"Preconception health is well woman health care. Only if we manage to optimize the health of women with every contact in our health care system will we see an improvement in pregnancy outcomes. Now THAT is preconception health. Every Woman, Every Time has been our motto for over a decade."

-Dr. Jeanne Conry, ACOG President Elect and Preconception Health Council of California Member

Guidelines for Preconception and Interconception Care

Every Woman….Every Time is the motto for those caring for women of reproductive potential because promoting women's health IS promoting preconceptional wellness, irrespective of pregnancy intentions. Therefore, we need to take advantage of all health care encounters to stress prevention opportunities throughout the lifespan, just like our pediatric colleagues. By providing anticipatory guidance, we enable every woman and, if appropriate, her partner, to make informed decisions about future reproduction.

Every Woman….Every Time is opportunistic care. It takes advantage of all health care encounters to:

- address conception and contraception choices
- identify modifiable and nonmodifiable risk factors for poor health and poor pregnancy outcomes before conception
- suggest risk reduction strategies
- provide individualized, nonjudgmental education
- provide referrals to complementary services, such as genetic or nutritional counseling, behavior modification programs etc.

In order to optimize pregnancy outcomes, women need to actively plan for pregnancy, enter pregnancy in good health with as few risk factors as possible, and be fully informed about their reproductive and general health. Nevertheless, more than half of all pregnancies in the United States are unplanned, and most of the fetal organs are developing before the first prenatal visit. Thus, interventions to prevent birth defects or adverse birth outcomes must happen during the preconception or interconception period.

Every Woman California
Preconception Health Council of California

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These guidelines are considered a resource, but do not define the standard of care in California. Readers are advised to adapt the guidelines and resources based on their facility's level of care and patient population and are advised not to rely solely on the information presented here. Guidelines can be found at: Everywomancalifornia.org

These guidelines are designed to assist you in addressing the needs of Every Woman…Every Time

Asthma

Counsel: Women with poor control of their asthma should use contraception until it is well controlled.

Tests: Confirm diagnosis with PFTs if not already done; intermittent SOB may have cardiac origin. See NHLBI Guidelines for Diagnosis and Management of Asthma, July 2007.

Contraindicated Medications: No restrictions.

Contraception:** All methods are considered to be safe. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Cardiovascular Disease

Counsel: Pregnancy is a stressor on the cardiovascular system. Discuss potentially life-threatening risks with pulmonary hypertension, Eisenmenger syndrome, prior myocardial infarction, or cardiomyopathy. Contraception should be strongly recommended when pregnancy is contraindicated.

Tests: Consult with a cardiac specialist. Any history of cardiac murmur needs echocardiogram; any history of palpitations/fainting needs EKG. See CA Heart Disease and Stroke Prevention Program (cdph.ca.gov/programs/cvd).

Contraindicated Medications: Find an alternate medication for ACE inhibitors and Coumadin beyond 6 weeks gestation. Statins.

Contraception:** Avoid: estrogen-containing methods in women with multiple risk factors for arterial CV disease, history of heart attack, and most women with a history of post-partum cardiomyopathy. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Depression

Counsel: Screening prior to pregnancy allows for treatment with behavioral therapy with or without medication and control of symptoms that may help prevent negative pregnancy and family outcomes. Patients controlled on SSRIs should be warned that relapse rates are 75% if medication is discontinued.

Tests: Use PHQ-9 or other validated test to diagnosis and monitor patient. See MacArthur Initiative on Depression and Primary Care Tool Kit (depression-primarycare.org/clinicians/toolkits/).

Contraindicated Medications: Paroxetine, lithium.

Contraception:** All methods are considered to be safe. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Diabetes

Counsel: Three-fold increased 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.

Tests: Patients should demonstrate good control of blood sugars with HbA1c < 6.5 prior to conception. Assess for retinopathy, renal disease, and cardiac disease. See Basic Guidelines for Diabetes Care (caldiabetes.org).

Contraindicated Medications: ACE inhibitors, statins.

Contraception:** Avoid: estrogen-containing methods in women with diabetic nephropathy, retinopathy, neuropathy, or diabetes of >20 years duration. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

HIV

Counsel: HIV may be life-threatening to the infant if transmitted. Antiretroviral therapy can reduce the risk of transmission, but the risk is still ~2%.

Tests: Refer to specialist. See updated Guidelines for Treatment of Adults and Adolescents (aidsinfo.nih.gov/Guidelines/). Call HIV Perinatal Hotline for questions (888-488-8765).

Contraindicated Medications: Efavirenz (Sustiva®).

Contraception:** Some antiretroviral drugs may reduce the efficacy of hormonal methods. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization (whqlibdoc.who.int/hq/2012/WHO_RHR_12.08_eng.pdf).

Hypertension

Counsel: Increased maternal and fetal risk during pregnancy, especially for preeclampsia. Discuss importance of finding alternative to ACE inhibitor prior to pregnancy.

Tests: Women with HTN for several years should be assessed for ventricular hypertrophy, retinopathy and renal disease. Consult a cardiac specialist if indicated.

Contraindicated Medications: ACE inhibitors.

Contraception:** Avoid estrogen-containing methods in women with severe hypertension (systolic >160, diastolic >100). Estrogen oral contraceptive pills should be avoided in women over 35. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Intimate Partner Violence and/or Reproductive Coercion

Counsel: Increased risk of unintended pregnancy, abortion, repeat pregnancy, STIs, preterm labor, obstetric complications, pregnancy-related mortality, postpartum depression, smoking in pregnancy, drug use in pregnancy. (Also see Relationship Health Section.)

Tests: Acknowledge the trauma and assess the immediate safety of woman and her children while assisting the woman in development of safety plan. Offer information about community resources, National DV Hotline (1-800-799-SAFE). Refer to social services or mental health specialist. In CA, reporting is mandatory if practitioner treats woman or provides medical care for injuries resulting from DV or abuse.

Contraception:** Use methods that are hidden or less likely to be controlled by partner (DMPA, implant, EC). Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Underweight

Counsel: (BMI ≤ 18.4) Counsel patients that they are at risk for an IUGR infant. Encourage healthy eating.

Tests: Assess for eating, malabsorption and/or endocrine disorder.

Contraception:** All methods are considered to be safe. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Overweight

Counsel: (BMI=25.0-29.9) offer specific strategies to decrease caloric intake and increase physical activity.

Tests: : If (BMI=25.0-29.9) and one additional risk factor test for glucose intolerance with HbA1c or a 2 hr. OGTT with a 75 gm glucose load. Additional risk factors: physical inactivity, waist circumference >35 inches, FH of DM, HTN, CVD, dyslipidemia, history of gestational diabetes or a previous 9 lb baby, PCOS, IGT or high risk ethnicity (African American, Native American, Latina, Asian American or Pacific Islander).

Contraindicated Medications: N/A

Contraception:** All methods are considered to be safe. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Obesity

Counsel: (BMI ≥ 30) Increases the risk for birth defects, spontaneous abortion, pre-eclampsia, gestational diabetes, prematurity, cesarean delivery, incision complications, postpartum infection, thromboembolic disease, perinatal death, maternal death, and childhood obesity. Offer specific strategies to decrease caloric intake and increase physical activity.

Tests: Screen for diabetes with HbA1c or 2 hr. OGTT with a 75 gram glucose load except in patient with Roux-en-Y gastric bypass surgery (OGTT will cause dumping syndrome). A patient who has undergone bariatric surgery needs to have PCC with her surgeon.

Contraindicated Medications: Weight loss medications should not be used during pregnancy.

Contraception:** Combined OCs and progestin only pills may have higher failure rates in women who have had bariatric surgery with a malabsorptive procedure. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Renal Disease

Counsel: Counsel to achieve optimal control (serum Cr <1.4 mg/dL) of condition prior to conception. Discuss potentially life-threatening risks during pregnancy. After transplant, wait 12-18 mo and until comorbid risk factors under control (no or minimal proteinuria, absence or well-controlled HTN, stable serum Cr < 1.4, no graft rejection).

Tests: Consult with renal specialist.

Contraindicated Medications: Find alternative for ACE inhibitors if at risk of pregnancy.

Contraception:** Safe: Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Seizure Disorder

Counsel: Counsel on potential effects of seizures and seizure medications on pregnancy outcomes. Patients should take 4 mg of folic acid per day for at least 1 month prior to conception.

Tests: Whenever possible, monotherapy in the lowest therapeutic dose should be prescribed.

Contraindicated Medications: Valproic acid (Depakote®), lithium. Topiramate. (Topamax®)

Contraception:** Phenytoin, carbamazepine, barbiturates, primidone, toprimate, oxcarbazepine, and lamotrigine may decrease contraceptive efficacy of some hormonal methods. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

SLE & Other Autoimmune Diseases

Counsel: Disease should be in good control prior to pregnancy.

Tests: Evaluate for renal function and end-organ disease. Consult with rheumatologist.

Contraindicated Medications: Cyclophosphamide and Methotrexate.

Contraception:** Avoid estrogen-containing methods in women with SLE with positive (or unknown) antiphospholipid antibody. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Thyroid Disease

Counsel: Women with hypothyroidism should increase their levothyroxine by 30% as soon as pregnancy is confirmed. Iodine intake of 150 mcg/day.

Tests: TSH should be <3.0 prior to pregnancy. Free T4 should be normal. See: (thyroidguidelines.net/pregnancy).

Contraindicated Medications: Radioactive iodine.

Contraception:** All methods are considered to be safe. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

Thromboembolic Disease

Counsel: Counsel patient that inherited thrombophilias and the antiphospholipid syndrome, as well as history of thrombosis increase the risk for venous thromboembolism during pregnancy and postpartum. Many of these patients will require anticoagulation during pregnancy and postpartum.

Tests: If patient with history of venous thromboembolism has not had work-up, test for inherited thrombophilias and the antiphospholipid syndrome.

Contraindicated Medications: Coumadin beyond 6 wk. GA.

Contraception:** Avoid estrogen-containing methods in women with history of DVT/PE (on or off of anticoagulant medications) with an increased risk of recurrence. Copper IUD and LNG IUD, ETG implant, DMPA, sterilization.

** U.S. Medical Eligibility Criteria for Contraceptive Use, 2010. (cdc.gov/reproductivehealth/unintendedpregnancy/usmec.htm)

Acknowledgment: These guidelines were adapted from the HealthTeamWorks (founded as the Colorado Clinical Guidelines Collaborative) Guidelines for Preconception and Interconception Care (Dec 2009).

Factors	Ask	Advise	Refer	Counsel
Alcohol & Drugs	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?	Pregnancy should be delayed until individuals are alcohol and drug free.	Do a brief intervention to address hazardous or harmful use of alcohol or drugs. Refer for more intensive treatment if indicated.	No amount of alcohol is considered safe during pregnancy. Alcohol is the leading known cause of intellectual disabilities and birth defects in the U.S. If a woman is pregnant, planning to get pregnant or at risk of getting pregnant (i.e., not using contraception), she should not drink alcohol. Illicit drug use is associated with pregnancy loss (miscarriage, stillbirth, neonatal death), birth defects, SIDS, IUGR, LBW, preterm birth, neonatal abstinence syndrome, developmental and behavioral problems.
Chlamydia	Women under 26 years of age if they have been screened for Chlamydia in the past year.	Annual screening of sexually active women under 26 years of age. Increased risk women of ANY age should be screened annually or more often based on sexual behaviors.	As needed for screening and treatment if not available in your practice.	Risk factors for Chlamydia infection include history of GC, Chlamydia, or PID in the past 2 years, more than 1 sexual partner in the past year, a new sexual partner within 90 days, and reason to believe that a sex partner has had other partners in the past year.
Other STIs & Other Infectious Diseases	Women about their sexual history and the use of injection drugs by themselves or their partners.	Women at risk for gonorrhea, HIV, TB, syphilis and hepatitis B and C should be screened and treated.	As needed for screening and treatment if not available in your practice.	See STD Treatment Guidelines (cdc.gov/std/treatment/2010/default.htm) or TB Treatment Guidelines (cdc.gov/tb/publications/guidelines/Treatment.htm) for risk factors.
Environmental/ Occupational Exposures	Do you have household, environmental, or workplace exposures to known or potentially hazardous chemicals or materials including pesticides?	Avoid such exposures prior to and during pregnancy.	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 (ctispregnancy.org) and (prhe.ucsf.edu).	Consider household, environmental and occupational exposures. Recommend that women avoid BPA and phthalates, lead, and mercury. Refer to Birth Defects Monitoring Program (cdph.ca.gov/programs/CBDMP/).
Family & Genetic History	Personal or family history of genetic disorders, congenital malformations, intellectual disabilities, and ethnicity of woman and partner.	N/A	Refer to geneticist if indicated. Assess for genetic disorders, congenital malformations, intellectual disabilities, and ethnicity of woman and partner. Refer to March of Dimes checklist: (marchofdimes.com/Your_family_health_historypreconceptionprenatal.pdf).	N/A
Folic Acid	Do you take folic acid supplements or a multivitamin with folic acid?	All women who are planning pregnancy or at risk of becoming pregnant should consume 0.4 mg (400 mcg) of folic acid daily. This can be achieved with a daily vitamin supplement; an alternate method is a fortified breakfast cereal containing 400 mcg of folic acid.		Preconception intake of folic acid is crucial because neural tube development is essentially complete by 4 weeks after conception (6 weeks after last menstrual period). This can reduce severe anomalies by 46%. Women with a seizure disorder or history of neural tube defects should take 4.0 mg/day. Consider advising the upper limit of 0.8 mg/day for women with diabetes or obesity (BMI ≥30). (http://www.cdph.ca.gov/healthinfo/healthyliving/nutrition/Pages/FolicAcidResources.aspx.)
Immunizations	Have you been vaccinated for influenza, MMR, varicella, TDP, HPV and Hepatitis B?	Completion of all necessary vaccine series before becoming pregnant.	As needed for vaccination services not available in your practice.	See CDC vaccination guidelines: (cdc.gov/vaccines/recs/schedules/downloads/adult/adult-schedule-bw.pdf).
Mood Disorder	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. In the past month, for more days than not, have you been bothered by feeling overly anxious, nervous, worried, irritable, or overwhelmed? If yes, screen for panic disorder, agoraphobia and obsessive-compulsive disorder.	N/A	To Postpartum Support International (1-800-844-4PPD or postpartum.net). To specialist if indicated.	N/A
Oral Health & Routine Dental Care	When was the last time you went to the dentist?	To brush teeth and floss at least twice a day.	To see dentist at least once a year.	Poor oral health in adults is associated with cardiovascular disease, diabetes, and respiratory diseases, all of which can increase the risk of complications during pregnancy. Children of mothers with poor oral health are more likely to develop dental caries at an early age and this can lead to developmental problems, pain, problems eating and speaking, low self-esteem, and school absenteeism.
Periodontal Disease	Do you have sore or bleeding gums, sensitive or loose teeth, a bad taste or smell in your mouth?	To brush teeth and floss at least twice a day.	To see a dentist, or if severe, a periodontist.	Periodontal disease in pregnant women is associated with adverse pregnancy outcomes including low birthweight, preterm birth, preeclampsia, and gestational diabetes. In fact, 18% of LBW and PTB may be attributable to periodontal disease.
Relationship Health	Within the last year, has your partner hit, slapped, kicked, choked, or otherwise physically hurt you? Are you afraid of your partner? Within the past year, has your partner forced you to participate in unwanted sexual activities? Does your partner interfere with your birth control or refuse to wear condoms ?	Controlling or violent relationships can impact your health as well as the health of your children. You are not alone; help is available. It can be stressful to worry about being pregnant when you don't want to be. There are methods of birth control that your partner doesn't have to know about.	Offer information about community resources, National DV Hotline (1-800-799-SAFE).	Assess for other behavioral health issues (depression, substance abuse) and refer to mental health specialist if indicated. (Also see Intimate Partner Violence Section).
Reproductive History	How many cesarean sections have you had? Did you have gestational diabetes with any prior pregnancy? Do you have a history of preterm delivery, stillbirth, recurrent pregnancy loss or uterine anomaly?	Women with prior cesarean delivery should be counseled to wait at least 18 months before next conception. Postpartum women with a history of gestational diabetes should be screened for diabetes using a 2 hr. OGTT with a 75 gm glucose load. After the postpartum period, perform HbA1c every 1-3 years. Evaluate for modifiable risk factors prior to conception, e.g. medical, lifestyle, and environmental risks for preterm birth, diagnosis of thrombophilia, or surgical correction of uterine anomalies.	For treatment if HbA1c > 6.5%. To specialist if indicated.	There is a significant increase in morbidity and mortality with > 3 C/S. Good control of blood sugars is essential prior to conception (See section on Diabetes). Discuss possible treatment options for next pregnancy, e.g., progesterone therapy, cerclage, timely treatment of recurrent UTIs or cervical/vaginal infections,etc., if applicable.
Smoking	Do you currently smoke or use any form of tobacco?	Quit for your health and the health of your family. It is the most important thing you can do to protect your health.	To (1-800-NO-BUTTS) and (http://www.ahrq.gov/path/tobacco.htm) or access other community-based resources.	Smoking accounts for the highest proportion of preventable problems in pregnant women and it is also important to avoid second-hand smoke. Smoking is associated with increased risk of miscarriage, cleft lip with or without cleft palate, premature rupture of membranes, preterm delivery, abruption, intra-uterine fetal demise, low birthweight, and SIDS.