

# The Uterine Cervix

## Where is the cervix ?

The cervix is the muscular canal at the lower end of the uterus, the top of which opens into the uterine cavity and its lower end into the vagina. The cervix is about 2cms long, and is closed for most of the menstrual cycle, (Fig.11-1, Fig.11-2).

## The uterine cervix – source of cervical mucus:

Cervical mucus is secreted in cells which lie in crypts in the endocervix, (lining of the cervix). The crypts are small clefts in the endocervix. The secretion of cervical mucus is regulated by the ovarian hormones oestrogen and progesterone.

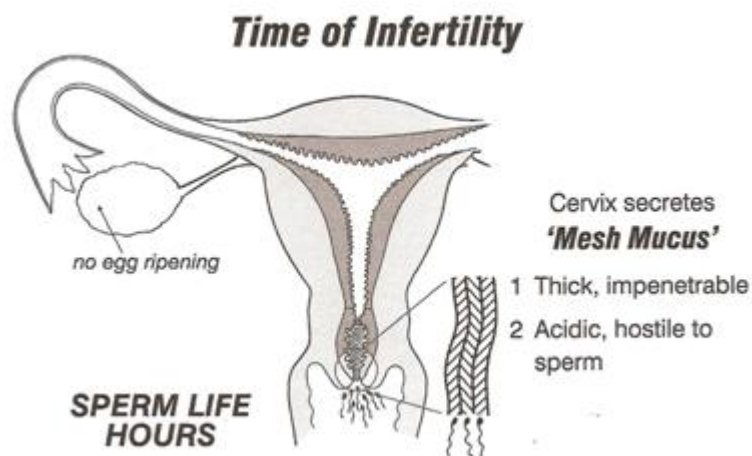
Under progesterone stimulation during the infertile phase of the cycle, a thick viscous mucus is secreted which fills and occludes the cervical canal and there is no vaginal discharge. (gestogenic G mucus).

Under oestrogen stimulation during the fertile phase of the cycle the cervical mucus is a copious, watery, clear, alkaline vaginal discharge which is stretchy and elastic (oestrogenic L and S mucus).

## How cervical mucus functions as a biologic valve:

The two types of cervical mucus (A) **gestogenic** and (B) **oestrogenic**, control entry of sperm to the cervix/uterus and in this way act as a biologic valve.

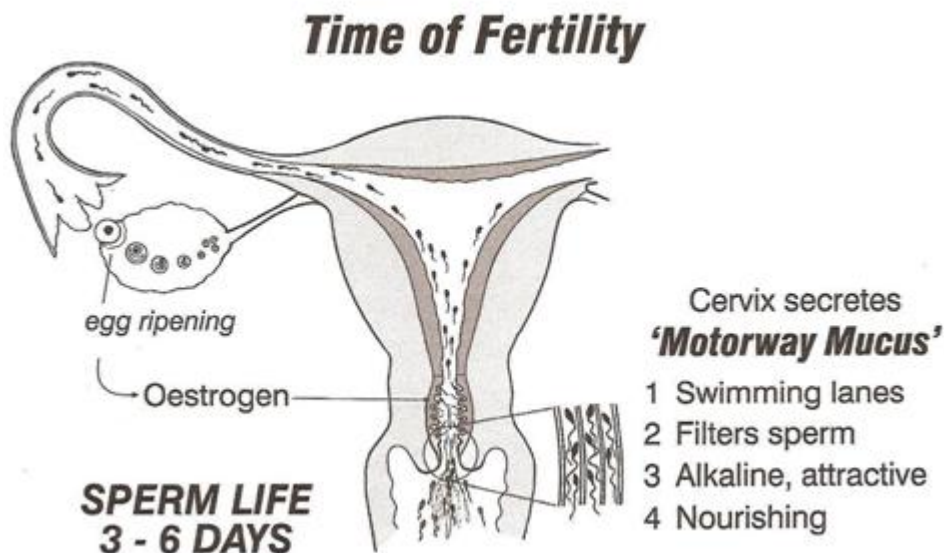
- (A) **Gestogenic mucus** (from progesterone stimulation) is thick and viscous and forms a plug in the cervix. This acts as a complete barrier to the entry of sperm into the uterus during the infertile phase of the cycle i.e. **the biologic valve is closed** in the infertile phase.



(Fig.11-1)

**Fig. 11-1; The biologic valve is closed, Fig. 11-1:** In the infertile phase of the cycle the cervical canal is occluded by a thick viscid plug of mucus due to progesterone stimulation of the cells in the cervical crypts- **gestogenic mucus**. (Fig.11-1 from the Fertility Education Trust UK, 2003, is used with the kind permission of Colleen Norman.)

- **(B) Oestrogenic fertile-type mucus** transports and nourishes sperm. This is an essential function for fertility, as without fertile-type mucus the woman could not become pregnant. Sperm is transported into the uterus by S mucus, i.e. **the biologic valve is open** during the fertile phase. (Fig.11-2)



**Fig. 11-2; The**

**biologic valve is open:** In the fertile phase of the cycle the cervical os is open and under oestrogen stimulation the cells in the cervical crypts secrete fertile-type mucus which is clear, stretchy and looks like raw-egg-white, **Oestrogenic S mucus**. (Fig. 11-2 from the Fertility Education Trust UK, 2003, is used with the kind permission of Colleen Norman.)

The fertile phase of the cycle is identified by the presence of the mucus symptom, i.e. the vaginal discharge of mucus both seen and felt by the woman at the vulva (i.e. the opening of the vagina). The cervix is also open during menstruation for exit of the menstrual bleed, and at the end of pregnancy for the birth of the baby.

**Note:** The beginning and end of the fertile-phase are defined by the rules of the natural family planning method used by the woman.