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**HUMAN CHRIONIC GONADOTROPIN:** Human chorionic gonadotropin (hCG) is a hormone produced by cells surrounding a growing embryo, which eventually forms the placenta after implantation. The presence of hCG can be detected in your body as early as 1 week after an egg is fertilized, which forms the basis of most over pregnancy tests. hCG also ensures the corpus leteum, a temporary endocrine gland a woman’s body produces after ovulation, continues to produce progesterone during the first trimester of pregnancy. Low concentrations of hCG are also produced by the pituitary gland, thus, men and non-pregnant women still have detectable levels of hCG throughout their lives. The levels of hCG increases every two to three days as your embryo continues to develop. hCG levels peak around sixth week of pregnancy, afterwards, hCG will be found in the body, but levels will begin to decrease. Once placenta is fully formed, it serves as a source of progesterone production and assistance from hCG to support ovarian function is no longer essential. Very high levels of hCG are rare. In these cases, it may be a sign of molar pregnancy, which is an abnormal growth of cells that usually develop in the placenta. In people who are not pregnant, high hCG levels may be due to certain cancers such as breast, kidney and lung. Low lwvwls of hCG may be a sign of a miscarriage or another problem within the pregnancy, such as the embryo implanting outside of the uterus.

**OESTROGEN:** Oestrogen or estrogen is the primary female sex hormone. It is responsible for the development and regulation of the female reproductive system and secondary sex characteristics. Both men and women produce oestrogen but it is more in females. Oestrogen is produced by the hormonal endocrine system and moves through the bloodstream. Oestrogen is needed for puberty, the menstrual cycle, pregnancy, bone strength and maintaining normal cholesterol levels. Oestrogen affects the brain, heart and skin. Oestrogen levels change according to where you are in your menstrual cycle and also a stage in life. Oestrogen levels are highest in the middle of your cycle and lowest during your period. At menopause, oestrogen levels begin to fall. Having too much oestrogen can lead to minor problems such as acne and constipation or more serious conditions such as breast cancer. Having too little oestrogen can lead to poor bone growth and menopausal symptoms.

**PROGESTERONE:** Progesterone is an endogenous steroid and progestogen sex hormone involved in menstrual cycle, pregnancy and embryogenesis of humans and other species. Progesterone is a hormone released by the corpus luteum in the ovary. It plays important roles in the menstrual cycle and in maintaining the early stages of pregnancy. It may also be involved in the growth of certain cancers. The progesterone prepares the body for pregnancy in the event that the released egg is fertilised. If the egg is not fertilised, the corpus luteum breaks down, the production of progesterone falls and a new menstrual cycle begins. If the egg is fertilised, progesterone stimulates the growth of blood vessels that supply the lining of the uterus to allow the fertilised egg to implant and helps to maintain the endometrium throughout the pregnancy. Although the corpus luteum in the ovaries is the major site for the production of progesterone in humans, progesterone is also produced in smaller quantities by the ovaries themselves, the adrenal glands and during pregnancy, the placenta.

**HUMAN PLACENTAL LACTOGEN:** Human placental lactogen (hpl) is a polypeptide hormone, the human form of placental lactogen. Its structure and function are similar to human growth hormone. It modifies the metabolic state of the mother during pregnancy to facilitate the energy of the foetus. hPL has anti-insulin properties. hPL is a hormone secreted by the syncytiotrophoblast during pregnancy. Like human growth hormone, hPL is encoded by genes on chromosome.