

# Vas deferens

The vas deferens (also known as "ductus deferens") forms the boundary of the continuation of the "cauda epididymidis" duct, and during ejaculation it carries sperm into the urethra. The diameter of the vas deferens is about 3 mm, in the proximal part it is twisted, then straight. The lumen of the vas deferens is narrow, about **0.5 mm**, because most of the diameter falls on the thickness of the muscle layer of the wall.

## Location and syntopy of the vas deferens

From the tail of the epididymis, the vas deferens runs cranially along the posterior edge of the testis, medially from the body of the epididymis. Above the **extremitas superior testis** it becomes part of the funiculus spermaticus = spermatic cord, continuing to the canalis inguinalis. During the passage in the canalis inguinalis, the vas deferens with the accompanying *a. ductus deferentis* is separated from the rest of the structures from the *funiculus spermaticus*. It turns around the *a. epigastrica inferior*, crosses the *vasa iliaca externa* and turns towards the entrance of the small pelvis. In the small pelvis, it crosses the *chorda a. umbilicalis*, the *vasa et n. obturatorius*, the ureter, and turns to the back of the urinary bladder. It runs medially from the seminal vesicles, the outlets of which connect to the injection canal (**ductus ejaculatorius**). The *injection ducts* pass through the prostate and open at the **coliculus seminalis** urinary tube, in the course behind the *fundus vesicae* the vas deferens widens, has a twisted shape with meandering bulges. This expansion is referred to as **ampulla ductus deferentis**, **trigonum interampullare** - the space defined by the two *ampullae ductus deferentis* on the bladder, well palpable per rectum.

## Wall construction

### Tunica mucosa

Mucous membranes forming longitudinal ridges (except for the ampullary section - there they have a reticular arrangement). Covered by a **cylindrical, double-layered epithelium**, composed of cylindrical cells (proximally without stereocilia, distally with stereocilia) and basal cells. There are a large number of secretory active cells in the epithelium. *Lamina propria mucosae* - a thin layer of thin collagenous tissue that contains many elastic fibers.

### Tunica muscularis

A thick layer of muscle, which consists of 2 or 3 layers of smooth muscle cells. We distinguish a deeper **circular** and a more superficial **longitudinal** arrangement of muscle fibers. In the proximal part there is also a third longitudinal layer. Layers are imprecisely bounded. By shrinking, it ensures the *transport of sperm* into the urethra.

### Tunica adventitia

A thin fibrous layer on the surface that passes into the funiculus spermaticus ligament.

## Vascular supply

### Arteries

Directly from *a. umbilicalis* or *a. vesicalis superior* comes off '**a. ductus deferentis**.'

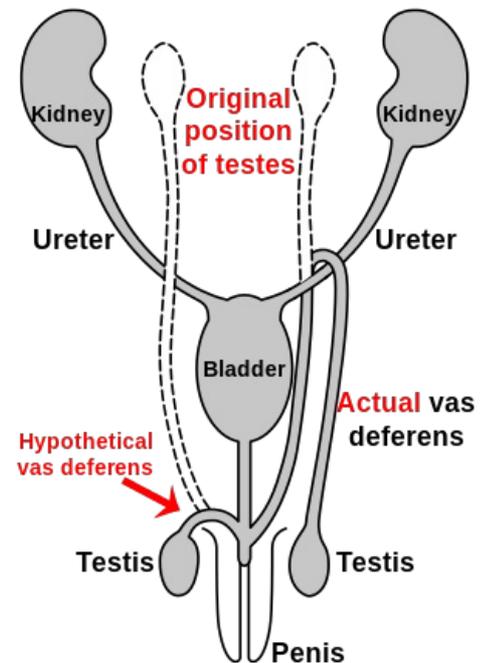
### Veins

They drain into the **plexus pampiniformis** and into the **plexus venosus vesicalis** and the **plexus venosus prostaticus**.

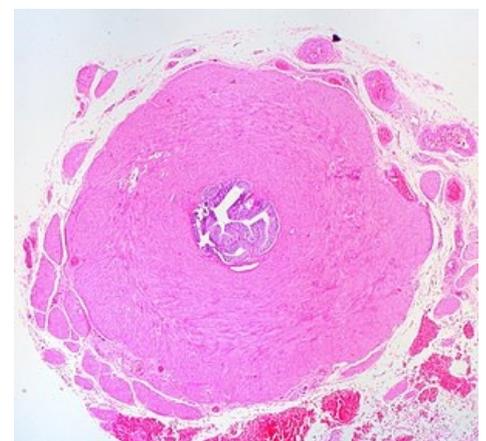
### Blood vessels disappear

They lead to **nodi lymphatici iliaci externi et interni**

### Innervation



The route of the vas deferens from testis to the penis.



Normal Vas Deferens

Branches of the '**plexus deferentialis**' come via the *plexus hypogastricus inferior*. They contain fibers sympathetic (*nn. splanchnici lumbales*) and parasympathetic component from spinal cord segments S<sub>2</sub>-S<sub>4</sub>.

## Links

### Related Articles

- Male genital tract
- Seminal cord

### References

- ČIHÁK, Radomír. *Anatomy 1*. 2. edition. Prague : Grada, 2001. 497 pp. ISBN 80-7169-970-5.