➢ CHANGES IN THE MOTHER DURING PREGNANCY

1. Increased caloric intake

2. Extra protein intake to help build the structures of the embryo

3. Extra calcium intake to help build fetal bones

4. Extra folic acid (folate) to prevent neural tube defects such as spina bifida (failure of the neural tube to close in spinal cord region) or anencephaly (failure of the neural tube to close in the brain region = baby is born with only the most primitive portions of the brain and is not self-aware or conscious)

5. B vitamins for increased metabolism

6. The average woman should gain about 25 pounds during her pregnancy: 11 pounds of fat, 3 pounds increase size of breasts and uterus, 2 pounds for placenta, a pound of increased maternal blood volume, about a pound of amnionic fluid, and an average 7 pound fetus.

7. Exercise is generally healthy and not harmful depending on the physical condition of the mother at the start of the pregnancy; moderate exercise can increase birth weight

8. Sexual intercourse during pregnancy rarely presents a danger to the mother or fetus, but it should be avoided if there is excessive uterine bleeding as the embryonic membranes may be ruptured. Air should not be blown into the vagina during oral sex as it could introduce air into the mother's bloodstream (possible embolism). A sex counselor or doctor may recommend certain sexual positions which may be more comfortable or safer during pregnancy.

1. For the mother, there is about a 25% increase in respiratory function and 25% increase in erythropoiesis (red blood cell formation) during pregnancy to support the metabolic needs of the developing fetus.

2. Maternal fetal recognition = the rescue of the corpus luteum by the production of hCG starting within 48 hours of implantation. hCG replaces LH to maintain progesterone secretion during the first trimester. After this time, progesterone is produced by the maternal-fetal-placental unit. Progesterone is required to maintain the endometrium in a nutrient rich secretory state and progesterone prevents contractions of the myometrium to keep the fetus in the womb.

3. The estrogen produced during pregnancy from the placenta is primarily estriol.

4. See figure 8-17 in the text with regard to steroid production by the fetal-placental unit.

5. Additional hormones produced by the placenta include: hCG, Prolactin, hPL (human placental lactogen) which causes an increase the maternal and fetal blood sugar and plays a role in lactation (milk production). The corpus luteum and the placenta secrete relaxin.

6. Relaxin levels rise near the end of pregnancy to relax the pubic symphysis (the connective tissue between the pubic bones of the pelvis) to increase the size of the pelvic outlet. Relaxin also helps to relax the cervix leading to dilation of the cervix during early

labor.