

Accessory sex glands

The accessory glands are involved in **creating sperm**. They produce sugars, which serve as a source of energy for the sperm. They also create proteins that affect the binding abilities of sperm. And last but not least, they also have a lubrication function.

The accessory gonads include: **vesiculae seminales**, **prostate** and **glandulae bulbourethrales**.

Vesiculae seminales

They are two 15 cm long twisted tubes. They are located laterally from the ampullae of the vas deferens. Their wall has three layers – mucosa, muscle and adventitia.

The mucous membrane is lined by secretory multi-rowed cylindrical epithelium. It has features characteristic of protein-secreting cells.

The secretion of the vesicular glands makes up almost seventy percent of the ejaculate. It contains a lot of carbohydrates (the most is fructose), which provide the sperm with *energy for movement*. Furthermore, there is a significant proportion of proteins for **sperm activation**.

Bladder gland secretion is dependent on testosterone.

Prostate

It is a chestnut-sized gland located at the point where the urethra separates from the bladder. It is a grouping of 30-60 branched tuboalveolar glands. The glands are surrounded by fibromuscular stroma. Around the prostate is a sheath rich in smooth muscle and elastic fibers.

According to their location, the glands are divided into:

- mucosal – their overgrowth is the most common cause of benign hypertrophy;
- submucosal and main – tend to be the source of malignant cells in prostate cancer.

The lumen of the glands contains corpora amylacea - prostatic stones. It is a condensed secretion whose *function is unknown*. Their number increases with age.

Prostatic secretion contains acid phosphatase, amylase, fibrinolysin and citric acid.

 For more information see *Prostate*.

Glandulae bulbourethrales

They are also called Cowper's glands. It is a pea-sized paired organ (tuboalveolar glands) located on the sides of the corpora cavernosa. Their outlet opens into the urethra. The secretion has a *lubricating function*.

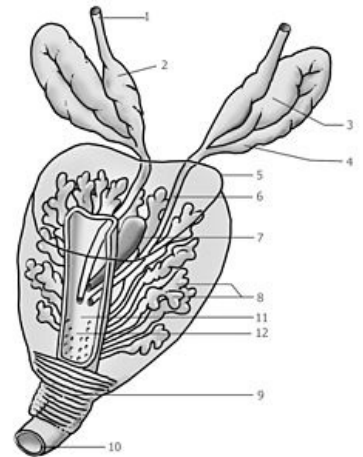
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References

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Prostate and accessory glands: 1. ductus deferens, 2. ampulla ductus deferentis, 3. vesiculae seminales, 4. excretory part of vesiculae seminales, 5. prostate, 6. ductus ejaculatorius, 7. utriculus prostaticus, 8. glandular part of the prostate, 9. sphincter of the urethra, 10. urethra, 11. colliculus seminalis, 12. crista urethralis