

PSY242: Prenatal & Neonatal Psychology: NA
Maret: Unit 4: Chapter 7 Fetal Development
Chapter 8 Maternal Development

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March 1, 2023

Required Video: The surprising effects of Pregnancy.

During the course in pregnancy, women experience several changes from their inner organs and outer physical body. The muscles and joints reposition slightly to allow some room as it becomes a bit crowded. The rhythmical beats of the heart accelerate, while blood speeds through the arteries and veins. Every organ in a woman's body changes as soon as the pregnancy begins. The changes are stimulated by the assortment of hormones. A few days after fertilization, the embryo implants in the lining of the uterus. The DNA does not correspond exactly to the mother's DNA. Normally, the immune system identifies it as a trespasser and takes aggressive action against it, as it destroys bacteria and dangerous microbes. Several different types of immune cells preserve the fetus against the charge by other immune cells. The female body produces an antibacterial plug that is formulated with mucus and located in the cervix. The mucus is the shield of protection to elude germs or bacteria and remains secured until labor. As the pregnancy advances, the uterus extends upward and outward with the developing fetus. The female body will generate hormones of progesterone and relaxin and will alert the muscles to unfasten. The kidneys produce extra erythropoietin, a hormone that rises the red blood cell production. The mother's heart works with great effort to pump blood through the body and placenta. Complications during pregnancy are connected to the heart and blood pressure. The fluid retention in the feet and legs are caused by the expansion of the uterus pressing on the veins. If the inferior vena cava is pressed, it can cause the interference of blood returning to the heart and can provoke dizziness. During labor, fluid retention is released when the water breaks and the uterus shrinks back to normal several weeks after labor.

Question 1

In the sixth month of pregnancy, the fetus' skin is reddish and translucent, with a weight estimate of one point two pounds. Because fat is not present, it enables the fetus's skin to be semitransparent. The fetus's sense organs are operating reaching full capacity development. As the eyesight continued to develop in week nine, the fetus' eye lids were closed to serve as a protection. By the end of week twenty-four, the fetus can open its eyes again and can acknowledge flashing lights through its mother's abdominal walls, stimulating a change in behavior. The fetus ears have fully developed permitting the fetus to perceive and acknowledge to multiple different sounds. The fetus can become alarmed with a great volume of noise. It can create the fetus to react in a negative way by intaking excess amniotic fluid, elevate the fetus' heart rate, and cause damage to a long period of time perceiving loud sounds. The fetus' taste buds can determine enjoyable taste as well as bitter taste. It is demonstrated by the fetus facial expressions and in their post-natal experiences. The fetus can differentiate smells in the amniotic fluid by the mother's consumption of nourishments. The fetus is quick to detect a gentle caress touch and will reply in a positive way. Many disagreements have been disputed on the issue if a fetus can experience pain. Several studies have provided evidence that a fetus can experience pain early in the pregnancy. Because structural and hormones mechanisms exist and are exhibit, it reveals that pain sensation can be manifested. The author stated, "At 16 weeks, the insertion of a needle into a fetus will trigger a hormonal stress response (norepinephrine and cortisol) as well as avoidance behavior such as pulling away from needle." (Maret 95). Fetuses by their behavior can react to painful incentives.

3. The medical procedure primarily used to diagnosis a genetic state or chromosomal factors during pregnancy is called an Amniocentesis. A needle is inserted into the womb to collect amniotic fluid through the guidance of an ultrasound and is performed between week fifteen and week twenty in the pregnancy. The amniotic fluid that surrounds the developing fetus contains fetal cells from the skin and from its digestive tract. The amniocentesis dispenses more precise information than chorionic villus sampling, as the mother's cells do not obstruct with the results. Chronic villus sampling performs their procedures between week ten and week twelve in the pregnancy, which can be a bit more at risk for a miscarriage compared to the amniocentesis. One type of prenatal testing and the most popular is the Transcervical CVS. It is a ten-minute painless procedure, where a thin tube is used and placed inside vagina, reaching into the uterus, and a small sample is taken from the villi. Transabdominal CVS is not too popular. The thin tube is placed inside the mother's abdominal wall to obtain a small villi sample. This method is performed on females whose uterus are retroverted. An ultrasound is performed to ensure a heartbeat from the fetus. CVS collects genetic and chromosomal information of the fetus but only for the results to be compared, following the medical procedure of an amniocentesis weeks later. CVS prenatal test cannot diagnosis a neural tube defect in the fetus. The amniocentesis supplies more accuracy than chronic villus sampling, as it provides a finalized inclusive chromosomal and genetic profile from the fetus, with the exception of diagnosing fetal congenital heart disease and cleft palate. Women over the age of thirty-five with a history of genetic or chromosomal disorders or has a family history of birth defects and had a previous pregnancy with a child diagnosed with neural tube defect, are recommended for amniocentesis.

4. Lanugo is the fine thin hair that develops on the fetus' cheeks, shoulders, back, abdominal, arms and legs in the fourth month of pregnancy. The purpose of the lanugo is like a shield, covering most of the fetal body to help maintain the fetus warm. The palms of the hands, side of the fingers, undersurface of fetus' feet, lips, side of toes is not covered by lanugo. In addition, if the fetus is a male, the sex organ is not covered by lanugo. The fine thin hair called the lanugo is abundant on the fetus' trunk, limbs, and face. Fetus fat does not occur until the third trimester; therefore, the lanugo is necessary and with the amniotic fluid, it prevents adhesion within the womb. The lanugo will fall out by the seventh or eighth month in pregnancy and is replaced by normal hair. Mecomium is fetal feces that is composed partly from the lanugo thin hair and from dead cells that contained digestive enzymes and proteins. After the birth of the fetus, the newborn first bowel movement is the mecomium, a dark green color feces. It is normal and expected for the first forty-eight hours after birth. The vernix also called the vernix caseosa, is a greasy white substance that is generated by the sebaceous glands. This occurs between week seventeen and week twenty in pregnancy. The vernix comprises of sebum, an oil created by the sebaceous glands and shed dead skin cells. The fetus' skin is covered by vernix. The purpose of the vernix is to protect the skin of the fetus serving as a lubricant for when the fetus is in movement.

7. Every woman's concern during pregnancy is the worry of the unexpected physical changes and the additional extra weight gain. But dieting during pregnancy is not suitable for the mother nor for the growing fetus. Pregnant women are advised to consume between 1800 and 2800 calories per day. A woman's body processes absorbed foods or protein converting it into energy. If additional calories are not consumed, then there is less protein in the mother's blood for the growing fetus to use for its developing body tissues and muscles. The importance of the extra calories is what the pregnant mother is consuming. Avoidance of processed foods and foods with low nutrition value should be considered. The best proteins to consume are meat, milk, eggs, cheese, poultry, and fish, except fish high in mercury. Raw seafood like sushi, oysters and clams are not recommended for their known risk factor of bacterial and viral pathogens. Proteins contain amino acids which help the mother's and the fetus' developing body to grow and repair. Another source of protein which is beneficially in pregnancy are beans and nuts. Good carbohydrates such as fruits, vegetables and whole grains are necessary during pregnancy because of their vitamins, minerals, and fiber. In addition, they provide natural energy needed for functioning. Good fats or HDL/ high density lipoproteins are recommended to be consumed in pregnancy, such as avocados, almonds, peanuts, and olives. Pregnancy birth defects and damages have been related to low levels of fat. However, foods that promote LDL/ lower density lipoproteins, can create a rise in cholesterol levels which puts the mother at risk for hypertension, atherosclerosis, and pre-eclampsia. Vitamins C and E can diminish the increased levels of cholesterol during pregnancy. Folate or folic acid is necessary and prevent open bifida. Iron and calcium are beneficial in pregnancy to produce blood cells and fetal bones and teeth.

8. Pregnant women can experience feelings of nausea, vomiting and lack of throwing up are called morning sickness, which can commence during week six and sometimes finish at week thirteen. NVP can occur in the morning, afternoon or in the evening. It does not have a specific time and can make pregnant women feel sick, as the unpleasantness of morning sickness can interfere with daily routine activities. Some NVP can be induced by certain odors like strong perfume scents. I remember during my first pregnancy; I could not smell the perfume White Diamonds made by Elizabeth Taylor. It's as if a pregnant women's sense smell becomes so sensitive, that certain odors like foods, spices, and condiments can also cause NVP. It is recommended for pregnant women to consume saltine dry crackers to ease the motions of morning sickness. Between the year 1950 and 1960, Thalidomide was prescribed as a medicine treating pregnant women who suffered with morning sickness. It was later discovered that the medicine produced birth defects and impacted 10,000 babies were born with numerous malformations. The benefit of NVP is that it discharges food consisting of dangerous toxins, microorganisms and can activate aversions to foods for the duration of the pregnancy. For example, several meats, poultry, eggs, strong tasting vegetables, alcohol and caffeinated drinks are generally cited aversions that carry pathogens and toxins. Hyperemesis Gravidarum is the severe condition of NVP during pregnancy. Apart from the current symptoms of NVP, pregnant women can experience dizziness, faint spells, dehydration, and loss of nutrients. To treat the serious condition of hyperemesis gravidarum, hospitalization is required to treat the pregnant patient with IV fluids and anti-nausea medication.

13. In 1872, the English obstetrician, John Braxton Hicks, was the pioneer to delineate between a woman's false contractions and real contractions which indicate the state of labor. Braxton Hicks contractions are also known as false labor pains. It is the mild, irregular, tightening experience on the woman's abdomen during pregnancy. The Braxton hicks usual last less than sixty seconds. While there are pregnant women who do experience Braxton hicks, and express their experience is uncomfortable but hardly painful, other pregnant women do not experience Braxton hicks at all. Braxton Hicks contractions is the practice of contractions to prepare the uterine muscles for the real birth contractions for the actual event of labor. On most occasions, the two types of contractions can be distinguished from each other. For example, Braxton hicks or false labor, the contractions are consistent lasting between thirty and sixty seconds, while real labor contractions slowly gets stronger. The Braxton hicks contractions are experienced on the front of a woman's body, while real contractions are experienced all over the woman's body. The Braxton hicks contractions are at distance from one another, while the real contractions slowly get close to each other. When a pregnant woman experiences Braxton hicks, she is able to walk to decrease its effect. But when a pregnant woman is experiencing real contractions, her ability to walk, if possible, intensifies her contractions to a greater level. Lastly, Braxton hicks contractions do not carry on or continue for a long period of time. However, real contractions do last longer.

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