

EFFECT OF MATERNAL CONDITION IN PRE NATAL CONDITION

**COURSE: CLINICAL ASSESSMENT AND INTERVENTION
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Effect of Maternal condition in prenatal condition

During the course of prenatal development many agent may raise the incidence of deviations or produce malformations in the fetus. Maternal characteristics such as

- Maternal diseases and disorders,
- Drugs taken by mother during pregnancy,
- labor and delivery Medication,
- Maternal diet,
- Maternal Emotional state (Maternal Depression)and
- Maternal age and Parity(the number of children the mother has borne) influence prenatal development.



Maternal Diseases and Conditions

Maternal disease and infections can cause damage by crossing the placenta barrier or they can be destructive during the birth process. Among the maternal diseases and conditions believed to be involved in possible birth defects are rubella, mumps, syphilis, gonorrhoea and cytomegalovirus.

- **Rubella-** Rubella(German measles) is a maternal disease that can damage prenatal development. A mild attack of Rubella may produce mental retardation, blindness, deafness and heart problems.
- **Syphilis-** A Syphilis infection is most harmful during the last 26 weeks of prenatal development and cause eye, ear and brain defects.
- **Mumps-** results in a higher incidence of malformations if contracted in the first trimester rather than later in pregnancy.

Gonorrhea- In gonorrhea, infection may occur during the birth process with resulting damage to the eyes.


Cytomegalovirus or CMV- infection can cause mental retardation and deafness.

Herpes- Herpes virus is one of the most common maternal diseases and can be transmitted to the fetus, leading to deafness, brain swelling, or mental retardation. Women with herpes virus are often encouraged to deliver via cesarean to avoid transmission of the virus.



Maternal Drug Use

The use of substances by the mother can have devastating consequences to the fetus. Smoking is linked to low birth weight, which can result in a weakened immune system, poor respiration, and neurological impairment. Alcohol use can lead to fetal alcohol syndrome, which is linked to heart defects, body malformations, and mental retardation. The use of illicit psychoactive drugs is also linked to low birth weight and neurological impairment.



Drugs use during pregnancy can also influence prenatal development.

- **Thalidomide**- can produce deformities of the arms and legs.
- **Quinine**- Deafness
- **Reserpine**- Respiratory problems.
- **Repeated use of Aspirin**- low birth weight, infants death at the time of birth, poorer motor development and lower intelligence score in early childhood.
- **Heavy Coffee intake**(over 3 cups of coffee per day) is associated with lower birth weight, miscarriage and newborn withdrawal symptoms such as irritability and vomiting.

Illegal or Non Prescribed Drugs

- **Heroin or morphine-** withdrawal symptoms such as irritability, vomiting, trembling, crying, rapid respiration and hyperactivity which may result in death in the first few days of life.
- **Nicotine and Alcohol-** The rate of abortion, prematurity and low birth weight in babies is higher for mothers who smoke or drink than for those who do not.

Sudden infant death syndrome(SIDs) in which infants under the age of 6 months stop breathing and die, is more common in the offspring of mothers who smoke drink and take narcotics (Stechler and Halton, 1952).

Smoking produces a rapid rise in heart rate, blood pressure.

A malformation syndrome called the **fetal alcohol syndrome** has been discovered in one third of infants of alcoholics mothers.. The infants have a high incidence of heart and limb defects, are 20% shorter than average. In addition, many children with the fetal alcohol syndrome exhibit abnormal behavior such as exercise, irritability, hyperactivity, distractibility, and stereotyped motor behavior such as head banging or body rocking. (Streissguth, 1977)

Labor and Delivery Medication

Offspring of mother who received certain drugs during labor show a decrease in cortical activity for several days after birth (Hughes, Ehemann and Brown 1948), disruption in feeding response (Brazelton 1961, kron, stein and Goddard 1966) general neonatal depression (Shrider and Mayer, 1964) and behavioral disorganization. The medication given to the mother after the birth of the child disrupts the reciprocal pattern characteristics of normal early interactions between parents and infants.

Maternal Diet- Deficiency in diet is related to increased rate of abortions, prematurity, still births, infant mortality and physical and neural defects in infants. Also impairment of intellectual development is associated with dietary deprivations




Maternal Emotional State

Women who are anxious and emotionally disturbed during pregnancy, infants are hyperactive, irritable, cry more and have feeding and sleep problems after birth.

Maternal Age and Parity

Women who have their first child when they are over 35 are likely to experience more problems during pregnancy and difficulties and complications than younger women. Problems is more when the mother is bearing her first child.



Thank you

