EKEH CHERECHI

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THE FEMALE BODY ADAPTATION TO PREGNANCY :

Maternal physiological changes in pregnancy are the adaptations during pregnancy that a woman's body undergoes to accommodate the growing embryo or fetus. These physiologic changes are entirely normal, and include behavioral (brain), cardiovascular (heart and blood vessel), hematologic (blood), metabolic, renal (kidney), posture, and respiratory (breathing) changes. Increases in blood sugar, breathing, and cardiac output are all expected changes that allow a pregnant woman's body to facilitate the proper growth and development of the embryo or fetus during the pregnancy. The pregnant woman and the placenta also produce many other hormones that have a broad range of effects during the pregnancy. Pregnancy involves remarkable orchestration of physiologic changes. The kidneys are central players in the evolving hormonal milieu of pregnancy, responding and contributing to the changes in the environment for the pregnant woman and fetus. The functional impact of pregnancy on kidney physiology is widespread, involving practically all aspects of kidney function. The glomerular filtration rate increases 50% with subsequent decrease in serum creatinine, urea, and uric acid values. The threshold for thirst and antidiuretic hormone secretion are depressed, resulting in lower osmolality and serum sodium levels. Blood pressure drops approximately 10 mmHg by the second trimester despite a gain in intravascular volume of 30% to 50%.