

PRECONCEPTION COUNSELING

DENISE SUR, MD

VICE CHAIR AND PROFESSOR

RESIDENCY DIRECTOR



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- Goals for today:
 - Every participant learns at least one new piece of information they can share with their patients planning for a pregnancy
 - Most leave with a sense for how they can provide at least some of this information to patients scheduled for another reason but needing more information around fertility
 - At least some participants find more joy in working with patients around a typically positive event.

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- Identify social, behavior, environmental and biomedical risks to a woman's fertility and pregnancy outcome with the GOAL of reducing those risks through education, counseling and appropriate intervention.
 - This is what we do and should do well- anticipatory guidance and prevention
 - But most women do not book a preconception care visit
- What are the barriers to providing preconception care?

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- Identify social, behavior, environmental and biomedical risks to a woman's fertility and pregnancy outcome with the GOAL of reducing those risks through education, counseling and appropriate intervention.
 - This is what we do and should do well- anticipatory guidance and prevention
 - Most women do not book a preconception care visit
- What are the barriers to providing preconception care?
 - Time constraints in our already full agendas when seeing patients
 - Lack of health insurance or adequate coverage for screening tests and counseling
 - Lack of resources in delivering information

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- What is one question that can be asked at most visits when seeing women of child-bearing age?

7 PRECONCEPTION COUNSELING

- What is one question that can be asked at most visits when seeing women of child-bearing age?

What is a patient's intention to become pregnant in the next year?

Asking this question helps us to identify appropriate contraception or identify potential risk to:

Mother

Fetus

Pregnancy

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Important facts to remember:

1- What percentage of pregnancies are unintended?

2- What percentage of pregnant women enter prenatal care in the second trimester or after 13 weeks pregnant?

3- Some interventions take months to achieve- any examples?

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Important facts to remember:

1- What percentage of pregnancies are unintended?

Just under 50%

2- What percentage of pregnant women enter prenatal care in the second trimester or after 13 weeks pregnant?

3- Some interventions take months to achieve- any examples?

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Important facts to remember:

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2- What percentage of pregnant women enter prenatal care in the second trimester or after 13 weeks pregnant?

30% of pregnant women enter after 13 weeks, which is the primary period for organogenesis (3-10 weeks)

***Preconception interventions like folic acid supplementation and avoidance of alcohol more important than prenatal interventions.**

3- Some interventions take months to achieve- any examples?

II PRECONCEPTION COUNSELING

Important facts to remember:

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3- Some interventions take months to achieve- any examples?

Substantial weight loss

Optimization of medical conditions

Immunizations that should not be given within a certain number of months of attaining pregnancy like MMR

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13 PRECONCEPTION RISK ASSESSMENT

- Straight up Prevention

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- Straight up Prevention
 - **Advise folic acid supplementation (400 mcg daily) started before pregnancy and continued until 6-12 weeks post conception to reduce the risk of neural tube defects**
 - **Reduces the rate of neural tube defects by nearly 75%**

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- Achieving a Healthy Body Weight

16 PRECONCEPTION RISK ASSESSMENT

- Achieving a Healthy Body Weight
 - **Counsel women who are overweight, obese, or underweight about achieving a healthy body weight before becoming pregnant**
 - **Women who are overweight or obese are at risk of diabetes, gestational diabetes, and hypertension – all conditions associated with adverse pregnancy outcomes**

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Is low pre-pregnancy weight associated with adverse pregnancy or newborn outcomes?

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Is low pre-pregnancy weight associated with associated with adverse pregnancy or newborn outcomes?

Yes- Preterm birth, low birth weight, higher incidence of gastroschisis

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- Screening and Treatment for Infectious Diseases

20 PRECONCEPTION RISK ASSESSMENT

- Screening and Treatment for Infectious Diseases
 - **Screen all women younger than 25 years and women at risk for Chlamydia infection**
 - **Screen all women for HIV**
 - **Screen high risk women for Gonorrhea and Syphilis**
 - **Counsel about the risk of vertical transmission of HSV**

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- Immunization or Immune Status Reviewed

22 PRECONCEPTION RISK ASSESSMENT

- Immunization or Immune Status Reviewed
 - **Document immune status for Rubella and Varicella**
 - **Immunize as indicated at least 1 month before conception**
 - **Immunize against Influenza if in flu season at any stage of pregnancy**

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Case definition and classification criteria for congenital rubella

Clinical case definition

An illness, usually manifesting in infancy, resulting from rubella infection in utero and characterized by clinical findings from the following categories:

Category A: Cataracts/congenital glaucoma, congenital heart disease (most commonly patent ductus arteriosus or peripheral pulmonary artery stenosis), hearing impairment, pigmentary retinopathy

Category B: Purpura, hepatosplenomegaly, jaundice, microcephaly, developmental delay, meningoencephalitis, radiolucent bone disease

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- Review of Medications

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- Review of Medications
 - What are common high risk medications?

26 PRECONCEPTION RISK ASSESSMENT

- Review of Medications
 - What are common high risk medications?
 - **Isotretinoin or Accutane associated with birth defects**
 - **Oral corticosteroids in the first trimester associated with reduced birth weight, increased risk of oral cleft, and higher rates of preeclampsia**
 - **Anti-seizure medications- many associated with neural tube defects**
 - **Tetracycline associated with risk of permanent bone/teeth discoloration and enamel hypoplasia**

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- Control of Chronic Diseases

What conditions are associated with adverse pregnancy and/or neonatal outcomes?

28 PRECONCEPTION RISK ASSESSMENT

- Control of Chronic Diseases

What conditions are associated with adverse pregnancy and/or neonatal outcomes?

- **Diabetes mellitus:** miscarriage, congenital anomalies, perinatal death
 - **HTN:** preterm birth, placental abruption, IUGR, preeclampsia, fetal death
 - **Hypothyroidism:** cognitive impairment, preterm birth, low birth weight, fetal death
 - **Poorly controlled asthma:** neonatal hypoxia, IUGR, PTL, low birth weight, fetal and neonatal death
 - **Seizure disorders:** miscarriage, low birth weight, microcephaly, dev disabilities, congenital anomalies
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- Environmental Risk Factors

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- Environmental Risk Factors
 - **Workforce exposures to toxicants**
 - Clinical and laboratory health care
 - Dry cleaning
 - Printing
 - Manufacturing
 - Agriculture
 - **Avoiding mercury exposure** by not consuming large fish (shark, swordfish, tilefish, king mackerel) and limiting other fish intake.

US Food and Drug Administration advice on fish consumption in women who are pregnant, might become pregnant, or are nursing

Best choices (eat 2 to 3 servings a week)		
<ul style="list-style-type: none"> ■ Anchovy ■ Atlantic croaker ■ Atlantic mackerel ■ Black sea bass ■ Butterfish ■ Catfish ■ Clam ■ Cod ■ Crab ■ Crawfish ■ Flounder ■ Haddock 	<ul style="list-style-type: none"> ■ Hake ■ Herring ■ Lobster (American and spiny) ■ Mullet ■ Oyster ■ Pacific chub mackerel ■ Perch (freshwater and ocean) ■ Pickerel ■ Plaice ■ Pollock ■ Salmon ■ Sardine 	<ul style="list-style-type: none"> ■ Scallop ■ Shad ■ Shrimp ■ Skate ■ Smelt ■ Sole ■ Squid ■ Tilapia ■ Trout (freshwater) ■ Tuna, canned light (includes skipjack) ■ Whitefish ■ Whiting
Good choices (eat 1 serving a week)		
<ul style="list-style-type: none"> ■ Bluefish ■ Buffalo fish ■ Carp ■ Chilean sea bass/Patagonian toothfish ■ Grouper ■ Halibut ■ Mahi mahi/dolphinfish 	<ul style="list-style-type: none"> ■ Monkfish ■ Rockfish ■ Sablefish ■ Sheepshead ■ Snapper ■ Spanish mackerel ■ Striped bass (ocean) 	<ul style="list-style-type: none"> ■ Tilefish (Atlantic Ocean) ■ Tuna, albacore/white tuna, canned and fresh/frozen ■ Tuna, yellowfin ■ Weakfish/sea trout ■ White croaker/Pacific croaker
Choices to avoid (highest mercury levels)		
<ul style="list-style-type: none"> ■ King mackerel ■ Marlin ■ Orange roughy ■ Shark 	<ul style="list-style-type: none"> ■ Swordfish ■ Tilefish (Gulf of Mexico) ■ Tuna, bigeye 	

One serving can be considered 3.5 ounces (100 grams). Note: On average, farm-raised fish tend to be lower in mercury compared with wild-caught fish^[1].

Reference:

1. Karimi R, Fitzgerald TP, Fisher NS. A quantitative synthesis of mercury in commercial seafood and implications for exposure in the United States. *Environ Health Perspect* 2012; 120:1512.

Reproduced from: US Food and Drug Administration. *Food: Eating Fish: What Pregnant Women and Parents Should Know*. Available at:

<http://www.fda.gov/Food/FoodborneIllnessContaminants/Metals/ucm393070.htm> (Accessed January 26, 2017).

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- Drugs of Abuse

What is the recommendation on the safe level of alcohol intake during pregnancy?

What is the recommendation on Nicotine and THC cessation?

33 PRECONCEPTION RISK ASSESSMENT

- Drugs of Abuse

What is the recommendation on the safe level of alcohol intake during pregnancy?

-A safe level of alcohol intake during pregnancy has not been determined

34 PRECONCEPTION RISK ASSESSMENT

- Drugs of Abuse

What is the recommendation on the safe level of alcohol intake during pregnancy?

What is the recommendation on Nicotine and THC cessation?

While there are conflicting data regarding the risk of preterm delivery and low birth weight in women who smoke marijuana during pregnancy, ACOG and AAFP advise avoiding marijuana use during pregnancy and lactation because of concerns for the neurodevelopmental impact on the developing fetus and child.

35 PRECONCEPTION FERTILITY ASSESSMENT AND OPTIMIZING NATURAL FERTILITY



36 PRECONCEPTION FERTILITY ASSESSMENT AND OPTIMIZING NATURAL FERTILITY

Let's start with some basic facts so we can better inform our patients:

What is normal natural fertility?

Most pregnancies occur during the first _____ menstrual cycles of attempted conception.

Fertility increases or decreases as the number of consecutive months without achieving increases?



37 PRECONCEPTION FERTILITY ASSESSMENT AND OPTIMIZING NATURAL FERTILITY

Let's start with some basic facts so we can better inform our patients:

What is normal natural fertility?

Most pregnancies occur during the first **six** menstrual cycles of attempted conception.

Fertility increases or **decreases** as the number of consecutive months without achieving increases?

38 PRECONCEPTION FERTILITY ASSESSMENT AND OPTIMIZING NATURAL FERTILITY

When is the fertile period of a woman's cycle?

What is the optimal coital frequency to achieve conception?

Do lubricants affect fertility?

What coital factors do not affect fertility?



39 PRECONCEPTION FERTILITY ASSESSMENT AND OPTIMIZING NATURAL FERTILITY

When is the fertile period of a woman's cycle?

- The fertile interval in each cycle is approximately six days with 5 days prior to ovulation plus the day of ovulation.
- The highest probability of conception occurring when intercourse takes place 1 to 2 days prior to ovulation and on the day of ovulation.

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What is the optimal coital frequency to achieve conception?

Do lubricants affect fertility?

What coital factors do not affect fertility?



4 | PRECONCEPTION FERTILITY ASSESSMENT AND OPTIMIZING NATURAL FERTILITY

What is the optimal coital frequency to achieve conception?

- The highest pregnancy rates occur in couples who have intercourse every 1-2 days
- Regular intercourse 2-3 times per week beginning after cessation of menses should ensure hitting fertile period and semen quality if optimal.

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Do lubricants affect fertility?

What coital factors do not affect fertility?

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Do lubricants affect fertility?

Some lubricants decrease or inhibit sperm mobility in vitro but actual studies of time to pregnancy showed no difference in fertility. Still recommended to avoid lubricants that can decrease sperm mobility and use mineral, canola or mustard oil if lubrication is necessary.

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Which of the following factors do not affect fertility?

a-Coital position

b-Presence or absence of female orgasm

c-Female position (eg, remaining supine) after male ejaculation

45 PRECONCEPTION FERTILITY ASSESSMENT AND OPTIMIZING NATURAL FERTILITY

Which of the following factors do not affect fertility?

a-Coital position

b-Presence or absence of female orgasm

c-Female position (eg, remaining supine) after male ejaculation

None of these factors affect fertility

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What is the effect of age on fertility?

Is male age a factor in fertility?

47 PRECONCEPTION FERTILITY ASSESSMENT AND OPTIMIZING NATURAL FERTILITY

What is the effect of age on fertility?

Women in their late 30s are approximately 40 percent less fertile than women in their early 20s

Is male age a factor in fertility?

It is a minor factor after age 50 years old for male

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Effects of environmental and lifestyle factors on fertility not well established as no large-scale, randomized clinical trials have been done to evaluate

- Cigarette smoking
- BMI
- Stress
- Alcohol consumption
- Caffeine consumption

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FERTILITY ASSESSMENT AND OPTIMIZING NATURAL FERTILITY

Effects of environmental and lifestyle factors on fertility not well established as no large-scale, randomized clinical trials have been done to evaluate

Most of the factors listed may contribute to subfertility but too many confounding factors in the studies done and no large randomized studies

*Interesting fact about caffeine: A cohort study of over 1700 couples undergoing fertility treatment reported a higher chance of a live birth among women consuming 1-5 cups of coffee per day compared to non-coffee drinking cohort. Because fertility does not appear affected by caffeine intake less than 200 mgs per day, women planning pregnancy probably can have 1-2 six to eight oz cups of coffee per day.

50 THANK YOU!

