contraception. See CCGC Diabetes Guideline.	ACE Inhibitors, Statins.	**Safe:** all methods (including those with estrogen) are safe for women who are <35 years, non-smokers and no hypertension or vascular disease. **Avoid:** estrogen methods for all other women.
HIV	HIV may be life-threatening to the infant if transmitted. Antiretroviral can reduce the risk of transmission, but the risk is still about 2%.	Refer to specialist.	Efavirenz (Sustiva®).	**Safe:** all methods in HIV-infected women who do not have AIDS. Antiretroviral therapy may interfere with hormonal methods. Concomitant use of condoms is strongly recommended.
Hypertension *	Increased maternal and fetal risk during pregnancy, especially pre-eclampsia. Discuss importance of finding alternative to ACE inhibitor prior to pregnancy.	Women with HTN of several years' should be assessed for ventricular hypertrophy, retinopathy and renal disease. Consult with a Cardiac Specialist.	ACE Inhibitors.	**Safe:** all methods (including those with estrogen) for women who are <35 years, non-smokers and have controlled hypertension (by way of meds or lifestyle changes). **Avoid:** estrogen methods for all other women.
Obesity *	Use effective contraception until ideal body weight (BMI = 18.5-24.9) is achieved. Offer specific strategies to decrease caloric intake and increase physical activity. For bariatric surgery, avoid pregnancy until weight stabilization and wait 1-2 years after surgery before conceiving.	Screen for diabetes with either a FBS or a 2 hour OGTT with a 75 gram glucose load. Refer to page 1 for risk factors.	Weight loss medications should not be used during pregnancy.	**Safe:** all methods.
Renal Disease	Counsel to achieve optimal control of condition prior to conception. Discuss potential life-threatening risks during pregnancy. Contraception should be strongly recommended to those who do not desire pregnancy.	Consult with Renal Specialist.	Find alternative to ACE Inhibitors if at risk of pregnancy.	**Safe:** Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.
Seizure Disorder	Counsel on potential effects of seizures and seizure medications on pregnancy outcomes. Patients should take 4mg of folic acid per day for at least 1 month prior to conception.	Whenever possible, monotherapy in the lowest therapeutic dose should be prescribed.	Valproic Acid (Depakote®).	**Safe:** all methods. Certain anticonvulsants decrease levels of steroid hormones and may decrease contraceptive efficacy.
SLE & Rheumatoid Arthritis	Disease should be in good control prior to pregnancy.	Evaluate for renal function and end-organ disease.	Cyclophosphamide.	**Safe:** Progestin only methods and IUDs.
Thyroid Disease	Proper dosage of thyroid medications prior to conception for normal fetal development. Iodine intake 150 mcg per day.	TSH should be <3.0 prior to pregnancy. Free T4 should be normal.	Radioactive iodine.	**Safe:** all methods.

Other Common Health Conditions	Counsel	Contraception†
Uterine Fibroids, Nulligravity, Tension Headaches, History of Ectopic Pregnancy, Fibrocystic Breast or Family History of Breast Cancer, Breastfeeding, and Healthy Women Age >35 years	Reassure patient that these conditions do not generally effect pregnancy. History of ectopic pregnancy: advise to seek care immediately upon conception.	**Safe:** all methods. Progestin only methods and IUDs may be used immediately post-partum and in breastfeeding women.

*See CCGC guideline

†Contraception column based on ACOG Practice Bulletin No 73, *Use of Hormonal Contraception in Women with Coexisting Medical Conditions*, June 2006, and The World Health Organization, *Medical Eligibility Criteria for Contraceptive Use*, 2008 Update.

§See Physicians' Desk Reference® (PDR) for comprehensive medications list.

Other Medical Conditions Where Special Counseling Is Recommended

Bipolar Disorder, Migraine Headaches, Phenylketonuria, Schizophrenia.

Contraception Key

Barrier Methods: Latex condoms, diaphragm with spermicide, and sponge have a high failure rate with typical use (20-30 pregnancies per 100 women in one year): encourage more effective methods. Condoms are the only contraceptive method that also prevent STIs. When used correctly and consistently, they reduce the risk of infection by 99%.
COC: Combined Oral Contraceptives *(contains estrogen and progestin)*.
DMPA: Depot Medroxyprogesterone Acetate *(progestin only)*.
ETG Implant: Etonogestrel Implant *(progestin only)*.

LNG IUD: Levonorgestrel intrauterine device *(progestin only)*.
Patch: Combined contraceptive patch *(contains estrogen and progestin)*.
POP: Progestin only pills *(sometimes referred to as the "mini-pill")*.
Progestin-Only Emergency Contraception: May be safely used in any woman of reproductive age; there is no medical condition that precludes its use.
Ring: Combined vaginal ring *(contains estrogen and progestin)*.

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