CYCLIC CHANGES IN THE CERVIX

Thirty parous ewes were divided into six groups and sacrificed on day 0 (first day of estrus), 1, 2, 10, 15 or 16 of the estrous cycle. The cervices were removed immediately and processed for examination with the scanning electron microscope. Observation of the tissues reveals that the surface of the cervix is highly convoluted, which results in the formation of numerous folds or crypts. Two forms of columnar epithelial cells, a ciliated and a non-ciliated cell with microvilli, line the luminal surface of the cerix in the day 10. However, on day 15, 2 days before estrus, the non-ciliated cells differentiate into two morphologically distinct types of secretory cells. One type forms when the apex of the non-ciliated cell dilates outward into the lumen of the cervix. Concurrent with apical enlargement, the microvilli are lost and the limiting cell membrane becomes smooth. The other type of cell is characterized by only a slight apical swelling. Consequently, remnants of microvilli along with secretory granules can be observed on the limiting membrane of this cell. Both cells release a particulate component, which is believed to be a precursor of mucus, into the lumen of the cerix. These particles undergo a series of morphological transformations to form a fibrillar layer, generally referred to as 'cervical mucus', that covers the epithelial surface at estrus. One to 2 days following the onset of estrus, the fibers become more closely assoicated with amorphous material that begins to coagulate, thereby revealing the underlying ciliated and non-ciliated cells that characterize the cervix of the luteal-phage ewe.

CYCLIC CHANGES IN THE BREAST DURING MENSTRUAL CYCLE

Each month, women go through changes in the hormones that make up the normal menstrual cycle. The hormone estrogen is produced by the ovaries in the first half of the menstrual cycle. It stimulates the growth of milk ducts in the breasts. The increasing level of estrogen leads to ovulation halfway through the cycle. Next, the hormone progesterone takes over in the second half of the cycle. It stimulates the formation of the milk glands.These hormones are said to be responsible for the cyclic changes many women feel just before menstruation.These may include pain,sore, swelling.many women also experience breasts texture during menstruation whereby their breasts becomes lumpy.

EXPLICATE MENSTRUAL CYCLE

Each month during the years between puberty and menopause, a woman’s body goes through a number of changes to get it ready for a possible pregnancy. This series of hormone-driven events is called the menstrual cycle.

During each menstrual cycle, an egg develops and is released from the ovaries. The lining of the uterus builds up. If a pregnancy doesn’t happen, the uterine lining sheds during a menstrual period. Then the cycle starts again.

A woman’s menstrual cycle is divided into four phases:

menstrual phase

follicular phase

ovulation phase

luteal phase

The length of each phase can differ from woman to woman, and it can change over time.

1. MENSTRUAL PHASE

The menstrual phase is the first stage of the menstrual cycle. It’s also when you get your period.

This phase starts when an egg from the previous cycle isn’t fertilized. Because pregnancy hasn’t taken place, levels of the hormones estrogen and progesterone drop.

The thickened lining of your uterus, which would support a pregnancy, is no longer needed, so it sheds through your vagina. During your period, you release a combination of blood, mucus, and tissue from your uterus.

You may have period symptoms like these:cramps ,tender breast,bloating,mood swings,irritability,headaches,tiredness,low back pain

On average, women are in the menstrual phase of their cycle for 3 to 7 days. Some women have longer periods than others.

2.FOLLICULAR PHASE.

The follicular phase starts on the first day of your period (so there is some overlap with the menstrual phase) and ends when you ovulate.

It starts when the hypothalamus sends a signal to your pituitary gland to release follicle-stimulating hormone (FSH). This hormone stimulates your ovaries to produce around 5 to 20 small sacs called follicles. Each follicle contains an immature egg.

Only the healthiest egg will eventually mature. (On rare occasions, a woman may have two eggs mature.) The rest of the follicles will be reabsorbed into your body.

The maturing follicle sets off a surge in estrogen that thickens the lining of your uterus. This creates a nutrient-rich environment for an embryo to grow.

The average follicular phaseTrusted Source lasts for about 16 days. It can range from 11 to 27 days, depending on your cycle.

3.OVULATION PHASE.

Rising estrogen levels during the follicular phase trigger your pituitary gland to release luteinizing hormone (LH). This is what starts the process of ovulation.

Ovulation is when your ovary releases a mature egg. The egg travels down the fallopian tube toward the uterus to be fertilized by sperm.

The ovulation phase is the only time during your menstrual cycle when you can get pregnant. You can tell that you’re ovulating by symptoms like these:

a. slight rise in basal body temperature

b.thicker discharge that has the texture of egg whites

Ovulation happens at around day 14 if you have a 28-day cycle — right in the middle of your menstrual cycle. It lasts about 24 hours. After a day, the egg will die or dissolve if it isn’t fertilized.

4.LEUTAL PHASE

After the follicle releases its egg, it changes into the corpus luteum. This structure releases hormones, mainly progesterone and some estrogen. The rise in hormones keeps your uterine lining thick and ready for a fertilized egg to implant.

If you do get pregnant, your body will produce human chorionic gonadotropin (hCG). This is the hormone pregnancy tests detect. It helps maintain the corpus luteum and keeps the uterine lining thick.

If you don’t get pregnant, the corpus luteum will shrink away and be resorbed. This leads to decreased levels of estrogen and progesterone, which causes the onset of your period. The uterine lining will shed during your period.

During this phase, if you don’t get pregnant, you may experience symptoms of premenstrual syndrome (PMS). These include:

Bloating,breast swelling, pain, or tenderness,mood changes,headache,weight gain,changes in sexual desire,food cravings,trouble sleeping

The luteal phase lasts for 11 to 17 days. The average lengthTrusted Source is 14 days.