Preconception and Interconception Health Care

To improve birth outcomes

Lisa Pasillas-Le, Health Net
We support you in educating patients about healthy choices.
Contents

1 Introduction
3 Preconception and interconception care
5 Reproductive life planning
11 Resources

Inserts Back pocket

Ramon Munoz, Health Net
We deliver education tools to support healthy lifestyles.
In the United States, we struggle with high rates of birth defects, low birth weights, preterm deliveries, infant deaths, and increased maternal deaths. Fifty percent of pregnancies are unplanned in the U.S., which means that organogenesis of the fetus has begun before half of women even know they are pregnant. Most of the infant’s organs are formed before the first prenatal care visit. While there is much emphasis on educating and counseling women during and after pregnancy, advocating care for women and their partners before conception is vital to ensure healthy outcomes for them and their babies.

Preconception care, which is defined as interventions aimed to identify and modify biomedical, behavioral and social risks to a woman’s health or pregnancy outcome through prevention and management, should be addressed with every woman of childbearing age prior to conception.¹

Preconception care is not limited to obstetric/gynecological (OB/GYN) providers, but designed to be implemented in the primary care setting. It includes assessment and screening, health promotion and counseling, and brief interventions.

This toolkit describes preconception care in detail and offers additional resources for your practice. Given the time constraints of each patient visit, this toolkit provides tips for targeting preconception factors that require little time, but have a big impact.

Preconception and Interconception Care

Preconception care may help eliminate or reduce the risk of adverse health effects for a woman and her fetus. Additionally, optimizing a woman’s health and knowledge before conception can help ensure optimal prenatal and postnatal health of a woman and her child. Preconception care should consist of a comprehensive risk assessment review, which includes, but is not limited to, a medical and reproductive history, health promotion, and medical and psychosocial interventions for identified risks, such as folic acid supplementation.

Assessing the risk of environmental and occupational hazards is also important, as exposure to chemicals in the workplace (for example, pesticides or solvents) or used in hobbies (such as painting or ceramics) can pose grave risk to preconception health. Detailed information on occupational and environmental exposure, including a qualitative and quantitative preconception occupational/environmental checklist, is available in the article, Preconception Brief: Occupational/Environmental Exposures.2

Interconception care

Interconception is the time between pregnancies. Postpartum visits are ideal times to promote interconception care, and to integrate and communicate all relevant clinical information to the patient. Postpartum visits may be the only time providers can address pregnancy and delivery problems with their patients prior to a subsequent pregnancy.

To ensure the patient returns for postpartum visits, providers should schedule postpartum visits while the patient is still pregnant and follow-up with multiple reminders. According to the American Congress of Obstetricians and Gynecologists (ACOG), the three important topics to cover consistently with patients during postpartum visits include:

1. **Folic acid supplementation** – prenatal vitamins help with iron deficiency caused by blood loss after delivery. Recommend patients continue prenatal vitamins until finished, then switch to multivitamins.

2. **Breastfeeding** – exclusive breastfeeding decreases the infant’s risk of obesity later in life and provides protective factors for many health conditions, including diabetes and asthma. Breastfeeding mothers are less likely to develop diabetes, heart disease, certain types of cancers, and high blood pressure.

3. **Contraception** – contraceptive use after delivery can help eliminate the risk of an unintended pregnancy. Contraception use may be a concern for patients after delivery, especially those breastfeeding. Review the patient’s reproductive life plan and help evaluate contraception accordingly.

It is important for a woman to give her body time to recover after a birth before becoming

pregnant again. Studies have shown that women who get pregnant within 18 months after pregnancy may be at increased risk of having a preterm birth or low-weight baby. During postpartum visits, providers should evaluate women with a history of preterm birth or low-birth-weight infants for remediable causes to be addressed before the next pregnancy. For example, providers should inform women of the potential benefit for treatments with progesterone in subsequent pregnancies, if appropriate.

Women who have had a poor birth outcome in a previous pregnancy are at increased risk for having poor birth outcomes in subsequent pregnancies, specifically:

- The recurrence risk for poor outcomes is significant and varies by diagnosis as follows:
  - 15-30 percent for preterm delivery
  - 20-60 percent for pre-eclampsia
  - 2-12 fold risk for low-birth-weight infants

- Rates of preterm delivery at spacing intervals less than 13 weeks were double those at intervals of more than two years
- Women with interpregnancy intervals less than 18 months are 14-47 percent more likely to have premature infants
- Poor birth rates are higher among African-American, Latina and low-income women

**Interconception Care Project in California**

The Interconception Care Project is a collaborative effort developed by ACOG District IX, with funding from the March of Dimes to help improve interconception care during postpartum visits for patients in California.

ACOG developed the Interconception Care Logic Model, which includes postpartum clinical management algorithms designed to improve patients’ health and reduce risks in future pregnancies. The algorithms are intended to guide risk assessment, management and counseling based on pregnancy and delivery complications, including:

- Mental disorders
- Intimate partner violence
- Preterm delivery
- Thyroid dysfunction
- Tobacco and other drug dependence
- Neurologic disorders
- Obesity/nutritional deficiencies
- Bleeding-associated disorders
- Hypertension/cardiovascular disorders
- Gestational diabetes
- Infections (such as urinary tract infections (UTIs) and STIs)
- Immunizations

Providers can access the algorithms on the Every Woman California website at [www.everywomancalifornia.org](http://www.everywomancalifornia.org) under *For Health Professionals > Interconception Care Project of California*. Additional information on preconception guidelines is also available for download on this website.

---

---


Reproductive Life Planning

Providers should incorporate preconception care or interconception care into clinical care practices, and discuss reproductive life planning with all women of childbearing age at every visit. Reproductive life planning is a set of personal goals about having children and a plan to achieve those goals based on personal values and resources. Making a reproductive life plan can help ensure that women are healthy and ready if they choose to get pregnant.

While providers should discuss reproductive life planning with all female patients of childbearing age, it is particularly important to discuss preconception care with women who want to become pregnant or are:

- Actively planning a pregnancy
- Planning to become pregnant within the next few years
- Risk takers – women who say they are not trying to become pregnant yet have a high probability of conceiving due to ineffective or no contraception use
- Adolescent and adult females with significant health challenges. Patients with health problems often do not know how their health problems may affect pregnancy and their babies

Providers should discuss the correct and consistent use of contraceptives for patients who do not want to become pregnant.

Including reproductive life planning in patients’ medical history helps determine pregnancy intent, risk, timing, support, and feelings, and allows providers to:

- Target behavioral and medical issues
- Offer intervention strategies
- Encourage dialogue about pregnancy planning and health care
- Emphasize the need for additional visits

Providers discussing disease management programs or chronic conditions with patients who want to become pregnant should include the following topics:

- Disease prognosis irrespective of pregnancy
- The risk of pregnancy complications and maternal morbidity and mortality with pregnancy
- Any conflicts between maternal treatment and fetal well-being
- Medication risk to fetus
- Ability to conceive
- Disease control in preparation for pregnancy

---

Dr. Jeanne A Conry, MD, PhD, presentation at March of Dimes Perinatal Symposium, Bakersfield, California, February 8, 2013. Presentation available at: www.marchofdimes.com/ca/bakersfieldsymposium.
Primary care providers play an important role in helping to improve pregnancy outcomes by encouraging women to make healthy choices.

- Change in teratogenic treatment regimen to one that is safer for the fetus. One in 25 prescriptions written for women between ages 18 and 45 has potentially teratogenic effects.
- Provision of contraception to delay or prevent pregnancy

Additional resources for professionals on reproductive life planning are available in the Resources section of this toolkit.

Discussing reproductive life plans during office visits encourages women to make healthy choices. The following topics may assist providers in promoting health and providing interventions as needed and related to patients’ reproductive life plans.

**Health promotion**

It is important for providers to promote health and provide education to both men and women to help improve family planning and pregnancy outcomes. Test patients for STIs. Counsel them on strategies to reduce the risk of STIs and provide information on all forms of contraception.

Encourage women to reach a healthy weight before pregnancy. This reduces the risk of preterm delivery, cesarean section, neural tube defects, and hypertensive and thromboembolic disease, all of which are associated with obesity. Recommend 30 minutes of moderate activity for all adults or offer recommendations appropriate to their physical abilities. All women with a BMI less than 18.5 should be counseled about short- and long-term risks of low body weight to their own health and the risks to future pregnancies. Assess for eating disorders and distortions of body image. Counsel women about risks to fertility and future pregnancies and, if necessary, refer women to treatment programs before pregnancy.

It is important that men planning to conceive with their partner have a comprehensive medical evaluation to prevent and diagnose disease, including STIs. Providers should ask men to complete a reproductive life plan so they can set personal goals about having children and consider contraception use, as appropriate. Discuss topics such as alcohol, smoking, and use of or exposure to toxic substances, and counsel men for any high-risk behaviors. Manage any medical conditions before they attempt conception.

**Psychosocial risks**

Identify whether your patient has been physically, sexually or domestically abused. If the partner is present, a patient may not be willing to respond honestly to these questions. Providers should have these discussions alone with the patient and express concern and willingness to help. Providers should refer such patients to a local agency or National Domestic Violence hotline at (800) 799-SAFE.

Screen for other behavioral health issues, such as depression or substance abuse, and refer patients to mental health specialists, as needed. If patients do not have access to health care, refer them to a local Health Net office or contact Health Net’s Enrollment Services Department listed in the Resources section of the toolkit for enrollment assistance.

Providers should refer patients who do not have adequate financial resources to the local county department of social services for financial assistance eligibility.

---


www.ncbi.nlm.nih.gov/pubmed/17876020
**Nutrition**

Providers should ask all women of reproductive age about their use of dietary supplements, such as vitamins, minerals, traditional or home remedies, herbal products, and weight-loss products. Patients should be advised about the safety, impact or efficacy of the supplement.

Primary care physicians (PCPs) may consider the following topics and CDC recommendations about nutrition with their patients:

- Screen women for iron deficiency during preconception visits to identify and treat anemia
- Recommend all women of reproductive age take a multivitamin containing 0.4 mg of synthetic folic acid and consume a diet of folate-rich foods
- Recommend calcium supplements if dietary sources of calcium are inadequate
- Recommend a diet rich in essential fatty acids, including omega-3 and omega-6 fatty acids. Women should be advised to consume at least 12 ounces of fish and no more than 6 ounces of canned albacore tuna weekly
- Advise women to avoid eating soft cheeses, such as feta, brie, Camembert, blue-veined and Mexican-style cheeses, and unpasteurized milk or milk products
- Advise women to avoid eating undercooked and raw meat, and seafood, as well as fish high in mercury, including shark, swordfish, king mackerel, and tilefish

**Parental exposure**

Discuss alcohol consumption and potentially adverse health outcomes and consequences during pregnancy. Refer women with signs of alcohol dependence to a treatment program. Identify illegal substance use by conducting a detailed history and discuss the risks of using illicit drugs before, during and after pregnancy. Refer patients to a drug treatment program, if indicated.

Screen all women of childbearing age for tobacco use. Providers should educate tobacco users about the benefits of not smoking before, during and after pregnancy, discuss medications, and refer patients who smoke to tobacco cessation programs. Additional information on available programs for members is listed in the Resources section of this guide.

Offer contraception services and counsel on delaying pregnancy until the patient is alcohol, drug and tobacco-free.

**Environmental exposure**

Discuss the patient’s work environment and physical conditions, such as irregular or shift work, strenuous work or prolonged standing/lifting, which may be hazardous. On identification of potential risks, refer the patient to an occupational medicine specialist for work modification.

Women who are trying to become pregnant or are already pregnant should avoid household toxins, such as:

- **Paint** – ceramics, stained-glass window making, and furniture refinishing
- **Chemical agents** – inorganic chemicals, organic solvents and fuels, pesticides, chemotherapy medications/pharmaceuticals, and lead
• **Physical agents** – ionizing radiation, microwave and other radiofrequency (RF) radiation, noise (intense sound), thermal stress (heat or cold), and vibration. Although there is no formal evidence of microwave use causing problems in pregnancy, it is recommended to limit the time spent in close proximity to microwaves when they are functioning.

• **Biological agents** – bacteria, fungi, viruses, protozoa, animal dander, endotoxins, and enzymes/proteins

Test women at risk for or who have a history of high blood-lead levels. For women who test positive for high blood-lead levels, initiate activities to lower the levels before conception.

**Special populations**

Providers should use Health Net interpreter services as needed to provide culturally and linguistically competent primary care. Providers may access interpreter services by contacting Health Net’s Provider Services Center listed in the Resources section of this toolkit.

Screen immigrants at high risk for tuberculosis, and immigrants from countries where hepatitis B is endemic. Assess immunization history and provide women with needed vaccines.

Review the risks of any medications and other options before conception. Assess the patient’s medical, social and psychological issues related to pregnancy and their disabilities, and provide counseling, if needed. Offer contraception choices that are practical and appropriate.

**Communicating with teens**

It is estimated that more than 66 percent of teen pregnancies in the U.S. are unintended, and according to the Centers for Disease Control and Prevention (CDC), nearly one in five births to teen mothers ages 15 to 19 is a repeat birth. Educating teens about reproductive anatomy, menstrual cycle and contraception can help them make healthy lifestyle choices. Providers are encouraged to have these discussions with teens during regular health care visits.

**Family and genetic history**

Assess pregnancy risks based on maternal age, maternal and paternal medical conditions, obstetric history, and family history. Known or discovered genetic conditions should be managed before and after conception.

**Medical conditions**

The information in this section provides recommendations from the CDC on how to address patients with specific medical conditions.

---

7 CDC’s Morbidity and Mortality Weekly Report (MMWR) 58(S S06):1-58. www.cdc.gov/mmwr/preview/mmwrhtml/ss5806a1.htm
8 CDC’s Morbidity and Mortality Weekly Report (MMWR). www.cdc.gov/mmwr/preview/mmwrhtml/mm62e0402a1.htm?_cid=mm62e0402a1_e
Cardiovascular disease
Counsel women with cardiovascular disease about potential life-threatening risks and medications. Women should be in control of their conditions before conception. Recommend contraceptive methods to achieve optimum timing of the pregnancy.

Diabetes mellitus (DM)
Encourage the use of effective birth control until glycosylated hemoglobin levels are near-normal and diabetes is in control. Consider testing for pre-diabetes and type 2 diabetes in asymptomatic women, adults who are overweight or obese and who have one or more additional risk factors for diabetes, including a history of gestational diabetes mellitus.

Providers should discuss the following topics related to DM control with their patients before considering pregnancy:

- Maintaining optimal weight
- Maximizing DM control
- Self-glucose monitoring
- Regular exercise program
- Tobacco, alcohol and drug cessation

Phenylketonuria
Women of reproductive age with phenylketonuria should maintain a low phenylalanine level. Consider recommending a low phenylalanine diet, especially when the patient is planning a pregnancy.

Seizure disorders
Educate women of reproductive age with seizure disorders about the risks of increased seizure frequency in pregnancy, the potential effects of seizures and anticonvulsant medications on pregnancy outcomes, and the need to plan their pregnancies with a health care provider well in advance of conception. Research recommends that patients with seizure disorders take 4.0 mg of folic acid supplementation at least one month prior to conception and through the end of the first trimester.9

Thyroid disease
Educate women with hypothyroidism about the risks of this condition to pregnancy outcomes and the importance of obtaining optimal replacement therapy prior to conception.

Prior to pregnancy, patients should be in control of the following thyroid-related diseases:

- Asthma
- Lupus
- Renal disease
- Rheumatoid arthritis

Infectious diseases
Educate women about the risks of each infectious disease listed below. Providers should recommend women at risk be screened and treated prior to pregnancy.

- Bacterial vaginosis (BV)
- Listeriosis
- Chlamydia
- Malaria
- Cytomegalovirus
- Periodontal disease
- Gonorrhea
- Syphilis
- Hepatitis C
- Tuberculosis
- Herpes simplex virus
- HIV

9Preconception Health and Health Care – Medical Conditions. www.cdc.gov/preconception/careforwomen/conditions.html
Immunizations

All women of reproductive age should have current immunizations for diphtheria-tetanus-pertussis, measles, mumps, and rubella; varicella should be reviewed and updated as needed.\textsuperscript{10}

Recommended subgroups should receive the human papillomavirus (HPV) vaccine to decrease the incidence of cervical abnormalities and cancer. The vaccine may help maintain cervical competency during pregnancy, by preventing the need for procedures of the cervix due to abnormalities caused by HPV.

Hepatitis B vaccine prevents transmission of the infection to infants. Screening before pregnancy is recommended for women who are at risk and have not been vaccinated. Instruct chronic carriers on ways to prevent transmission to close contacts and how to prevent vertical transmission to their infants.

\textsuperscript{10}Preconception Health and Health Care – Immunizations. www.cdc.gov/preconception/careforwomen/immunization.html
The following resources are available to support providers in discussing preconception or interconception care and reproductive life planning with their patients.

**The American Congress of Obstetricians and Gynecologists**
ACOG offers additional information and resources for preconception and interconception care for health care providers.

www.acog.org

**Preconception counseling and health care checklist**
To help providers ensure their office is adequately supporting preconception and interconception health care with patients, Health Net has created the enclosed checklist that can be used to promote health and counsel patients.

**Reproductive life planning**
Reproductive life plan tools for health professionals:

www.cdc.gov/preconception/rlptool.html

Other provider resources on reproductive life planning:

www.cdc.gov/preconception/freematerials.html

Patient resources on reproductive life planning:

www.cdc.gov/preconception/reproductiveplan.html

www.cdc.gov/preconception/showyourlove/buttons-press.html#checklists

**Folic acid fact sheet**
Office on Women’s Health, U.S. Department of Health and Human Services:


**Occupational and environmental exposures**
Additional information on occupational and environmental exposure, including a qualitative and quantitative preconception occupational/environmental checklist:

*Preconception Brief: Occupational/Environmental Exposures*

www.ncbi.nlm.nih.gov/pmc/articles/PMC2335294/

**March of Dimes**
Patient information on working together for stronger, healthier babies:

Every Woman California
Provides health care providers with recommendations to improve and promote preconception interconception care. Providers can refer patients to the website for available downloads, such as *Id Like to Have a Baby Soon* or *Life Plans for Teens*.

www.everywomancalifornia.org

WebMD health & pregnancy
WebMD offers information about nutrition, fitness and pregnancy essentials for women.

www.webmd.com/baby/guide/health-pregnancy-nutrition-and-fitness

Preconception/contraception app
CDC Contraception app is an evidence-based application developed to assist physicians to accurately prescribe contraception for patients.

www.imedicalapps.com/2013/03/cdc-contraception-app-physicians-prescribe

Continuing education
Before, Between and Beyond Pregnancy offers provider training modules with CME credits and provides information and resources about preconception health care.

http://beforeandbeyond.org

Tobacco cessation programs
Health Net members have access to the Health Net Quit for Life smoking cessation program and can access the program through Health Net’s member website at www.healthnet.com.

The California Smokers’ Helpline telephone program is available at no cost to everyone in California. For additional information, visit the website at www.nobutts.org/index.htm or by calling (800) NO-BUTTS ((800) 662-8887).

Health Net Provider Services Center

<table>
<thead>
<tr>
<th>Line of business</th>
<th>Telephone number</th>
<th>Email address</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMO/POS, PPO &amp; EPO</td>
<td>(800) 641-7761</td>
<td>N/A</td>
</tr>
<tr>
<td>Medicare programs</td>
<td>(800) 929-9224</td>
<td>N/A</td>
</tr>
<tr>
<td>CommunityCare Covered California</td>
<td>(888) 926-2164</td>
<td><a href="mailto:provider_services@healthnet.com">provider_services@healthnet.com</a></td>
</tr>
<tr>
<td>Cal MediConnect – Los Angeles County</td>
<td>(855) 464-3571</td>
<td>N/A</td>
</tr>
<tr>
<td>Cal MediConnect – San Diego County</td>
<td>(855) 464-3572</td>
<td>N/A</td>
</tr>
<tr>
<td>Medi-Cal</td>
<td>(800) 675-6110</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Health Net Enrollment Services Department

<table>
<thead>
<tr>
<th>Line of business</th>
<th>Telephone number</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMO/POS, PPO &amp; EPO</td>
<td>(877) 288-9082</td>
<td><a href="http://www.healthnet.com">www.healthnet.com</a></td>
</tr>
<tr>
<td>Medicare programs</td>
<td>(800) 418-6565</td>
<td><a href="http://www.healthnet.com">www.healthnet.com</a></td>
</tr>
<tr>
<td>Medi-Cal</td>
<td>(800) 327-0502</td>
<td><a href="http://www.healthnet.com">www.healthnet.com</a></td>
</tr>
</tbody>
</table>
Provider Communications

Preconception and Interconception Health Care

To improve birth outcomes

Lisa Pasillas-Le, Health Net

We support you in educating patients about healthy choices.
Preconception Counseling and Health Care Checklist

When discussing reproductive life planning with your patients, consider these topics to promote preconception health, counsel patients and provide brief interventions, as necessary.

General Counseling

☐ Health promotion
  ○ Family planning and reproductive life plan
  ○ Physical activity
  ○ Weight status – body mass index (BMI) calculation
  ○ Nutrient intake – recommended daily allowances
  ○ Folate – 0.4 mg recommended daily from fortified foods and/or supplements
  ○ Immunizations – see Clinical Considerations
  ○ Substance use
  ○ Sexually transmitted infections (STIs)

☐ Special populations
  ○ Women with disabilities – identify risks of medications; medical, social and psychological issues related to pregnancy and the disabilities; practical and appropriate contraception
  ○ Immigrant and refugee populations – identify and understand needs of immigrant women and their families (culturally and linguistically competent primary care)
  ○ Cancer – explain fertility preservation options and reproductive effects of various cancer treatments on fertility and pregnancy
  ○ Men – conduct comprehensive medical evaluation for disease prevention, detection and preconception education

☐ Psychosocial risk
  ○ Inadequate financial resources – refer to your local county department of social services to determine eligibility for financial assistance
  ○ Physical or sexual abuse

☐ Parental exposures
  ○ Alcohol – explain potential for adverse health outcomes and consequences of alcohol consumption during pregnancy
  ○ Tobacco – discuss benefits of not smoking before, during and after pregnancy
  ○ Illicit substances

The checklist was adapted from recommendations published in the following articles:

Nutrition
- Dietary supplements
- Vitamin A
- Folic acid – see Health Promotion
- Multivitamins
- Vitamin D
- Calcium
- Iron
- Essential fatty acids
- Iodine
- Overweight – BMI ≥ 25
- Underweight – BMI ≤ 18.5
- Eating disorders
- Diet:
  - Avoid soft cheese, such as feta, Brie, Camembert, blue-veined and Mexican-style cheeses, and unpasteurized milk or milk products
  - Always wash raw fruits and vegetables
  - Avoid undercooked and raw meat
  - Avoid seafood and fish high in mercury, including shark, swordfish, king mackerel, and tilefish

Environmental exposure
- Mercury
- Lead
- Soil and water hazards
- Hobbies – avoid painting, ceramics, stained-glass window making, and furniture refinishing
- Workplace and household exposure:
  - Chemical agents – inorganic chemicals, organic solvents and fuels, pesticides, chemotherapy drugs/pharmaceuticals, childhood lead poisoning
- Physical agents – ionizing radiation, microwave and other RF radiation, noise (intense sound), thermal stress (heat or cold), vibration
- Biological agents – bacteria, fungi, viruses, protozoa, animal danders, endotoxins, enzymes/proteins
- Physical conditions – irregular or shift work, strenuous work, prolonged standing/lifting

Clinical Considerations
Family and genetic history
- All individuals – discuss risks to pregnancy based on maternal age, maternal and paternal medical conditions, obstetric history, and family history
- Ethnicity-based – counsel or refer to genetic counselor or clinical geneticist, if necessary; assess couples at risk for any ethnicity-based conditions
- Family history – obtain history of developmental delays, congenital anomalies or other genetic disorders
- Previous pregnancies – if at least one member of couple has a known chromosomal anomaly, discuss in vitro fertilization with preimplantation genetic diagnosis
- Any known genetic conditions

Infectious disease
- Asymptomatic bacteriuria
- Bacterial vaginosis (BV)
- Chlamydia
- Cytomegalovirus
- Gonorrhea
General Counseling (continued)

Nutrition

Dietary supplements

- Vitamin A
  - Folic acid – see Health Promotion
    - Multivitamins
      - Vitamin D
        - Calcium
          - Iron
            - Essential fatty acids
              - Iodine

Overweight – BMI ≥ 25

Underweight – BMI ≤ 18.5

Eating disorders

Diet:
- Avoid soft cheese, such as feta, Brie, Camembert, blue-veined and Mexican-style cheeses, and unpasteurized milk or milk products
- Always wash raw fruits and vegetables
- Avoid undercooked and raw meat
- Avoid seafood and fish high in mercury, including shark, swordfish, king mackerel, and tilefish

Environmental exposure

- Mercury
- Lead

Soil and water hazards

- Hobbies – avoid painting, ceramics, stained-glass window making, and furniture refinishing

- Workplace and household exposure:
  - Chemical agents – inorganic chemicals, organic solvents and fuels, pesticides, chemotherapy drugs/pharmaceuticals, childhood lead poisoning
  - Physical agents – ionizing radiation, microwave and other RF radiation, noise (intense sound), thermal stress (heat or cold), vibration
  - Biological agents – bacteria, fungi, viruses, protozoa, animal danders, endotoxins, enzymes/proteins
  - Physical conditions – irregular or shift work, strenuous work, prolonged standing/lifting

Clinical Considerations

Family and genetic history

- All individuals – discuss risks to pregnancy based on maternal age, maternal and paternal medical conditions, obstetric history, and family history
  - Ethnicity-based – counsel or refer to genetic counselor or clinical geneticist, if necessary; assess couples at risk for any ethnicity-based conditions
  - Family history – obtain history of developmental delays, congenital anomalies or other genetic disorders
  - Previous pregnancies – if at least one member of couple has a known chromosomal anomaly, discuss in vitro fertilization with preimplantation genetic diagnosis
  - Any known genetic conditions

Infectious disease

- Asymptomatic bacteriuria
- Bacterial vaginosis (BV)
- Chlamydia
- Cytomegalovirus
- Gonorrhea
- Group B streptococcus
- Hepatitis C – screening for high-risk women recommended; women who test positive and desire pregnancy should be counseled regarding uncertain infectivity, the link between viral load and neonatal transmission, the importance of avoiding hepatotoxic drugs, and the risk of chronic liver disease
- Herpes simplex virus
- HIV
- Listeriosis – see Diet under Nutrition
- Malaria
- Parvovirus
- Periodontal disease
- Syphilis
- Toxoplasmosis
- Tuberculosis

Reproductive history

- Prior preterm birth infant – evaluate for remediable causes before next pregnancy
- Prior cesarean delivery – Centers for Disease Control and Prevention (CDC) recommends waiting at least 18 months before next pregnancy
- Prior miscarriage – low likelihood of recurrence; offer a work-up for women with three or more early losses to identify cause
- Prior stillbirth – explain increased risk of adverse pregnancy outcomes
- Uterine anomalies – heightened awareness during pregnancy and labor often help to optimize pregnancy outcomes

Immunizations

- Diphtheria-tetanus-pertussis vaccination – women of reproductive age should be up-to-date with vaccine because passive immunity typically protects against neonatal tetanus
- Hepatitis B – recommended before pregnancy; women who are chronic carriers should be instructed on ways to prevent transmission to close contacts and how to prevent vertical transmission to their babies
- Human papillomavirus (HPV)
- Influenza
- Measles, mumps and rubella
- Varicella

(continued)
Clinical Considerations (continued)

Medical conditions
- Asthma
- Cardiovascular disease
- Diabetes mellitus – maintain optimal weight control, maximize control, conduct self-glucose monitoring, exercise regularly, and stop use of tobacco, alcohol and drugs
- Hypertension
- Lupus
- Phenylketonuria
- Renal disease
- Rheumatoid arthritis
- Seizure disorders
- Thrombophilia
- Thyroid disease

Medications
- Prescription – explain potential impact of chronic health conditions and medication on pregnancy outcomes for mother and child
- Over-the-counter medication – advise against use of aspirin if a woman is planning to become pregnant or is pregnant
- Dietary supplements – discuss use of herbs, weight-loss products and sport supplements

Psychiatric conditions
- Depression/anxiety – screening is essential because treating or controlling these conditions before pregnancy may help prevent negative pregnancy and family outcomes
- Bipolar disease – discussion that pregnancy is a time of substantial risk of relapse, particularly after discontinuation of ongoing mood-stabilizing maintenance treatment
- Schizophrenia
Get Ready for Pregnancy

A healthy baby starts with a healthy pregnancy. And a healthy pregnancy starts before you are even pregnant. Take these steps to prepare yourself for a healthy pregnancy and a healthy baby.

1. **Take at least 400 micrograms of folic acid every day.** Folic acid is a B vitamin that can prevent some birth defects. You can find folic acid in most multivitamins. Be sure to check the label for 400 micrograms of folic acid or ask your pharmacist. It is recommended that all women take a multivitamin with folic acid whether they are planning to get pregnant or not.

2. **Stop smoking and drinking alcohol.**

3. **Get healthy.** If you have a medical condition such as asthma, diabetes, epilepsy, gum disease, or obesity, make sure that your condition is under control before you get pregnant.

   Eat at least 2 cups of fruits, 2½ cups of vegetables and choose whole grains every day.

   Try to get at least 30 minutes of exercise most days.

4. **See the doctor.** Ask your doctor what you need to do if you want to get pregnant. Talk to your doctor about any medications, vitamins and herbs that you take. Talk to your doctor to make sure that your immunizations or shots are up to date.

5. **Avoid harmful substances.** Chemicals, bug spray, and cat and rat droppings can hurt you and your baby.

As soon as you are pregnant, call the doctor for your first prenatal appointment. Health Net can help you find a doctor that is right for you. Call us at 1-800-675-6110.

www.healthnet.com/shp

This information is not intended as a substitute for professional medical care. Please always follow your health care provider’s instructions. Programs and services are subject to change.

Health Net of California, Inc. is a subsidiary of Health Net, Inc. Health Net is a registered service mark of Health Net, Inc. All rights reserved.
Prepárese para el Embarazo

Un bebé comienza una vida saludable con un embarazo saludable. Y un embarazo saludable comienza incluso antes de quedar embarazada. Siga estos pasos para prepararse para un embarazo saludable y un bebé saludable.

1. **Tome al menos 400 microgramos de ácido fólico por día.** El ácido fólico es una vitamina B que puede prevenir algunos defectos de nacimiento. Puede encontrarlo en la mayoría de las multivitaminas. Asegúrese de verificar que la etiqueta indique 400 microgramos de ácido fólico o pregúntele a su farmacéutico. Se recomienda que todas las mujeres tomen una multivitamina con ácido fólico, ya sea que estén planeando quedar embarazadas o no.

2. **Deje de fumar y de beber alcohol.**

3. **Manténgase saludable.** Si tiene una condición médica como asma, diabetes, epilepsia, enfermedad de las encías u obesidad, asegúrese de que dicha condición esté bajo control antes de quedar embarazada.

Coma al menos 2 tazas de frutas, 2½ tazas de verduras y elija granos integrales todos los días.

Intente realizar al menos 30 minutos de ejercicio la mayoría de los días.

4. **Vaya al médico.** Pregúntele a su médico qué debe hacer si desea quedar embarazada. Hable con éste acerca de cualquier medicamento, vitamina y producto a base de hierbas que tome. Consúltele para asegurarse de estar al día con sus vacunas.

5. **Evite las sustancias perjudiciales.** Las sustancias químicas, los repelentes de insectos, así como los excrementos de los gatos y las ratas pueden causarles daño a usted y a su bebé.

Tan pronto como quede embarazada, llame al médico para programar su primera cita prenatal. Health Net puede ayudarle a buscar un médico que sea adecuado para usted. Llámenos al 1-800-675-6110.

www.healthnet.com/shp