

# Where is cervical mucus secreted?

## What is cervical mucus?

Cervical mucus is a hydrogel consisting of 90-95% water and a number of other constituents,<sup>1</sup> the water content rising to 98-99% prior to ovulation 'peak' day. The other constituents include cervical mucin, inorganic salts such as NaCl, and low molecular weight organic compounds e.g. free simple sugars such as glucose, maltose and mannose.<sup>2</sup> Cervical Mucin, a carbohydrate-rich glycoprotein, is the most important constituent of cervical mucus and accounts for most of its physical and biologic properties.<sup>2</sup>

## Where is mucus secreted ? :

The mucous membrane lining the cervix (endocervix) contains many clefts or fissures called crypts and the glands in these crypts secrete cervical mucus (Fig 11-9). The ovarian hormones oestrogen and progesterone from the developing follicle in the ovary, regulate the secretion of mucus.

## Is there just one type of mucus? :

There are **two** main types of cervical mucus:

- **Gestogenic** mucus secreted under progesterone stimulation is called **G mucus**, and is present in the **infertile phases** of the cycle.
- **Oestrogenic** mucus is secreted under oestrogen stimulation.<sup>5</sup> Oestrogenic cervical mucus is a **mixture of three subtypes** each with a different viscosity, viz. L, S, P mucus\* and is present in the **fertile phase** of the cycle. The proportions of the three subtypes of oestrogenic mucus also vary during the cycle, each with its distinct qualities which the woman can identify by its sensation/ appearance at the vulva.

\* G mucus stands for 'gestogenic' as progesterone stimulates its secretion, the letters L, S refer to the shapes of the mucus crystals when air-dried on a slide; L ('loaf'), S ('string' also called 'sperm-carrier'), P ('peak', as it is present on peak day).

## Where in the cervix is each type of mucus secreted ?

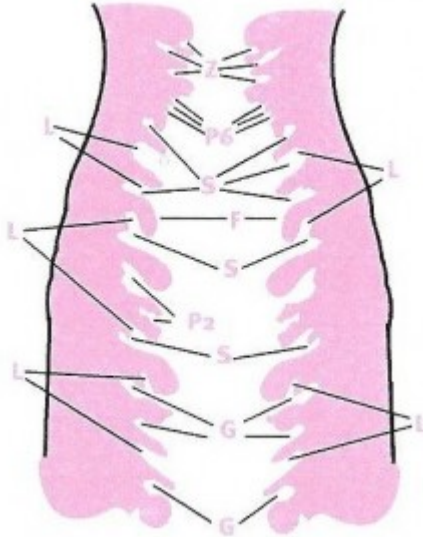
The gestogenic mucus and the three subtypes of oestrogenic mucus are secreted from separate groups of crypts in the cervical canal, that is to say that **each mucus type** comes from a **special zone** of the cervix.<sup>3</sup>

## Where are the different crypt zones located ? (Fig. 11-9)<sup>4</sup>

- **Gestogenic G crypts** : The G-secreting units are at the lower opening of the cervix, (external os).
- **Oestrogenic L crypts** : The L-secreting units are distributed along the whole cervical canal, but dominate its lower half.
- **Oestrogenic S crypts**: The S-secreting units predominate in the upper

half of the canal.

- Oestrogenic **P2 crypts**: The P2 units are in mid cervix and upper half of the cervix.
- Oestrogenic **P6 crypts**: The P6 unit is in the isthmus: P6 mucus is secreted in the upper cervical canal at its junction with the body of uterus and this area is called the isthmus.



**Fig. 11-9; Crypt Zones in Cervix:** Longitudinal section of the **cervix** showing the location of the crypt zones in the endocervix where the different types of mucus are secreted. (The NFPTAI acknowledge the generosity of Prof. Erik Odeblad in making Fig. 11-9, diagram of the cervical crypt zones available on the internet).

#### References:

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