

# **Periconceptual**

# **Counseling**



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# *Periconceptual Care(pcc)*



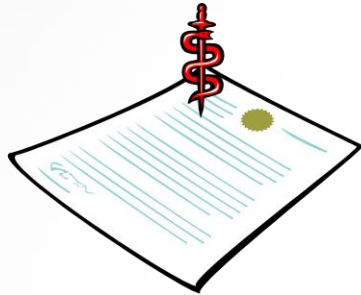
**May be the most important  
component of prenatal care**



# GOAL of PCC



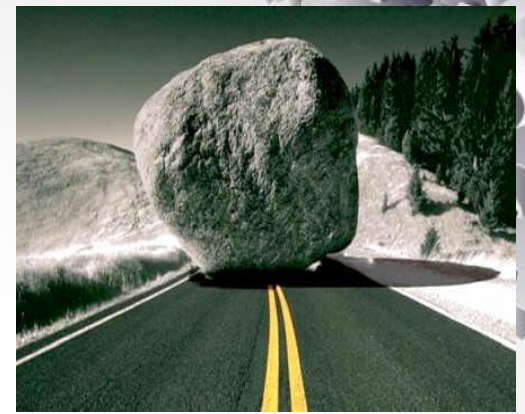
- Identify modifiable and non-modifiable risk factors for poor obstetrical outcomes before conception begins
- Provide an opportunity to intervene before conception
- Perform individualized patient education including information on the advantages of planned pregnancy
- Education of health providers



ACOG advocates extending the opportunity to receive periconceptional counseling as a component of routine primary medical care to all women of child bearing age.



# Obstacles



# Socio-demographic risk factors



# Maternal Health factors





# High risk age groups

Which are the more concerning age groups?

Teenagers

>35 years old

38 Father is >55 years old





# Teenage Pregnancy:

- Preterm labour
- Anaemia, PIH, IUGR
- Microsomia
- Poor nutrition
- Poor pre pregnancy weight
- Emotional problems

# Mother >35years



- Infertility
- Chromosomal anomalies
- Spontaneous abortion
- Placenta previa (x 8)
- Microsomia (x20-40)
- Prematurity (20%)
- Caesarean section
- Chronic medical diseases: DM, HTN

# Father >55 years



Risk of chromosomal anomalies??



# Genetic Diseases Associated with Race

<b>Black</b>	<b>Sickle Cell Trait</b> Test: Sickle cell smear Frequency 10%	<b>Beta Thalassemia</b> Test: MCV <70 Frequency: 5%
<b>European Jewish</b>	<b>Tay-Sachs disease carrier</b> Test hexosaminidase A Freq: 4%	
<b>French Canadian</b>	<b>Tay-Sachs disease carrier</b> Test hexosaminidase A Freq: 5%	
<b>Mediterranean</b>	<b>Alpha and Beta Thalassemia</b> Test: MCV <70 Freq: 10-20%	
<b>Southeast Asian (Laotian, Thai, Cambodian)</b>	<b>Alpha and Beta Thalassemia</b> Test: MCV <70 Freq: 20-40%	
<b>White Northern European origin</b>	<b>Cystic fibrosis</b> Test: sweat test Freq: 1:3,200	
<b>Indian, Middle Eastern</b>	<b>Sickle Cell Trait</b> Test: Sickle cell smear ▪ Frequency Unknown	<b>Alpha and Beta Thalassemia</b> Test: MCV <70 Freq: unknown

# Substance abuse



# Medications



# Occupational Hazards



**Table 1. Chemical and physical agents that are reproductive hazards for women in the workplace**

Agent	Observed effects	Potentially exposed workers
Cancer treatment drugs (e.g., methotrexate)	Infertility, miscarriage, birth defects, low birth weight	Health care workers, pharmacists
Certain ethylene glycol ethers such as 2-ethoxyethanol (2EE) and 2-methoxyethanol (2ME)	Miscarriages	Electronic and semiconductor workers
Carbon disulfide (CS <sub>2</sub> )	Menstrual cycle changes	Viscose rayon workers
Lead	Infertility, miscarriage, low birth weight, developmental disorders	Battery makers, solderers, welders, radiator repairers, bridge repainters, firing range workers, home remodelers
Ionizing radiation (e.g., X-rays and gamma rays)	Infertility, miscarriage, birth defects, low birth weight, developmental disorders, childhood cancers	Health care workers, dental personnel, atomic workers
Strenuous physical labor (e.g., prolonged standing, heavy lifting)	Miscarriage late in pregnancy, premature delivery	Many types of workers

# Occupational Hazards

**Table 2. Disease-causing agents that are reproductive hazards for women in the workplace**

<b>Agent</b>	<b>Observed effects</b>	<b>Potentially exposed workers</b>	<b>Preventive measures</b>
Cytomegalo-virus (CMV)	Birth defects, low birth weight, developmental disorders	Health care workers, workers in contact with infants and children	Good hygienic practices such as handwashing
Hepatitis B virus	Low birth weight	Health care workers	Vaccination
Human immuno-deficiency virus (HIV)	Low birth weight, childhood cancer	Health care workers	Practice universal precautions
Human parvovirus B19	Miscarriage	Health care workers, workers in contact with infants and children	Good hygienic practices such as handwashing
Rubella (German measles)	Birth defects, low birth weight	Health care workers, workers in contact with infants and children	Vaccination before pregnancy if no prior immunity
Toxoplasmosis	Miscarriage, birth defects, developmental disorders	Animal care workers, veterinarians	Good hygiene practices such as handwashing
Varicella-zoster virus (chicken pox)	Birth defects, low birth weight	Health care workers, workers in contact with infants and children	Vaccination before pregnancy if no prior immunity



# Universal work precaution



# Domestic violence



# Overcoming barriers to preconceptional care



- Education of health personnel
- Education of women of reproductive age about pregnancy
- Emphasize importance of periconceptional counseling
- Use of Mass Media
- Patient Information Leaflets
- Early recognition of high risk women

# Family Hx



- CNS: Epilepsy
- CVS: HTN, Stroke
- Resp sys: Bronchial asthma
- Hepatic: Hepatitis
- Hematopoietic
- Renal
- Endocrine: DM, Thyroid disease
- Autoimmune Disease
- Genetic Disease: Sickle cell anemia, Thalassemia etc

# Personal history



- Diet
- Exercise
- Weight gain/ loss?
- Substance abuse
- Emotional Hx
- No. of sexual partners
- STD, IV drug abuse, Blood transfusion
- Emotional History: Depression, Insomnia, Stress

# Dietary Hx



- Veg/ Non veg
- Caffeinated beverages: colas, tea, coffee
- Chocolates, chips
- Dietary restrictions?

# Substance abuse



- Smoke
- Alcohol
- Recreational drugs
- Self administered medications:  
analgesics

# Past Hx



- Any chronic disease
- Hospitalisation
- Blood transfusion
- Allergies
- Exposure to infectious diseases: TB, HIV, STD



# Investigations



- Complete Blood Count
- Blood sugar
- Rubella, Varicella Antibodies
- VDRL
- Urinalysis

# Management



- Lifestyle modification
- Treat any medical problems
- Emphasise the role of father

# Lifestyle modification



# Vitamin supplementation



- Folic acid 0.4 mg/day
- 1 mg/ day: DM/epilepsy
- 4 mg/ day: Neural tube
- defect

# Immunization



# Environmental hazards



- Household chemicals: Avoid paint thinners, chemical solvents, pesticides, bleaches.
- Radiation
- Anaesthetic gases
- Gardening
- Cats

# Role of Father



# Periconceptional Counseling



- An extension of antenatal care.
- To minimize maternal and fetal risks.
- Prevent birth defects.
- Inform high risk women about the risk and the available options.



# Periconceptional Counseling

- Starts even before marriage.



*Desire pregnancy*

*Don't desire pregnancy*



*Fertile period*

*Lifestyle modification*



*Safe period*

*Contraception*

*Lifestyle modification*