

# Preconception Care

The best time to provide pregnancy counseling is before conception. Counseling at this time affords an excellent opportunity to practice preventive health care. There are many medications, occupational exposures and nutritional habits that may have a significant effect on a fetus during the time of organ development.

Preconception care should include an assessment of health, status of immunity to certain infections and the need for immunization, presence and status of medical conditions, reproductive history, nutritional status and risk of genetic disease.

Medical conditions carry risks for both mother and fetus. Certain medications for high blood pressure, clotting disorders and seizures for example may cause fetal malformations and possibly miscarriage. Women taking certain medications may need to have their medications switched to medications "safe for pregnancy" prior to conception.

Type 2 (insulin-dependent) diabetes is a common medical condition encountered during pregnancy. Preconception glucose control is extremely important in reducing the risk of congenital malformations. A woman should be evaluated for retinopathy (eye disease) and kidney disease before becoming pregnant.

Immunization records should also be reviewed prior to conception. Immunity to rubella should be confirmed and those who are not immune should be vaccinated. Women at risk for hepatitis should also be offered vaccination. Women at risk for tuberculosis, toxoplasmosis, and cytomegalovirus (CMV) infection should also be tested for immunity. HIV testing should be offered and a risk assessment for other STDs done.

A reproductive history helps to identify any conditions that may have contributed to a previous adverse outcome that may be amenable to intervention. Potential contributions to pregnancy loss can be categorized by trimester.

## Potential Causes of Pregnancy Loss

### First Trimester

- Corpus luteum defect
- Antiphospholipid antibodies
- Chromosomal defects

### Second and Third Trimesters

- Chromosomal defect
- Uterine anomalies
- Incompetant cervix
- Antiphospholipid antibodies/lupus anticoagulant
- Placental abruption/Previa
- Illicit drug use
- Maternal illness

Personal and family histories may reveal risk for certain genetic diseases such as autosomal recessive disease, fragile X syndrome, Down syndrome, and multi-factorial conditions. Carrier screening is available for certain autosomal recessive conditions such as Tay-Sachs disease, cystic fibrosis, sickle cell disease, and thalassemias. Women with significant genetic risks may be referred to a genetic specialist for further counseling.

It is now recommended that all women who are capable of becoming pregnant consume 0.4mg of folic acid per day to reduce the risk of neural tube defects (NTDs). Women who have had a previous fetus with a NTD should consume 4mg of folic acid daily for 3 months before

# Preconceptional Care (cont.)

conception and during the first trimester to help prevent recurrence.

Women who have phenylketonuria should be reminded of the need for dietary restriction of phenylalanine during pregnancy to decrease the risk of congenital malformations. Women should also be counseled against over consumption of vitamins, particularly vitamin A because of risk of congenital malformations.

The preconception period is also a great time to provide counseling and intervention for women regarding the harmful effects of tobacco, alcohol, and illicit substances. Alcohol is the leading non-genetic cause of mental retardation.