

What Everyone Needs To Know About Preconception Health

*The Continuum of Women's Health Care,
Preconception Care and Prenatal Care*

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**This program is sponsored by The Florida
Department of Health, in partnership with the
March of Dimes Florida Chapter, working to
increase awareness on the importance of good
Preconception Health**

Every Woman Florida

- **Every Woman Florida is** a statewide and March of Dimes' initiative promoting the integration of comprehensive preconception health services for women of childbearing age into all health care settings.
- **The goal is** to improve the integration of preconception health within all clinical settings

<http://www.everywomanflorida.com/>

What Everyone Needs To Know About Preconception Health

- **At the conclusion of this presentation, the interested participant will be able to:**
 - Understand how women's health care, preconception care and pregnancy are a continuum
 - Describe why preconception care is so important
 - List at least 2 potential benefits of preconception care on pregnancy outcome



Infertility and Endocrinology Practice

Case Study: Obesity and Infertility

A 38 year old very obese African American is referred by an infertility specialist. Her BMI is 55. She has been unable to get pregnant and wants IVF now! Stable relationship with sperm donor. “If he does not work out, I have a spare.” Referred to me for counseling before IVF. How should this woman be counseled?

Women's
Health
Care

Preconception
Care

Pregnancy

- **Duration of pregnancy is no longer “nine” months, it’s “twelve” months**
- **Both ACOG and AAP suggest that prenatal care begin **before** conception**

What Is Preconception Care?

- Aims to identify reversible risk to a women's health or pregnancy outcome
- Emphasizes factors which must be acted on before conception or early in pregnancy for maximal impact and optimal outcome
- Adds a different dimension to usual primary care by focusing on future pregnancy, anticipating change, and reframing issues in this light.

What Are The Goals of Preconception Care?

- **Optimize the woman's health**
- **Minimize risks to her and the fetus and improve pregnancy outcome**
- **Provide information necessary to make informed decisions about future reproduction**

The Necessary Components of Preconception Care

- **Medical history**
- **Psychosocial issues**
- **Physical exam**
- **Laboratory tests**
- **Family history**
- **Nutrition assessment**

Some Examples of What Preconception Care Should Include

- **Factoring the possibility of future pregnancy into the choice of chronic medications**
- **Suggesting that a male patient about to undergo therapy for testicular cancer, bank sperm**
- **Discussing risks of pregnancy in a woman**

Some Examples of What Preconception Care Should Include

- **Recommending contraception as part of an effort to promote the planning of pregnancy**
- **Checking for rubella immunity in all young women with unknown status**
- **Recommending 0.4 mg of folic acid to all women of childbearing age**

When Should Preconception Care be Offered?

- **As part of routine health maintenance care**
- **At a defined preconception visit**
- **Anytime for a reproductive women with a chronic illness**

Epidemiology of Unintended Pregnancy

- 49% of pregnancies in the US are unintended (unwanted or mistimed)
 - Henshaw, 1998
- Preconception care should be provided to all reproductive age individuals

Since so few pregnancies are planned, **preconception care issues** must be addressed at all encounters with reproductive-aged individuals (ages 10-55)

What Are The Barriers to Preconception Care?

Patient Aspect

- High rate of unintended pregnancies
- Ignorance about importance of good health habits prior to conception
- Limited access to health services in general
- “Planned” pregnancies are seldom planned with a health care provider

What Are The Barriers to Preconception Care?

Physician Aspect

- Feeling of having inadequate knowledge and being unprepared
- Perception of preconception care being time-consuming
- Concern about insurance reimbursement.
- Lack of awareness of how to integrate preconception care into ongoing primary care

Role of Us The Health Care Provider

- Be open to the subject
- Provide a private, confidential setting for visit
- Use a standardized screen
- Ask every woman
- Know local resources for referral
- Intended for **All Providers** and provider extenders regardless of specialty



Obstetrics and Gynecology Practice



Gynecology Practice

Preconception Care and Obstetrics and Gynecology Practice

- Annual gynecological visit
- Episodic visit for any common complaints
- Routine postpartum visit
- Negative pregnancy test - an opportunity for preconception care
- Family planning encounter
- Infertility evaluation
- Following a poor pregnancy outcome

Preconception Care and Obstetrics and Gynecology Practice

- **Care for preterm, LBW infants, IDMs, and children with malformations, genetic disease**
- **Aware of immense personal and economic burden**
- **Sensitive to the importance of primary prevention**
- **Have frequent contact with women of childbearing age**



Pediatric Practice

Preconception Care and Pediatric Practice

- **Care for adolescent girls and prepare them for adult roles**
- **Must deal with emerging sexuality, teen pregnancy**
- **Especially important for adolescents**
- **13% of births in US are to adolescents**
- **Majority of adolescents are sexually active**

Preconception Care and Pediatric Practice

- **Mothers**
 - prenatal**
 - post-natal**
 - new to practice**
- **Periodic reminder**

Opportunities for Preconception Care of Adolescents in the Pediatric Practice

- Adolescents: emphasis on PREVENTION
- Individualized
 - menarche
 - sexually active
 - pre-college physical
- Follow-up on a negative pregnancy test.
Why was it done?



Family Medicine Practice

Preconception Care and Family Medicine Practice

- **Family medicine physicians care for well women and those with illnesses through various stages of life before, during, after and between pregnancies**
- **Family medicine physicians treat family members including women of different generations**



Internal Medicine Practice

Preconception Care and Internal Medicine Practice

- Preconception care has special benefits for women with chronic medical problems many of whom are cared for by internists
- In one large study, 13.9% of women entering prenatal care had an identified medical problem requiring an internist

Seven Examples of the Importance of Preconception Care

- **Prevention of Neural Tube Defects**
- **Rubella Vaccination**
- **Substance Use**
- **Alcohol use**
- **Tobacco Use**
- **Physical and Emotional Abuse**
- **Medical Conditions**



Prevention of Neural Tube Defects

- Supplementation for all women of childbearing potential with folic acid
 - No history of NTD: 0.4 mg. every day
 - Prior infant with NTD: 4.0 mg. every day
 - Woman with NTD: 4.0 mg. every day
- Nutritional sources often inadequate



Rubella Vaccination

- Determine rubella immunity prior to conception
- Vaccinate susceptible **nonpregnant** women
- Congenital rubella syndrome may result from infection during pregnancy (microcephaly, fetal growth restriction, cardiac malformations, etc)
- Congenital rubella syndrome does not result from vaccination during pregnancy





Substance Use and Preconception Care

- Patient education as to effects of substances on fetus
- Screening for use/abuse
- Referral for treatment program
- Pregnancy may be a strong motivator for change

Substance Use and Consequences

- **Cocaine**
 - Congenital anomalies
 - Low birth weight
 - Abruptio placenta
- **Heroin**
 - Low birth weight
 - Newborn withdrawal
- **Methadone**
 - Newborn withdrawal

Alcohol Use

- **Leading preventable cause of mental retardation**
- **Most common teratogen to which fetuses are exposed**
- **Effects related to dose**
- **No threshold has been identified for “safe” use in pregnancy**
- **Effects at all stages of pregnancy**

Role Of The Health Care Provider In Substance Use and Preconception Care

- **Screening, identifying and counseling women regarding substance use**
- **Routine screening in history taking**
 1. **No physical symptoms in majority of abusers**
 2. **Screen everyone since no predictors**
- **Know local community resources**

What About Smoking



Tobacco Use

- **Leading preventable cause of low birthweight**
 - **For every 10 cigarettes smoked each day the risk of delivering an SGA infant increases by a factor of 1.5**
- **Associated with placental abruption, preterm delivery, placenta previa, miscarriage**
- **Smoking cessation results in increased birth weight**



Smoking Cessation Practice

Physical and Emotional Abuse in Pregnancy

- **Two million women each year are abused by a partner**
- **No correlation with ethnicity, socio-economic status, or education**
- **29% of abused women report escalation of abuse during pregnancy**

Some Medical Conditions Amenable to Preconception Care

- **Diabetes Mellitus**
- **Hypertensive Disorders**
- **Cardiac Disease**
- **Thyroid Disorders**
- **Epilepsy**
- **Asthma**
- **HIV Infection**
- **Systemic Lupus**
- **Thromboembolic Disease**
- **Renal Disease**
- **Hemoglobinopathies**
- **Cancers**
- **Recurrent Pregnancy Lost**
- **Obesity**

MEN HAVE

An incredible world exclusive interview!



WEEKLY WORLD
NEWS

July 7, 1992

88¢/95¢ CANADA

**FIRST PHOTOS
EVER!**



**31-year-old has healthy
4-pound, 7-ounce boy!**

PREGNANT MAN GIVES BIRTH!

**Woman drives stake
through vampire
daughter's heart!**

INSIDE:



Men Have Babies Too!

- **Male issues in preconception health not to be forgotten**
- **Encourage cooperation and support between prospective father and mother**
- **Identify male exposures that could adversely affect reproduction e.g.. occupational exposures, alcohol, tobacco, drug exposure, HIV, STD and male genetic issues**

Specific Preconception Care for Men

- **Alcohol**
 - may be associated with physical and emotional abuse
 - may decrease fertility
- **Genetic Counseling**
- **Occupational exposure**
 - lead
- **Sexually transmitted diseases**
 - syphilis, herpes, HIV

SMH CASE



Endocrinology Practice



Nephrology Practice

Case Study: Diabetes

- A 38 year old **obese** African American school principal has had Type 2 **Diabetes Mellitus** for 13 years. She **smokes** a ½ pack a day
- Married for 10 years, she has deferred childbearing but now wishes to conceive
- She is on **Glyburide** for diabetes control and on an **ACE inhibitor** for microalbuminuria which was first noted 3 years ago by her nephrologist

Diabetes and Pregnancy

- Diabetes mellitus is the **most common serious disease** to affect the maternal-fetal medicine patients
- Maternal and perinatal mortality associated with diabetes has **decreased** over the past 50 years
- The leading cause of perinatal death among women with diabetes is malformations

Goals Of Preconception Care With Diabetes

- **To reduce the occurrence of:**
 - **diabetic complications**
 - **obstetric complications**
 - **congenital malformations**

Preconception Care for Women with Diabetes

- Assist to achieve optimal glycemic control
- Encourage the use of contraception until glycemic control is achieved
- Discontinue ACE inhibitors
- Glyburide (?)
- Educate about the need for insulin, special testing, frequent prenatal care visits

Care for Diabetic Women in Preparation for Planned Conception

- **Substitute insulin for oral hypoglycemics**
- **Adjust insulin to achieve optimal glycemia for embryonic development**
- **Goals -- FBS 60-90 mg/dl**
- **1 hr postprandial <130mg/dl; 2 hr <120mg/dl**
- **Achieved by home monitoring, multiple daily injections, close supervision, education**
- **Postpone conception until control is stable**

Congenital Anomalies in DM Occur At An Early Gestational Age

- Caudal regression** 5 weeks
- Situs inversus** 6 weeks
- Spina bifida** 6 weeks
- Anencephaly** 6 weeks
- Heart anomalies** 7-8 weeks
- Anal/rectal atresia** 8 weeks
- Renal anomalies** 7 weeks

Hemoglobin A_{1c} and Congenital Anomalies

<i>HbA_{1c}%</i>	<i>No. Anomalies(%)</i>	<i>Total #</i>
<6.9	0 (0)	19
7.0-8.5	2 (5.1)	39
8.6-9.9	8 (22.9)	35
>10.0	5 (21.7)	23

Miller, NEJM, 1985

Prevention of Congenital Malformations

- **Study by Fuhrmann, et al. 1983**
- **Preconception treatment, n=128**
 - **1% malformations**
- **Late Pregnancy registrants, n=292**
 - **7.5% malformations**

Preconception Care Is The Key!!!



Bariatric Surgery Practice

What We Know: Obesity

- **Obesity and Women's Health:**
 - Diabetes
 - Hypertension
 - Cardiovascular disease
 - Disabilities
- **Obesity and Pregnancy:**
 - Glucose intolerance of pregnancy
 - Pregnancy induced hypertension
 - Thrombophlebitis
 - Neural tube defects
 - Prematurity

Nutritional Risks

- **Overweight (BMI 26.1-29.0) and Obese (BMI >29.0)**
 - Increased risk for: diabetes, hypertension, thromboembolic disease, macrosomia, birth trauma, abnormal labor, cesarean delivery
- **Underweight (BMI < 19.8 prepregnant)**
 - Increased risk for: low birth weight, fetal death, mental retardation

Care for Obese Women in Preparation for Planned Conception

- Nutritional counseling
- Good primary care
- Evaluate for presence of morbidities
- Discuss risks of obesity and pregnancy
- Postpone conception until weight loss

What We Know:

- **Tobacco And Women's Health:**

- Implicated the leading causes of death for women:

- Heart disease
- Stroke
- Lung cancer
- Lung disease

- **Tobacco and Reproductive Outcomes:**

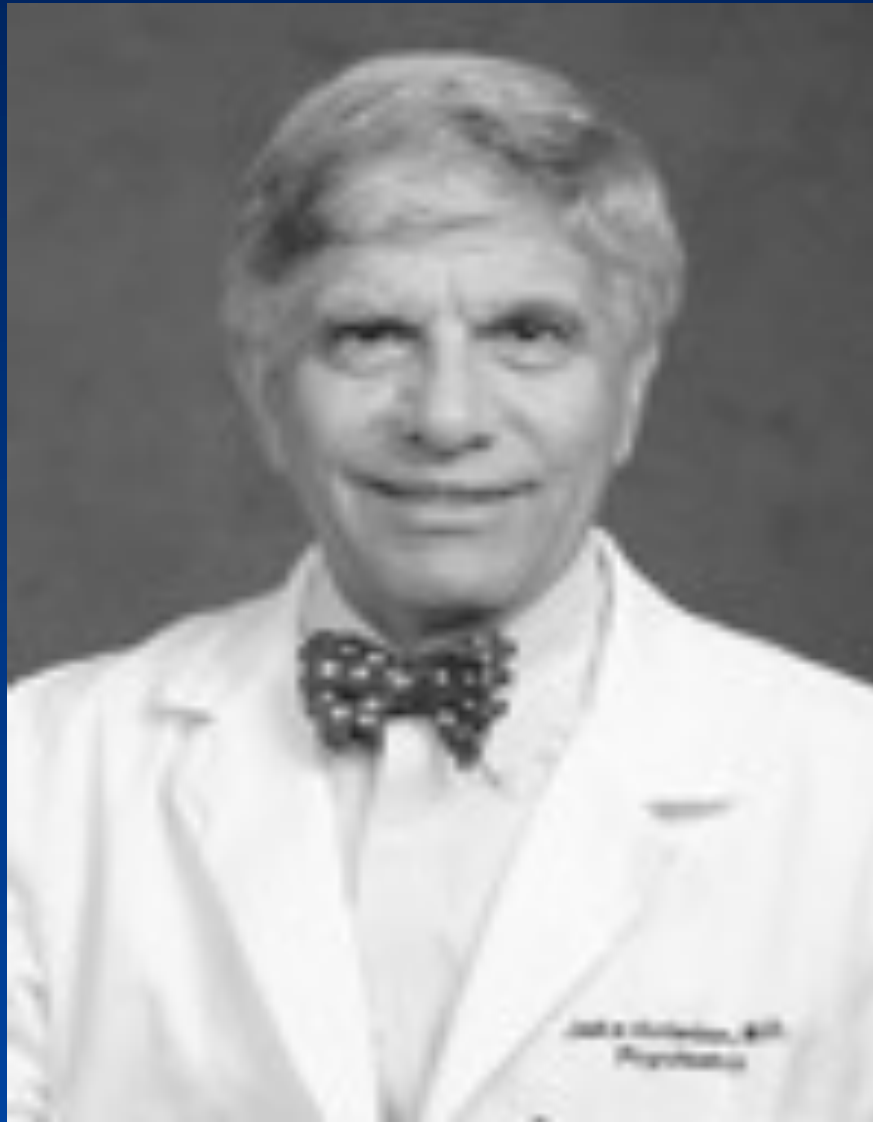
- Leading preventable cause of infant mortality
- Preventable cause of low birth weight and prematurity
- Associated with placental abnormalities

Preconception Issues and Tobacco Exposure

- **Smoking in pregnancy is associated with preterm delivery and low birthweight infants**
- **Smoking in the household is associated with SIDS, childhood respiratory illness, asthma, and otitis media**

Care for Smoking Women in Preparation for Planned Conception

- **Stop smoking**
- **Smoking Cessation Program**
- **Discuss risks of smoking and pregnancy**
- **Postpone conception until not smoking**



Substance Abuse Practice

Case Study: New Patient

- A 24 year old woman comes for a first visit to you because she is concerned about a persistent cough
- History reveals she has smoked 1 pack per day since age 16 and has 1-2 alcoholic drinks on weekends and had a DUI
- She is recently married and plans to have children soon
- Her husband also smokes and drinks

What We Know:

- **Alcohol and Women's Health**
 - Risk for Motor vehicle and other accidents
 - Risk for unintended pregnancy
 - Risk for addiction
 - Risk for nutritional depletions and inadequacies
- **Alcohol and Reproductive Outcomes**
 - Delayed fertility
 - Increased spontaneous abortions
 - Fetal Alcohol Syndrome and Fetal Alcohol Effect

What Else We Know: Alcohol Use During Pregnancy

- Fetal Alcohol Syndrome is a leading cause of preventable mental retardation
- **No level** of alcohol consumption is considered “safe”
- Advise her to abstain when attempting to conceive and during pregnancy
- Assess for problem drinking with a standardized screening tool

Care for Alcoholic Women in Preparation for Planned Conception

- Stop alcohol
- Get help if necessary
- Goals is **NO** alcohol
- Nutritional counseling
- Good primary care
- Discuss risks of alcohol and pregnancy
- Postpone conception until not drinking



Neurology Practice

Case Study: Seizure Disorder

22 year old woman misses her period. Pregnancy test in the office is “negative”. She expresses a desire to have a baby. She is on Dilantin since age 2. She has had no seizures for the past 5 years.

Background of Preconception Care and Seizure Disorders

- Epilepsy is the most common, serious neurologic problem seen in pregnancy
- All anticonvulsants are potentially teratogenic
- Increased incidence of congenital malformations in offsprings of mothers with a seizure disorder (independent of anticonvulsant use)
- Prepregnancy period an optimal time to review the diagnosis and classification of the patient's seizure disorder and also the need and effectiveness of current therapeutic regimens

Goals of Preconception Care In Women with Seizure Disorders

- To keep the woman seizure-free
- To decrease the incidence of congenital abnormalities in her offspring
- Balance maternal seizure control with minimal fetal effects

Goals Achieved By:

- **Thorough evaluation of patients' past and present history, her treatment regimen and its effectiveness**
- **Collaborate with the neurologist for a pre-pregnancy workup including EEG, CT Scan, etc.**
- **Discussion of effects of epilepsy on pregnancy and offspring**
- **Consider weaning the patient from anticonvulsants if appropriate candidate, in consultation with her neurologist, prior to pregnancy**

Goals Achieved By:

- **Consider monotherapy as far as possible since it is safer**
- **Educate patient about risks of abrupt discontinuation**
- **Discuss risks associated with the medications used**
- **Folic acid supplementation**
- **Effective contraception until seizure-free**



Dermatology Practice

Case Study: Medication Management

22 year old woman seen in the office for symptoms of urinary tract infection. In the course of history taking she says she is quite happy about the results of her new medication (Accutane) her dermatologist prescribed for her severe acne. She is sexually active and uses

Care for Women on Medication in Preparation for Planned Conception

- **Make sure all medication used during preconception is safe for the fetus**
- **If in doubt check it out!**

Techniques For Providing Preconception Care

- **Self-administered Reproductive Health Screen**
- **Waiting room posters and magazines**
- **Pamphlets from the March of Dimes, ACOG, AAP, etc.**
- **Community and School Interventions**
- **Referral to Maternal-Fetal Medicine specialists...**



Maternal-Fetal Medicine Practice

Preconception Care Summary

- **Preconception care begins with mindset of possible future childbearing which informs the care of patients**
- **Develop the habit of discussing the reproductive plans of patients**
- **Offer information that might affect the decision of whether or when to conceive**
- **Unintended pregnancies are common and even when intended, pregnancy planning seldom includes the doctor**
- **Promote planned pregnancy**

Preconception Care Summary

- **Possibility of future pregnancy should inform medical decisions**
- **For each condition review the core issues and individualize care**
- **Care prior to attempts to conceive may include reassessment, special diagnostic tests, change in medications or diet, intervention to prevent pregnancy-associated complications**
- **Remember the elements of care applicable to all women**

Think Preconception

...and how can I help

Finally What Is The Role YOU Can Play In Your Own Family

- Encourage them to talk ahead of time with their the OB-GYN and ask questions
- Is that medication OK if you get pregnant?
- Does your Doctor know of our family history?
- Are you living in a town where good care is available?
- Is your doctor aware of your issues?

Women's
Health
Care

Preconception
Care

Pregnancy

A Happy Granddaughter!!



Thank you