

Weibliche Geschlechtsorgane
Menstruationszyklus

Männliche Geschlechtsorgane
Becken

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Geschlechtsorgane

1. Gonaden – produzieren Geschlechtszellen:

Hoden – kontinuierlich, viel

Eierstock – zyklisch, wenig (~ 400),

2. Ausführungsgänge – mit Schleimhaut bedeckt:

♂ **Wolff-Gang**: paarig

♀ **Müller-Gang** – unterer Teil verschmelzt miteinander → Gebärmutter

Aufgabe:

♂ Ausführungsgang für Spermien

♀ Versorgung und Schutz von Fetus

3. Drüsen: Hauptmasse von Samen

4. Copulationsorgan

Maybe vagina jokes are
funny and I'm just ovary
acting.



somee cards
user card

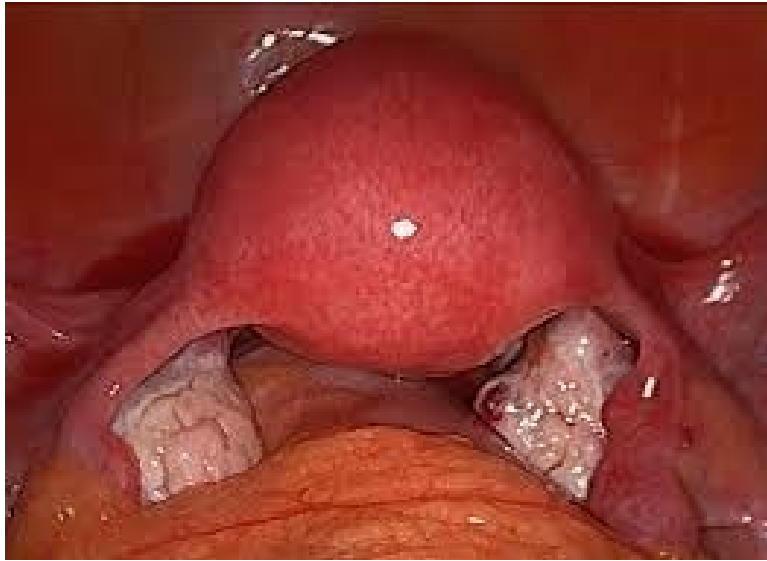
Eierstock
(*Ovarium*)

Eierleiter
(*Tuba uterina*)

Gebärmutter
(*Uterus*)

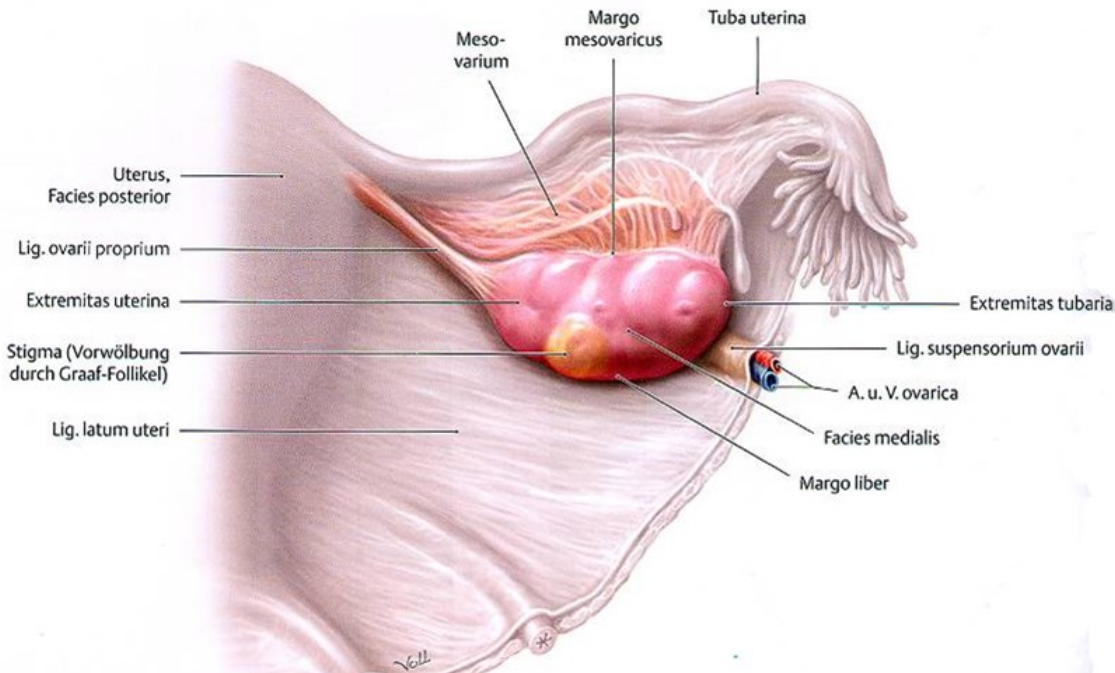
Scheide
(*Vagina*)

Eierstock (*Ovarium*)



- mandelförmig
- „intraperitoneal“ – mit Bauchfell (*Peritoneum*) bedeckt

Blutversorgung:
A. ovarica





1200 μ m

Peritoneales Epithelium – einschichtiges kubisches Epithel

Tunica albuginea - Bgw

Cortex ovarii - Rinde

Medulla ovarii - Mark

Eizellbildung

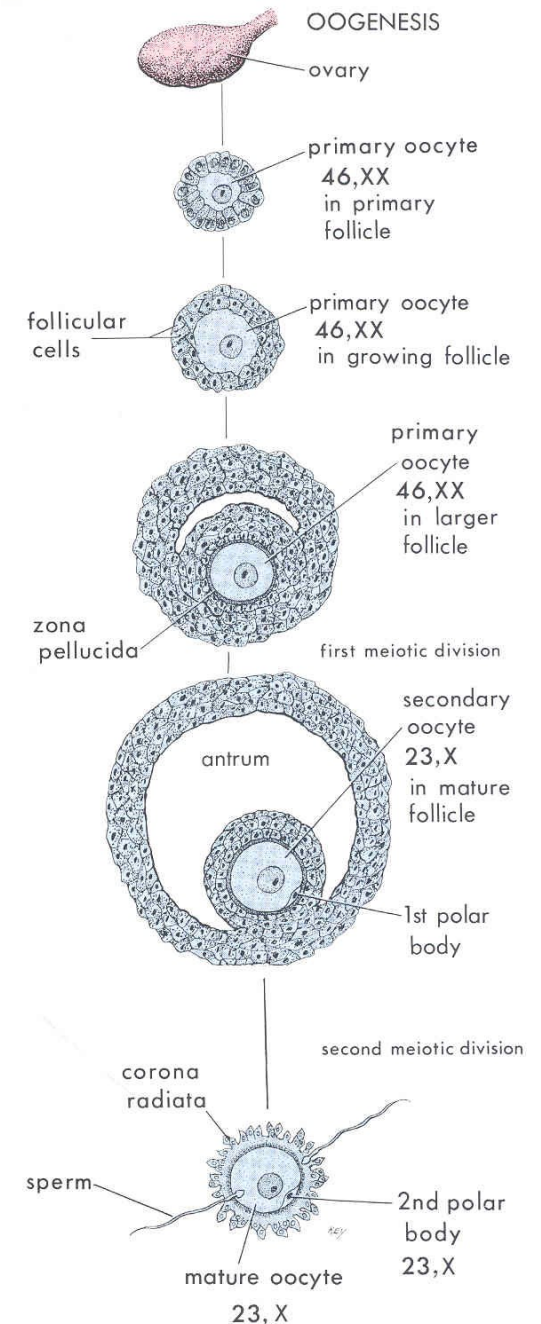
Oogenese:

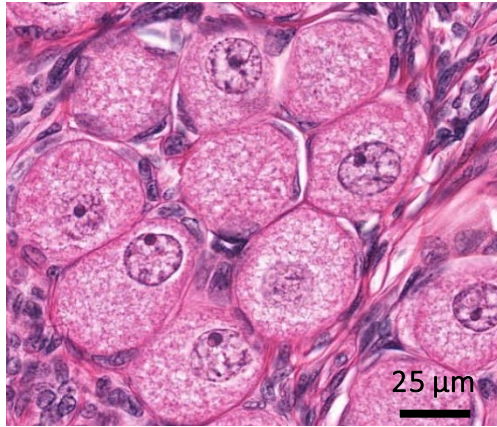
Vermehrungsperiode

während der Fetalentwicklung abgeschlossen
Urkeimzellen = Oogonien (1 Million)

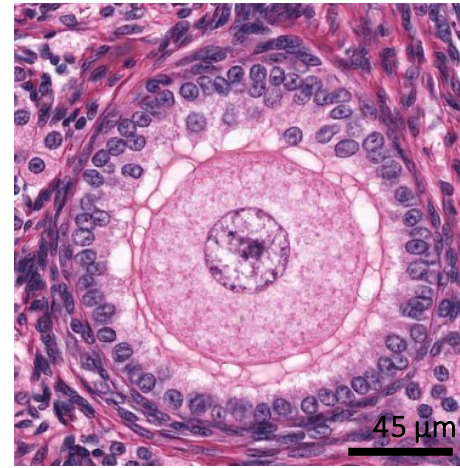
Reifungsperiode

primäre Oozyten (400.000) – 1. Reifeteilung
sekundäre Oozyten – 2. Reifeteilung wird nur bei
Befruchtung beendet

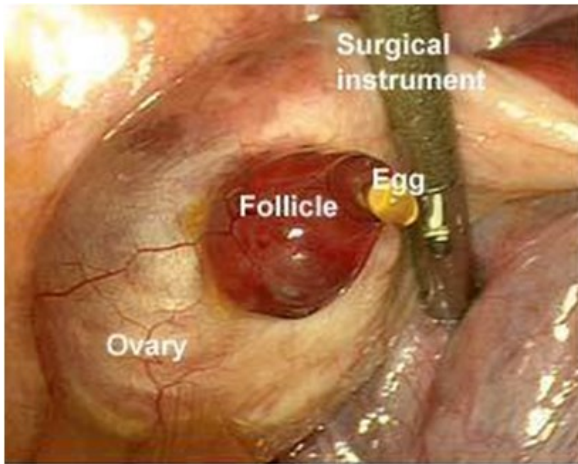




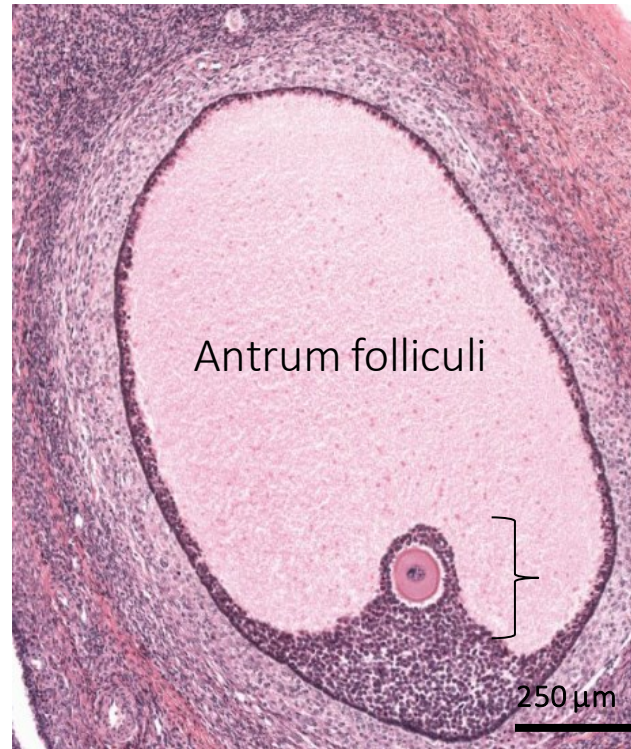
Primärfollikel



Sekundärfollikel



Tertiärfollikel/Bläschenfollikel
 Sprungreifer/Graafscher Follikel
 Hormonproduktion: Follikelhormone,
 Östrogene

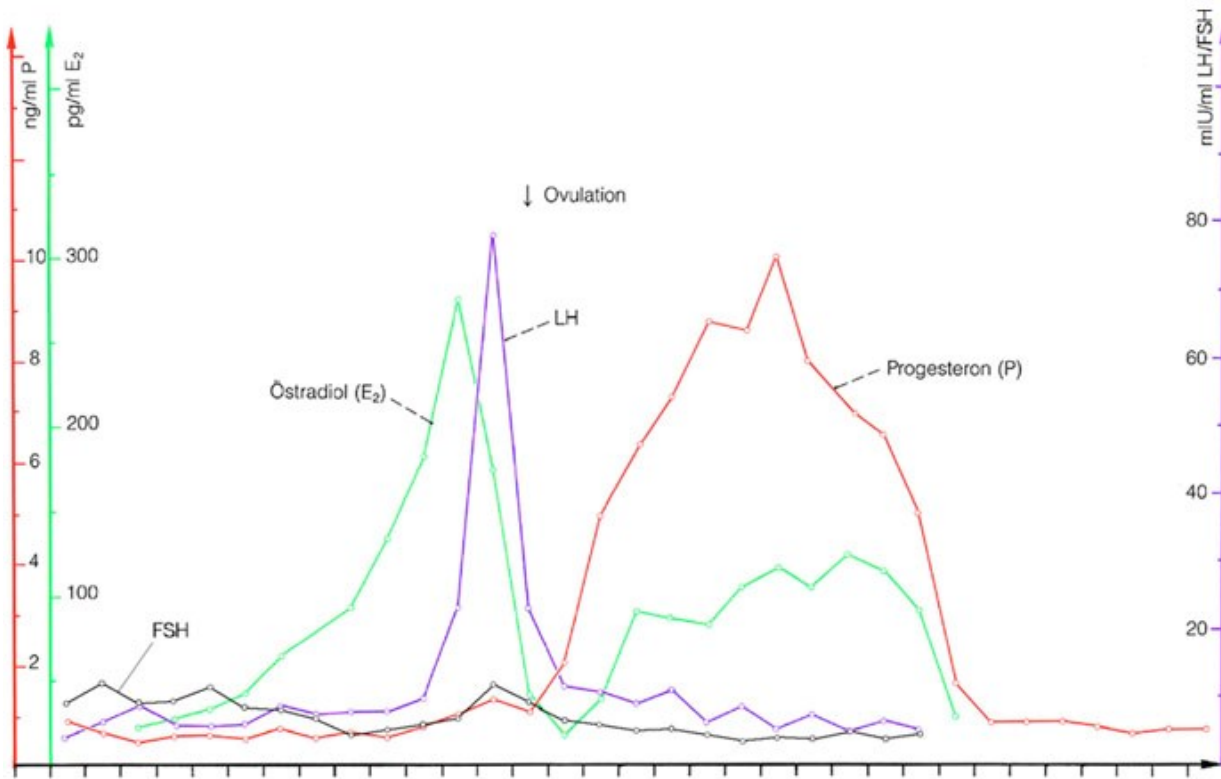


Cumulus oophorus
 Primäre Oozyt



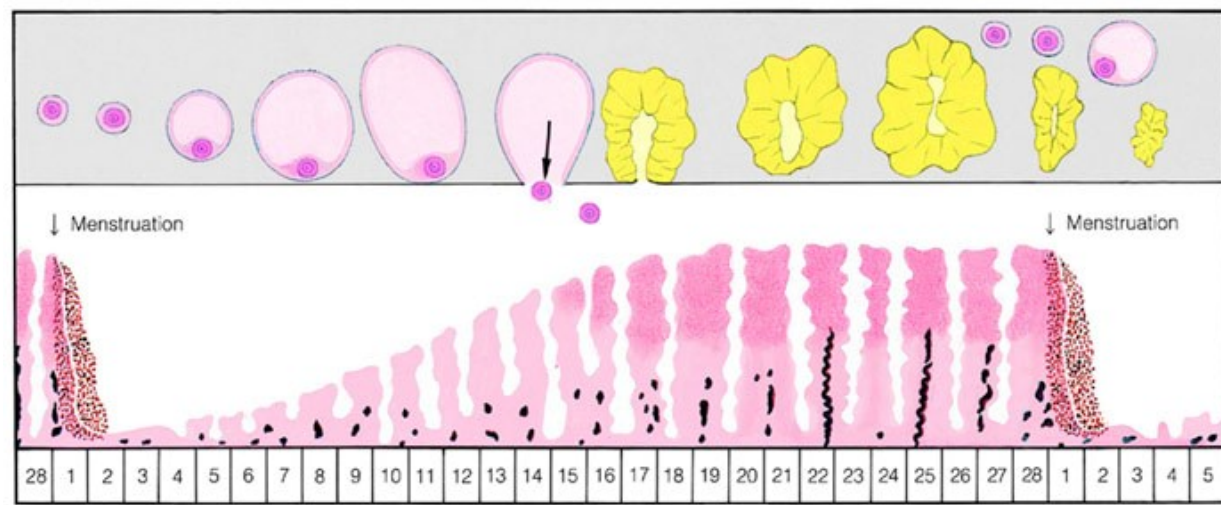
3000 μm

Blutung – *Corpus haemorrhagicum*
Gelbkörper (*Corpus luteum*)
Hormonproduktion: Progesteron, Östrogene



Menstruationszyklus:

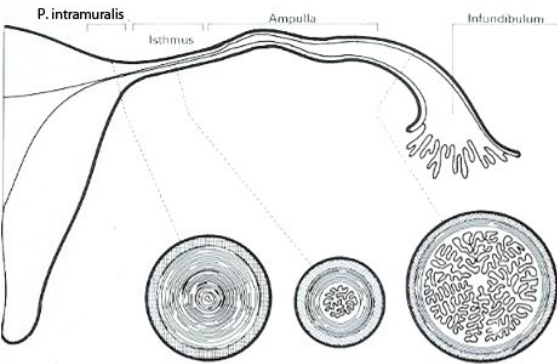
1. Regenerationsphase
1-4. Tage
Ausfalls des Progesterons
Anstieg der Östrogene
2. Proliferationsphase
5-15. Tage
„östrogene Phase“
die Drüsen werden vergrößert
Spiralarterien entstehen
prämenstruelle Hyperthermie



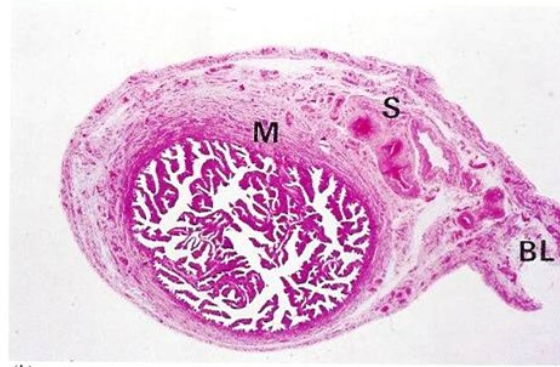
3. Sekretionsphase
15-28. Tage
„Progesteron Phase“

-> Ischämie, Blutung, Abstoßung
-> Schwangerschaft

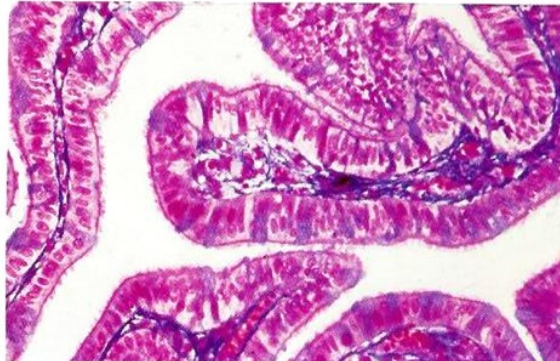
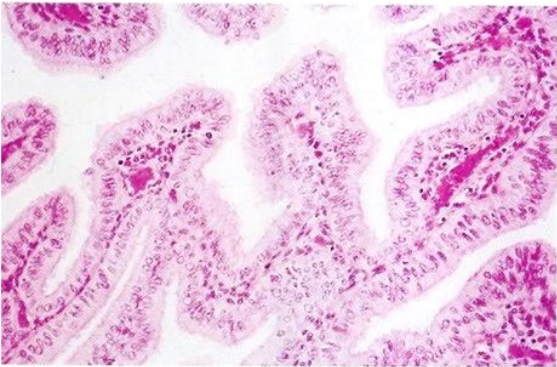
Eileiter (Tuba uterina)



(a)



(b)



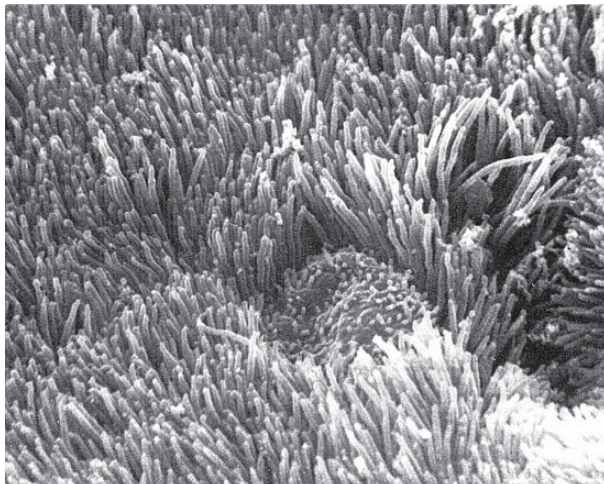
- 10-13 cm lang
- d= 2-5 mm
- Intraperitoneal

Flimmerepithel

Blutversorgung:

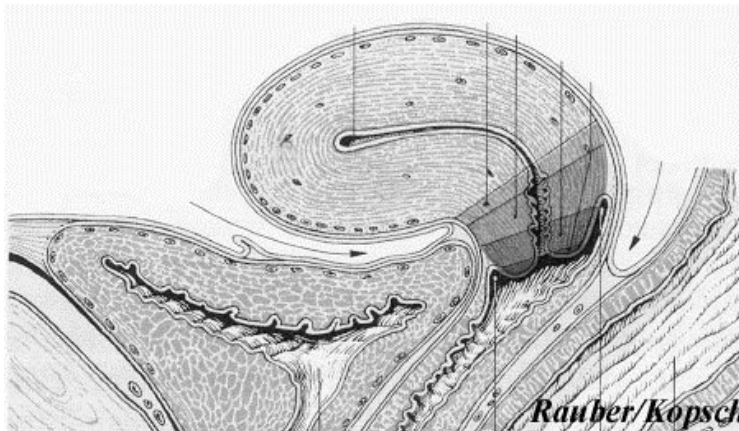
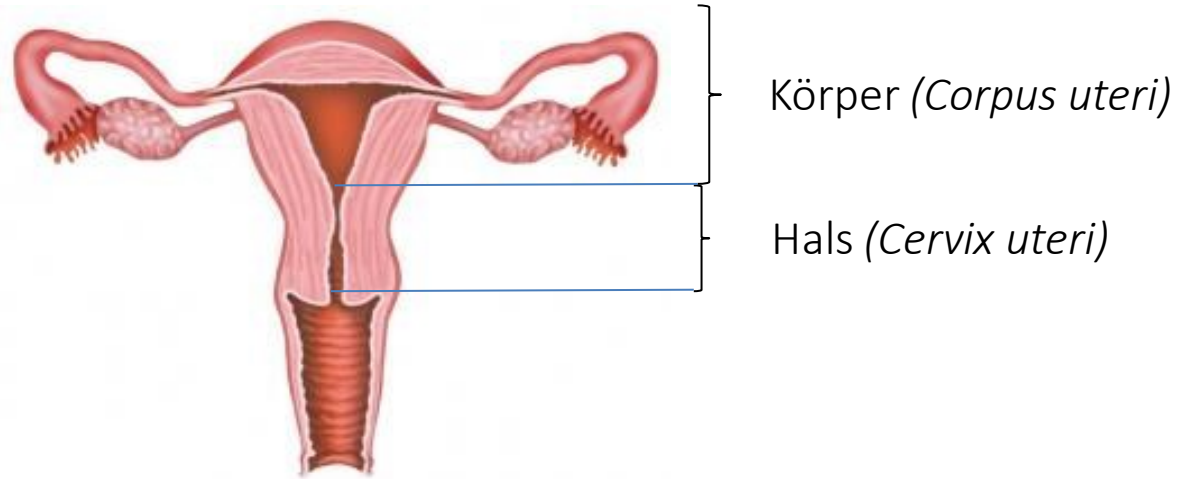
A. ovarica

A. uterina rr. tubarii



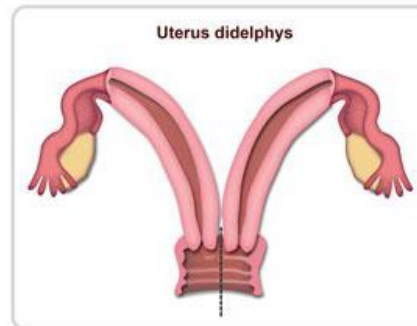
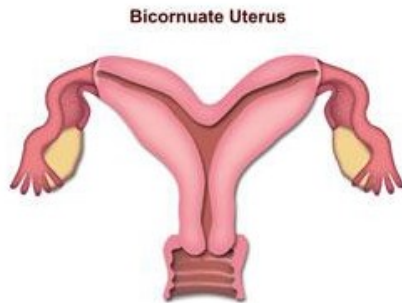
Gebärmutter (Uterus)

- biernenförmig
- Muskelorgan
- infraperitoneal



- Excavatio vesicouterina
- Excavatio rectouterina (Douglas-Raum)

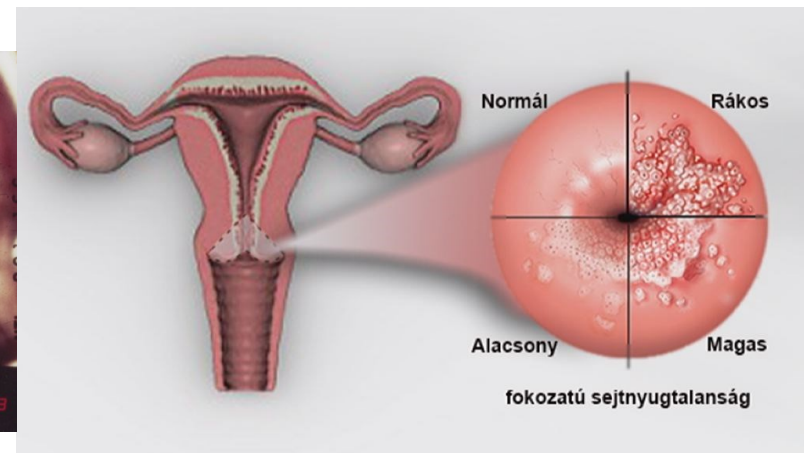
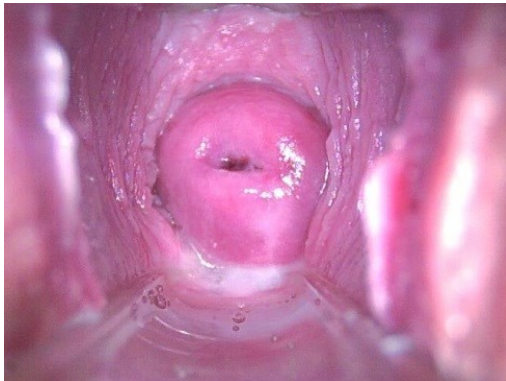
Blutversorgung: A. uterina



Äußere Muttermund (*Ostium uteri externum*)

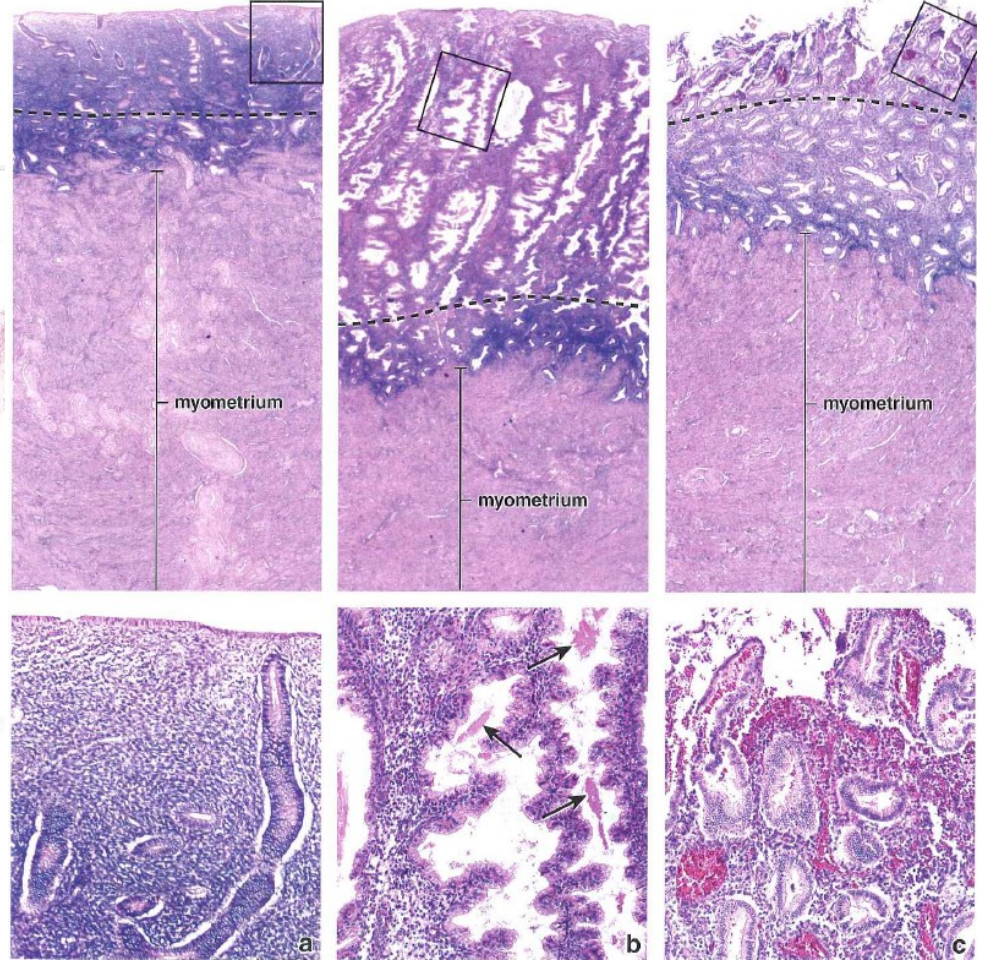


Nullipara
Multipara



1. Perimetrium
2. Myometrium
3. Endometrium

1. Proliferationsphase
2. Sekretionsphase
3. Regressive phase

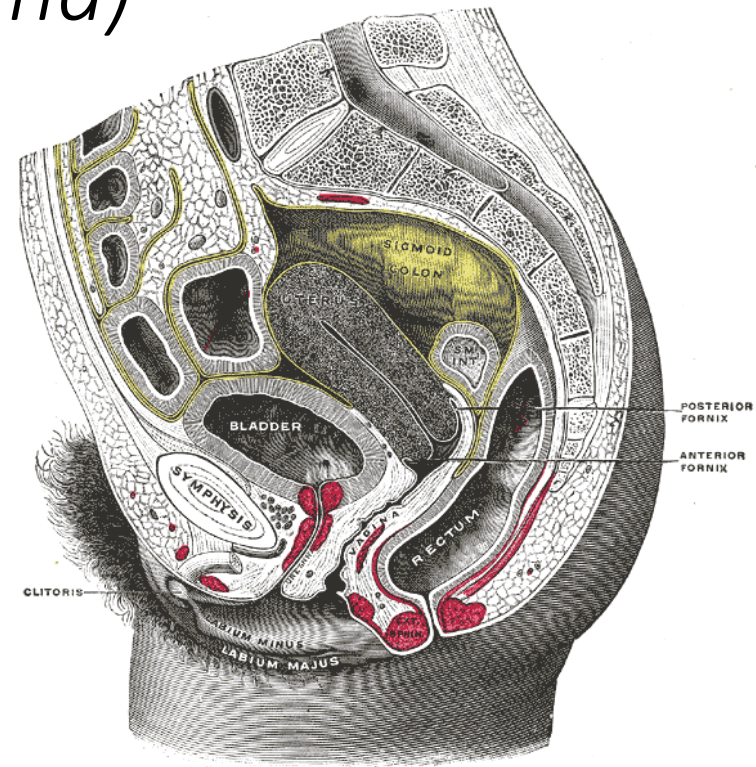


Scheide (*Vagina*)

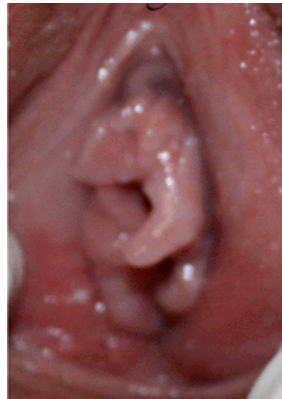
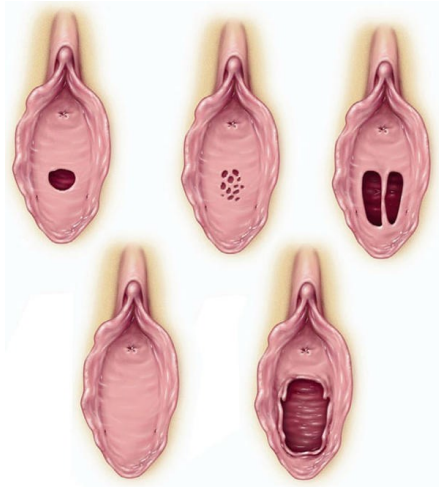
- häutig-muskuläres Rohr
- neigt 30-40° nach hinten
- Fornix vaginae anterior et posterior
- Vestibulum vaginae

- Mehrschichtiges unvernhorntes Plattenepithel

Blutversorgung: A. vaginalis (A. uterina)



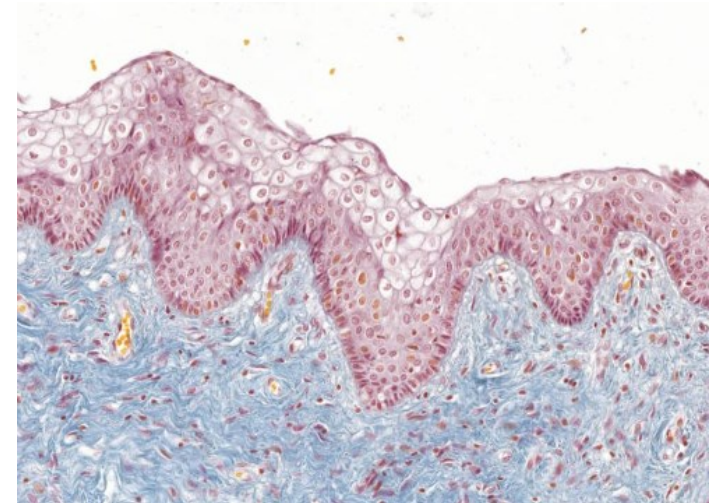
Hymen



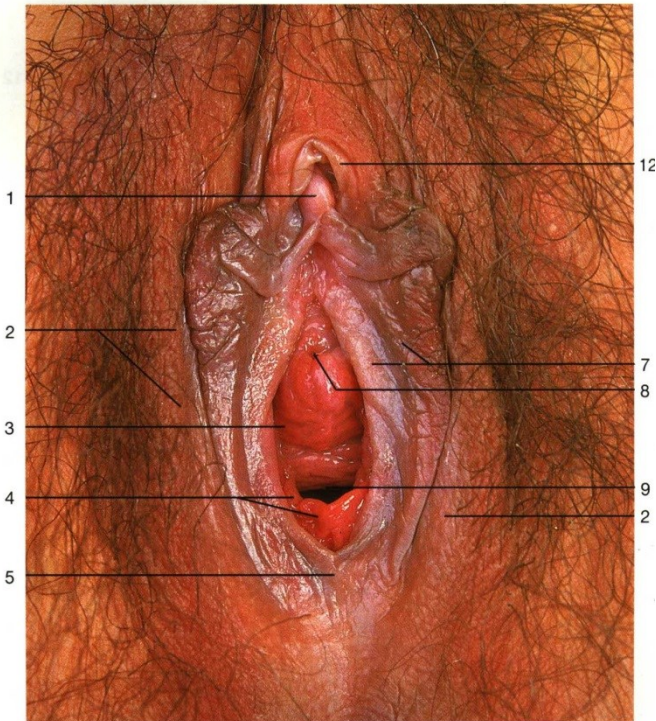
Before



After



Äußere weibliche Geschlechtsorgane



Kitzler (*Clitoris*)

Große Schamlippen (*Labium majus pudendi*)

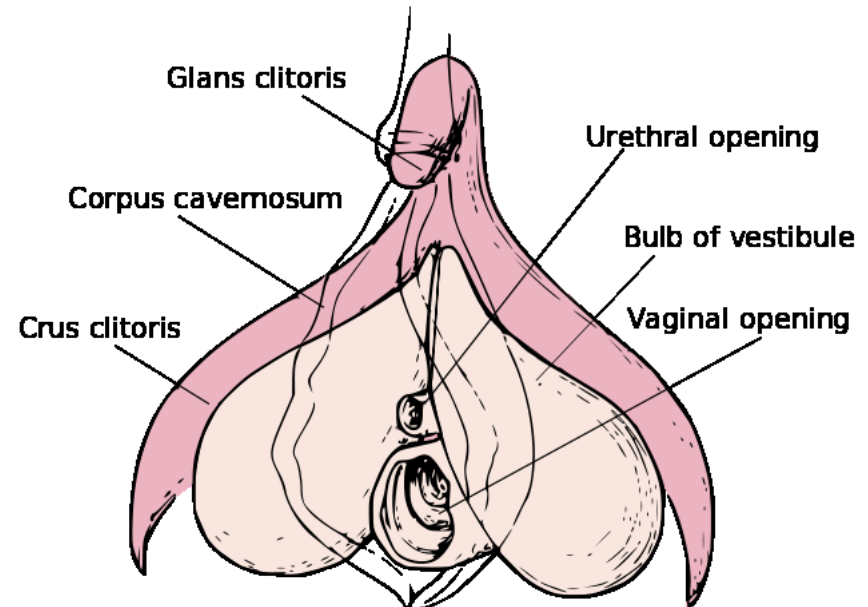
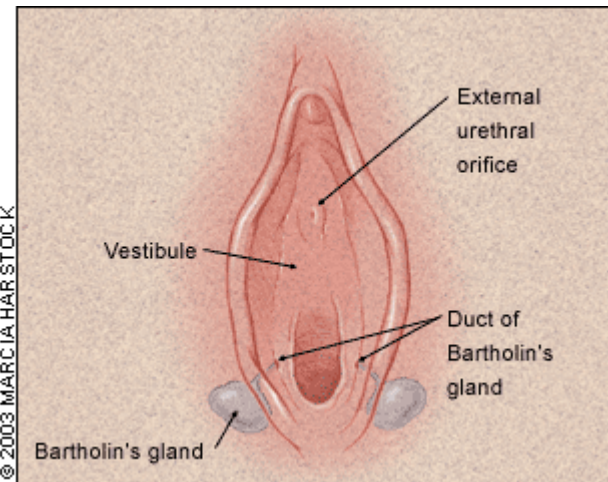
Kleine Schamlippen (*Labium minor pudendi*)

Vestibulum vaginae

Scheidenmündung (*Ostium vaginae*)

Blutversorgung:

Äste von A. pudenda interna und A. femoralis



Schwangerschaft

- Befruchtung
- Furchung
- Implantation
- Embrionale Phase
- Foetale Phase

Veränderungen in Schwangerschaft

Brust

- Schwellung

Äußere Geschlechtsorgane

- Hyperämie

Gebärmutter

- Zahl und Größe von glatte Muskelzellen erhöht

Eierstock

- Progesteron produktion
- Keine Ovulation

Gewicht

- Energielagerung



Hoden (*Testis*)

Nebenhoden (*Epididymis*)

Samenleiter (*Ductus deferens*)

Samenbläschen (*Vesicula seminalis*)

Vorstehedrüse (*Prostata*)

Cowpersche Drüse (*Glandula bulbourethralis*)

Penis

My brain: it's my second favorite organ.

(Woody Allen)

Hoden (*Testis*)



- Hängen im Hodensack (*Scrotum*)
- Gefäßstiel - Samenstrang
- pflaumenförmig

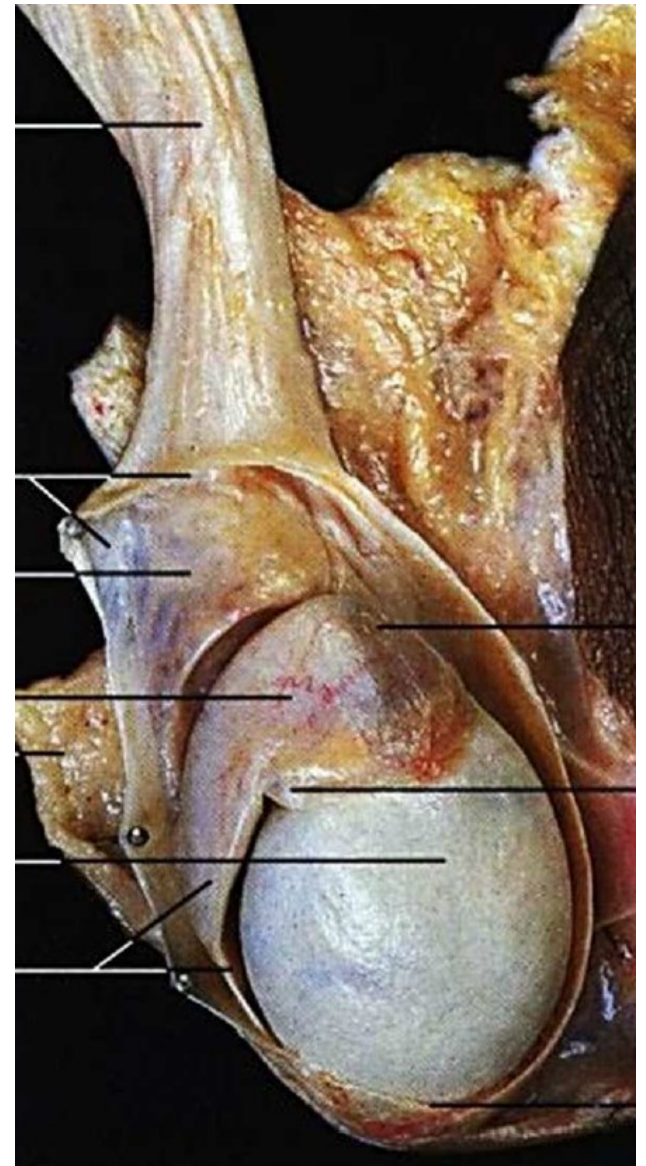
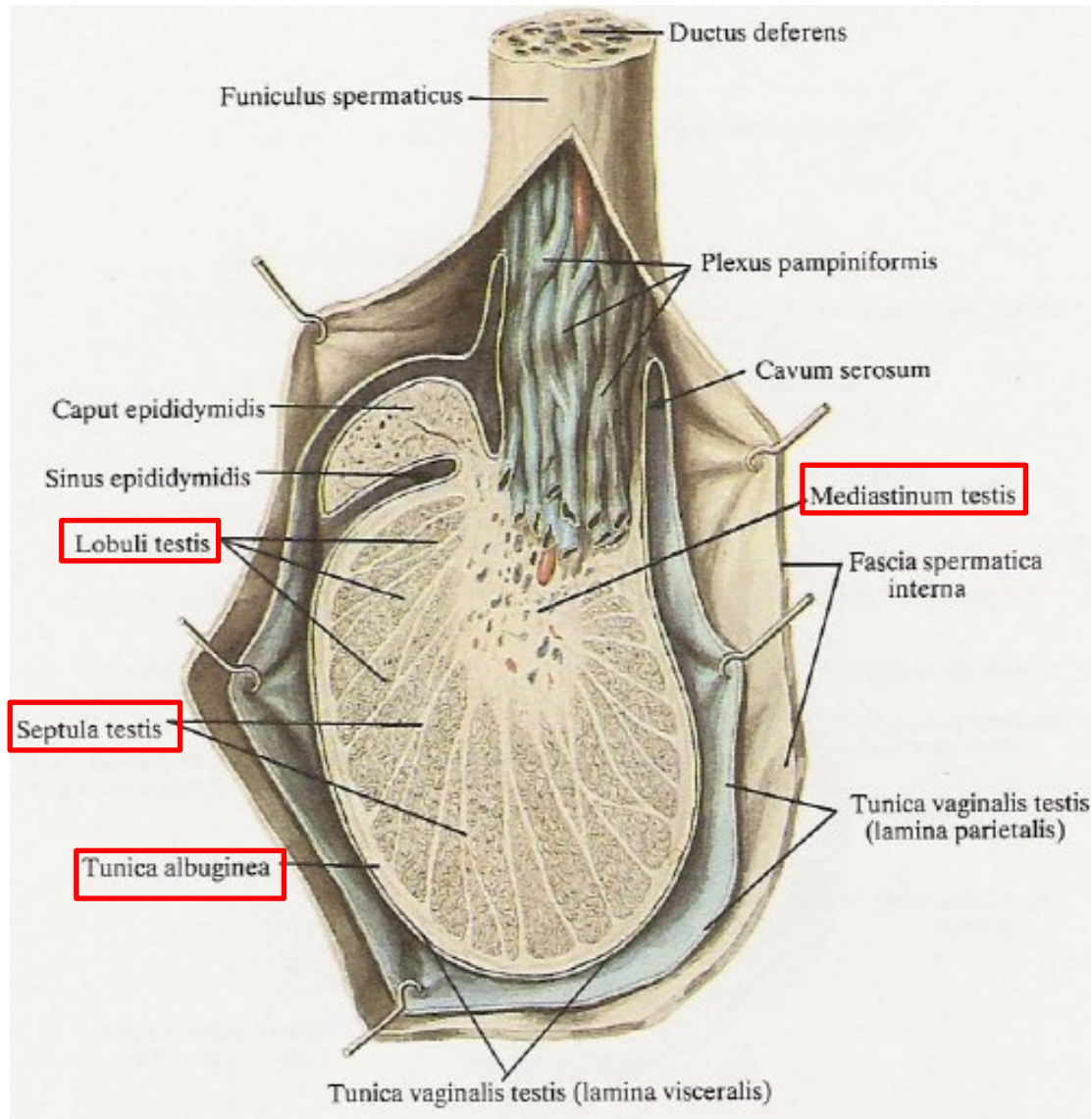
Blutversorgung:

A. testicularis – Aorta abdominalis

Plexus pampiniformis- v. cava inferior (rechts) / v. renalis (links)

Lymphgefäße:

Nodi lymphatici paraaortici



Hodenhülle (*Tunica vaginalis testis*)

Descensus testis

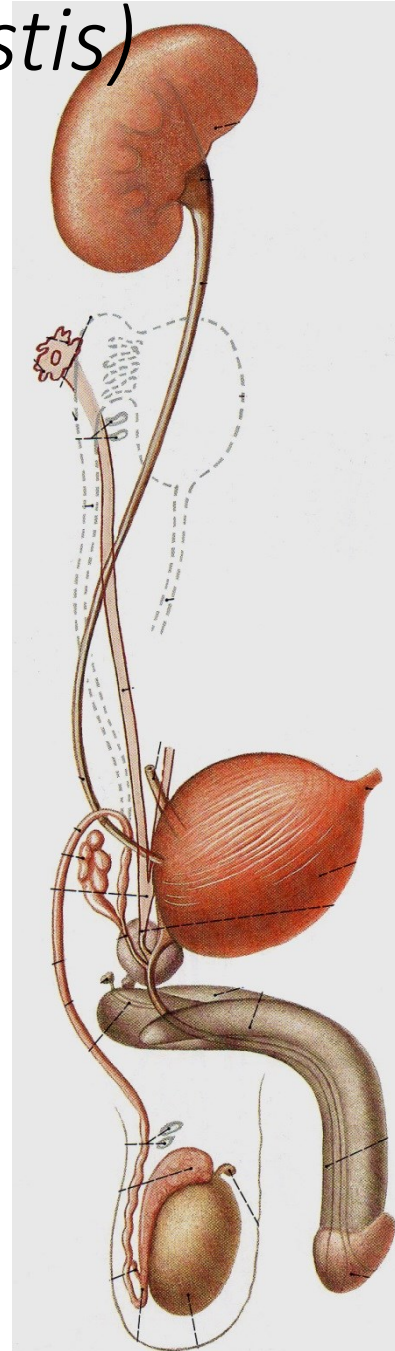
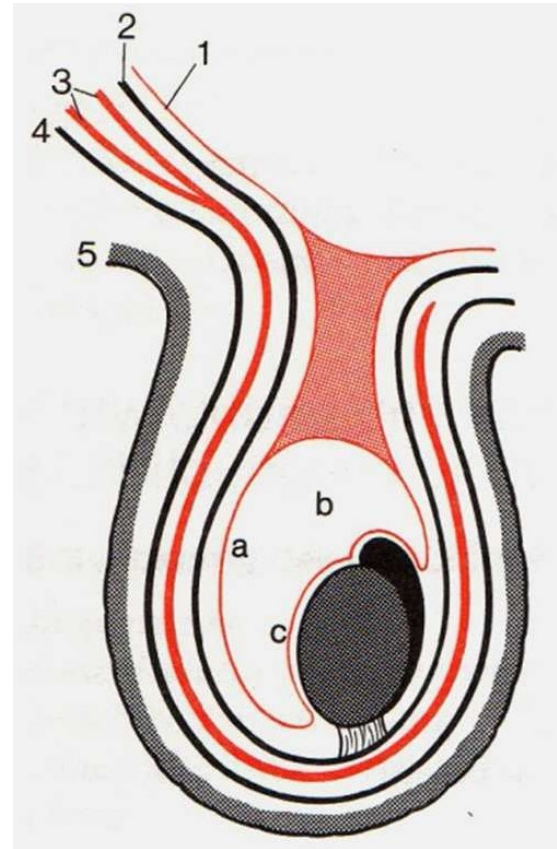
-2-7. Schwangerschaftsmonat

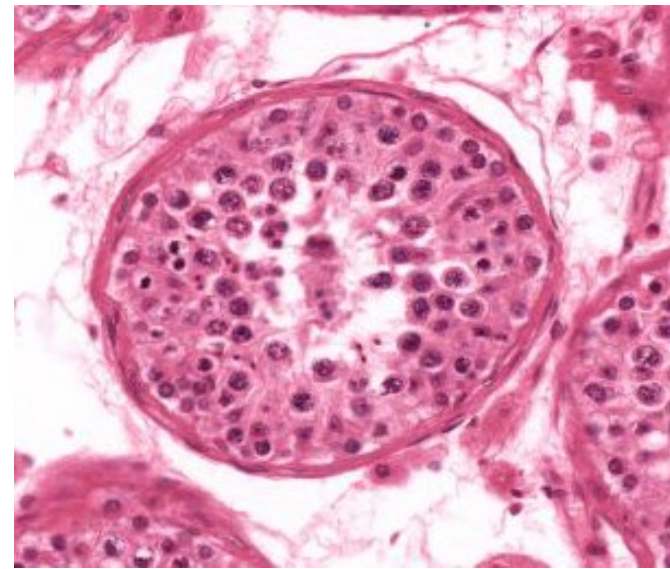
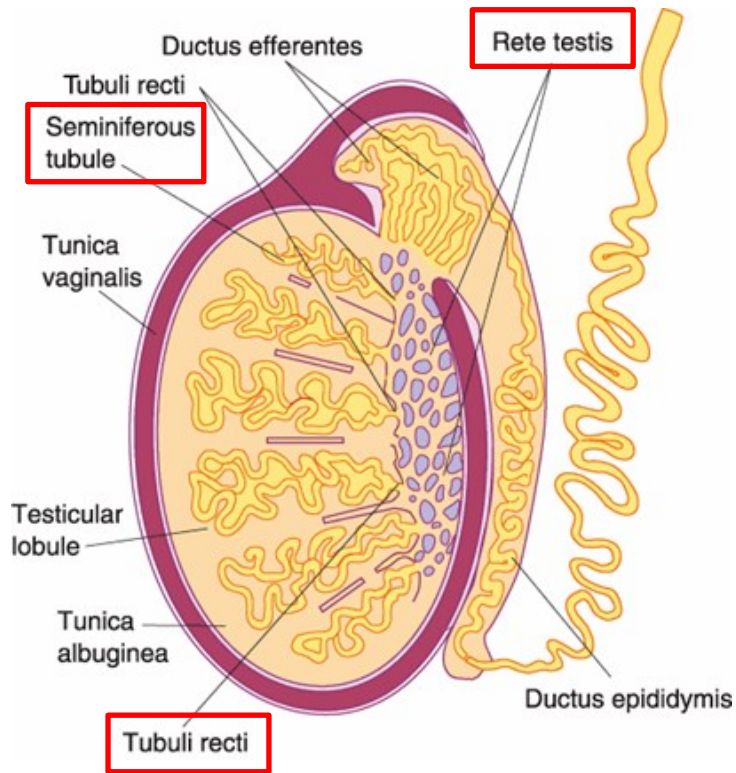
- Von L1

Versteckte Hoden

Cremaster reflex

- Haut (5)
- Fascia (4)
- Muskeln(3)
- Fascia transversalis (2)
- Bauchfell (*Peritoneum*) (1)





100 μm

Samenkanälchen (*Tubuli seminiferi contorti*)

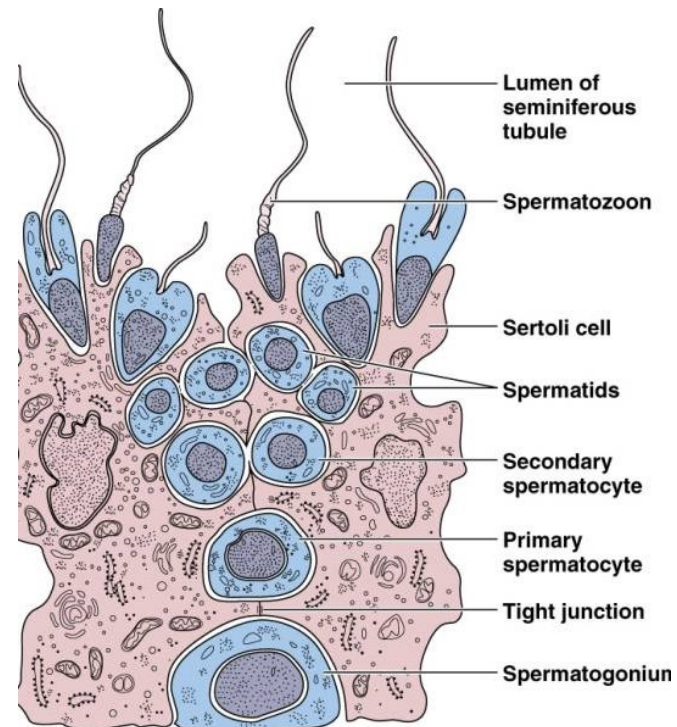
- Spermatozoen
- Sertoli-Zellen

sezernieren Samenflüssigkeit
 produzieren Lactat und Pyruvat für die Spermien

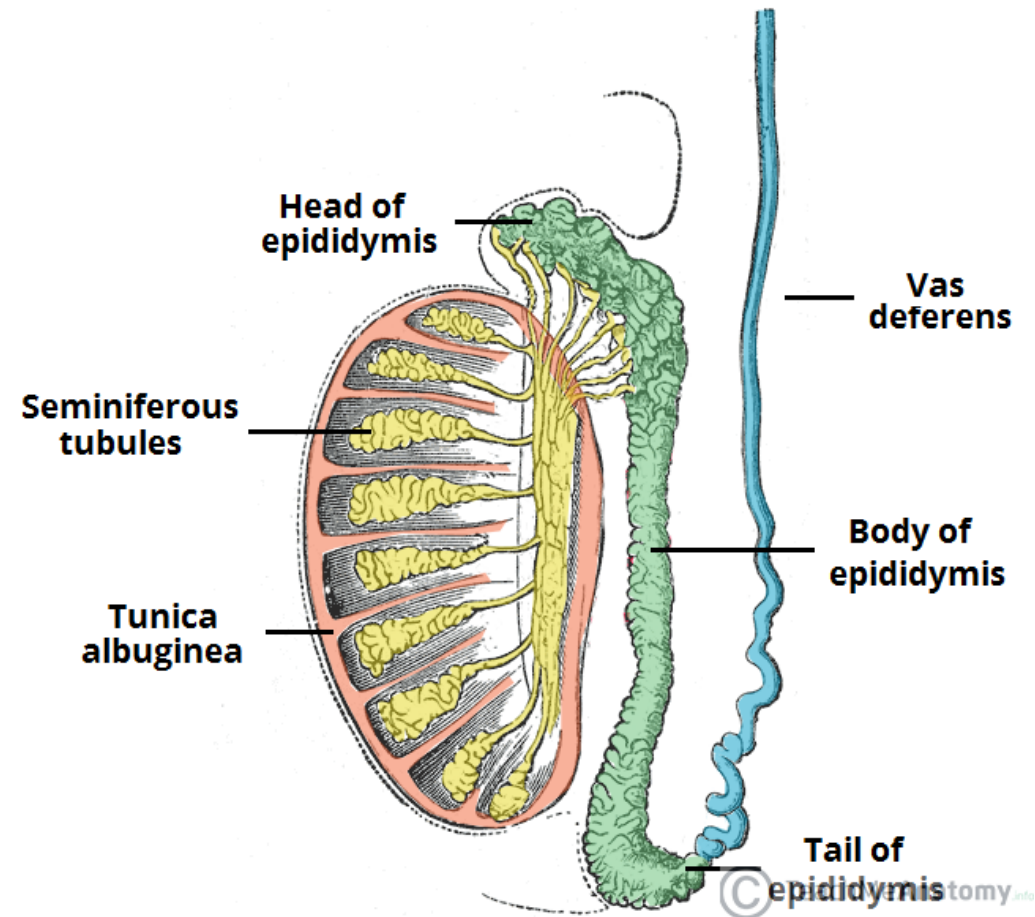
Blut-Hoden Schranke

- Zwischenzellen (Leydig-Zellen)

Bildung der Testosteron

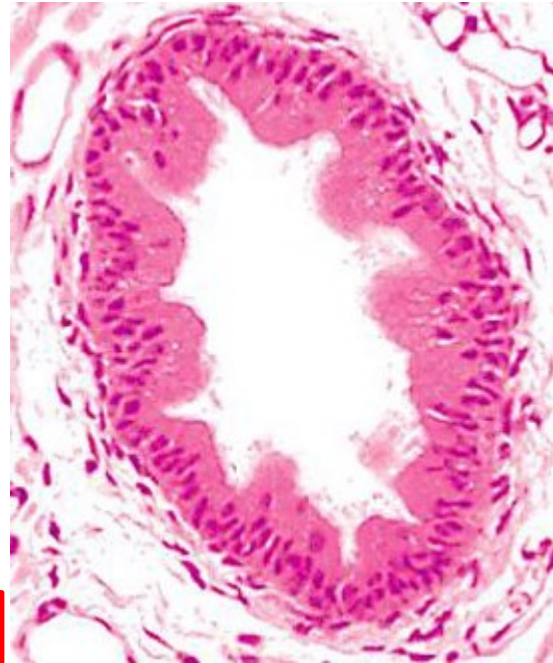
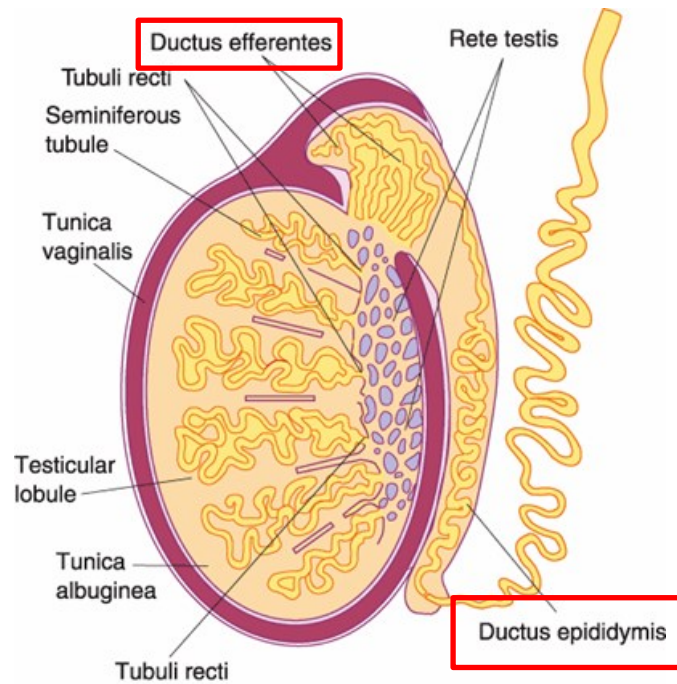


Nebenhoden (Epididymis)

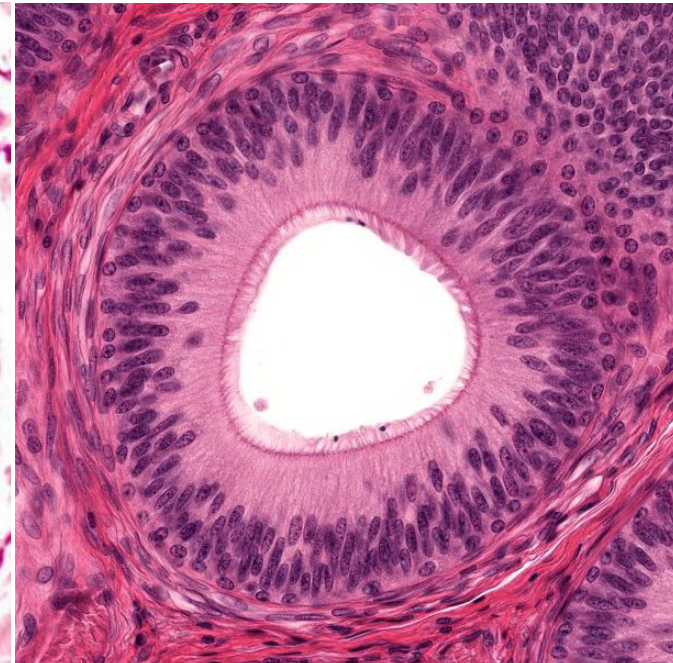


- Caput
- Cauda
- Ductus deferens

Blut- und Lymphgefäße sind identisch mit den Hoden.



450 μm



50 μm

Ductuli efferentes testis
 12- 14 Kanälchen
 Länge: 20 cm (in 2 cm
 gewunden)

*Hochprismatisches Epithel
 mit Stereozilien*

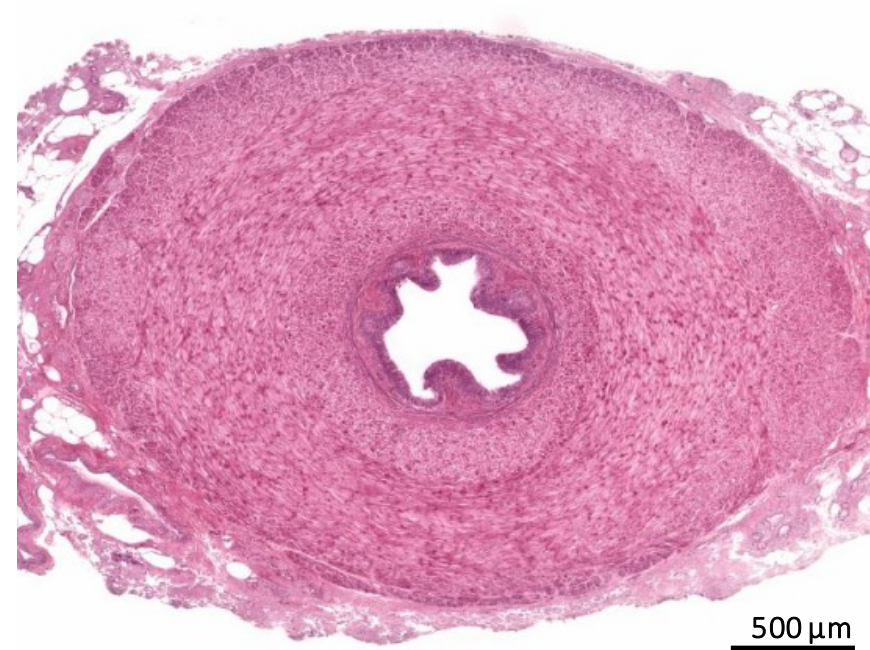
Ductus epididymis
 1 Stück
 Länge: 4m

*Zweireihiges
 hochprismatisches Epithel
 mit Stereozilien*

Samenleiter (*Ductus/vas deferens*)

- Länge: 45 cm
- d=2 mm
- Durchmesser von Lumen: 0,2-0,3 mm

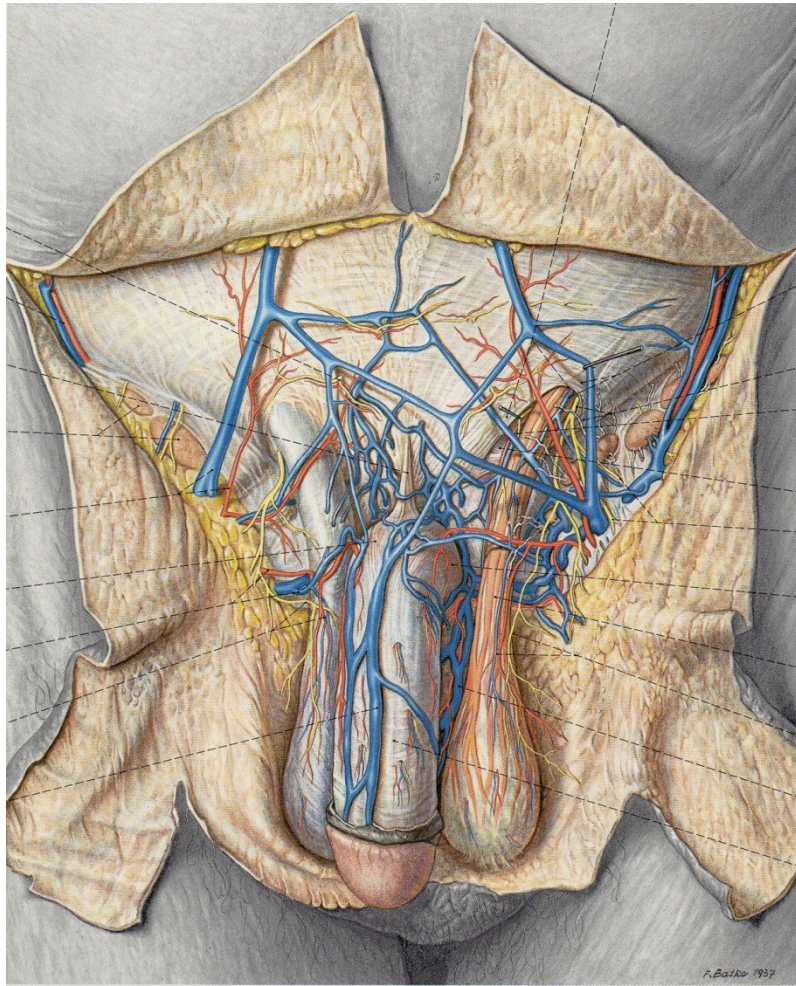
Blutversorgung: A. ductus deferentis



Zweireihiges hochprismatisches Epithel mit Stereozilien
Glatte Muskulatur
Elastische Fasern

Vasectomy: Verschnürung von Ductus deferens
Tubuli seminiferi contorti sterbt

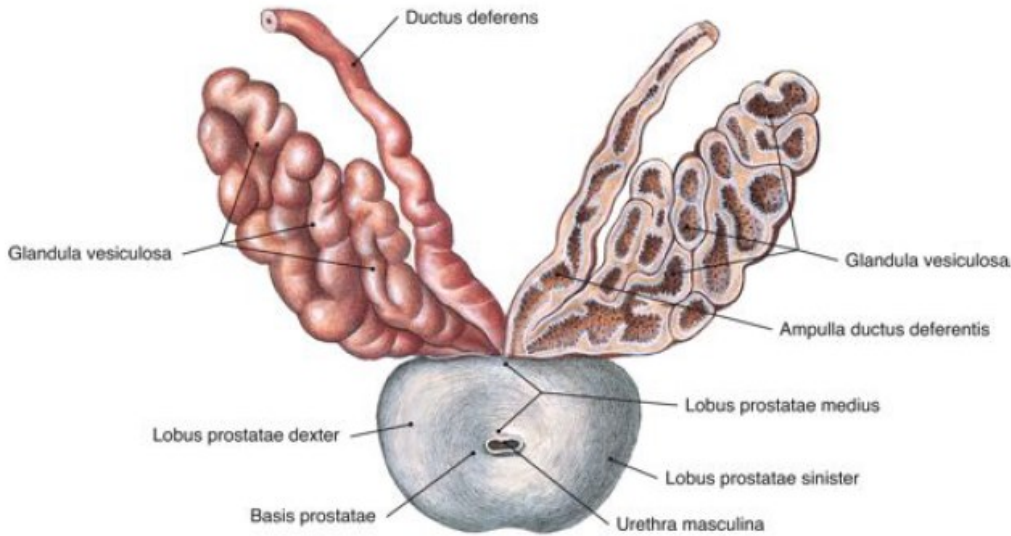
Samenstrang (*Funiculus spermaticus*)



- Ductus deferens
- A. testicularis
- Plexus pampiniformis
- A. ductus deferentis
- Vegetative Nerven
- Ramus genitalis nervus genitofemoralis



Samenbläschen (Vesicula seminalis)



Exokrine Drüse

Alkalisches Sekret (pH 7.3)

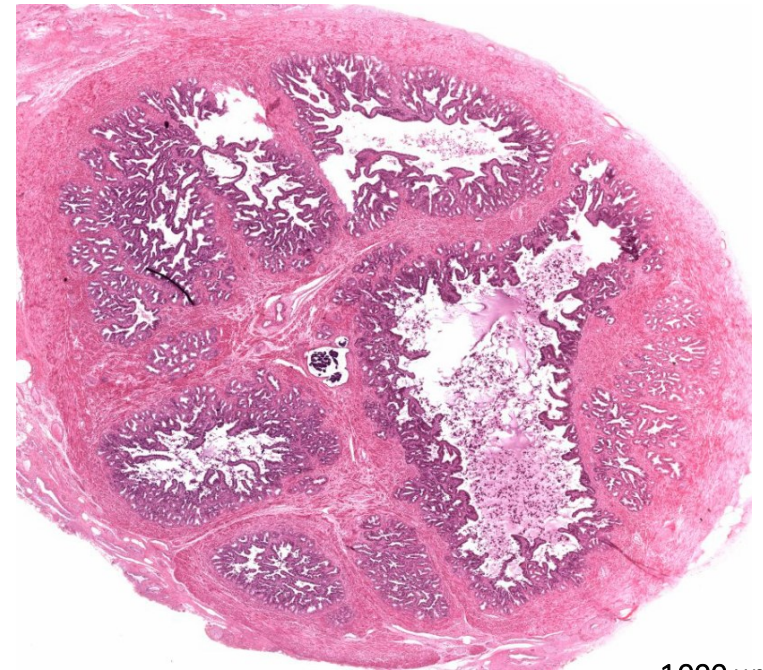
Hauptmasse von Sperma

Fruktose

Blutversorgung: A. ductus deferentis

Ductus excretorius + ductus deferens =
ductus ejaculatorius

Hochprismatisches Epithel



1000 µm

Vorsteherdrüse (*Prostata*)

Gestalt und Größe Eßkastanie ähnlich
Exokrine Drüse

saueres Sekret (pH 6.45)

Pars prostatica urethrae

Ductus ejaculatorius

Blutversorgung:

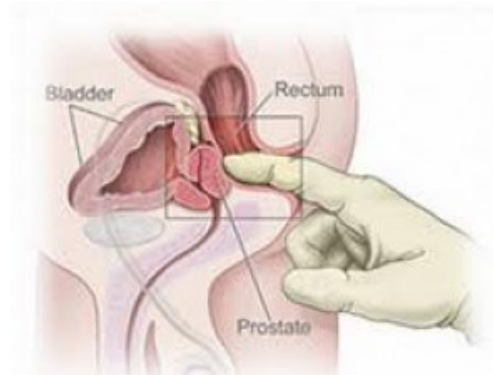
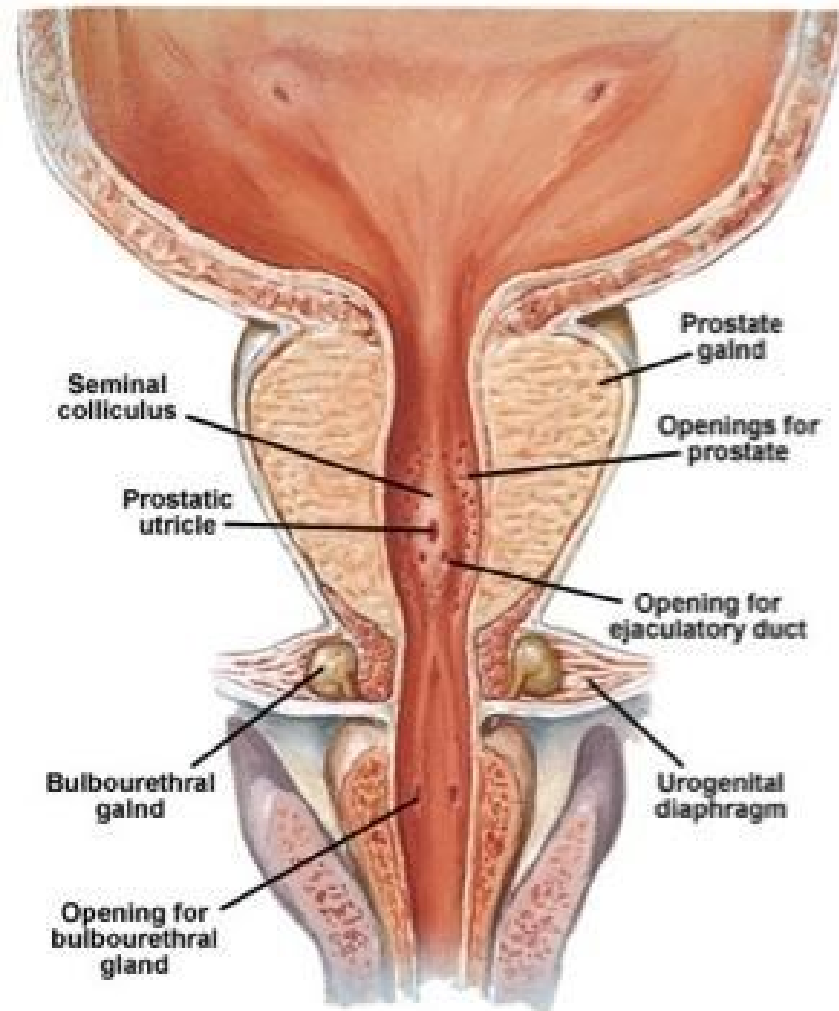
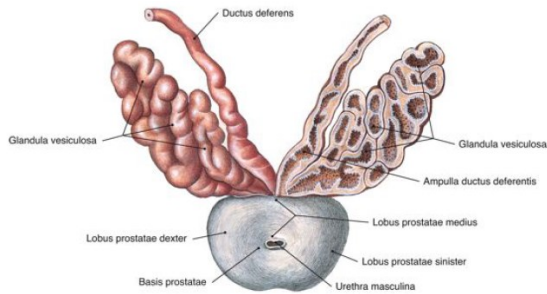
A. pudenda interna

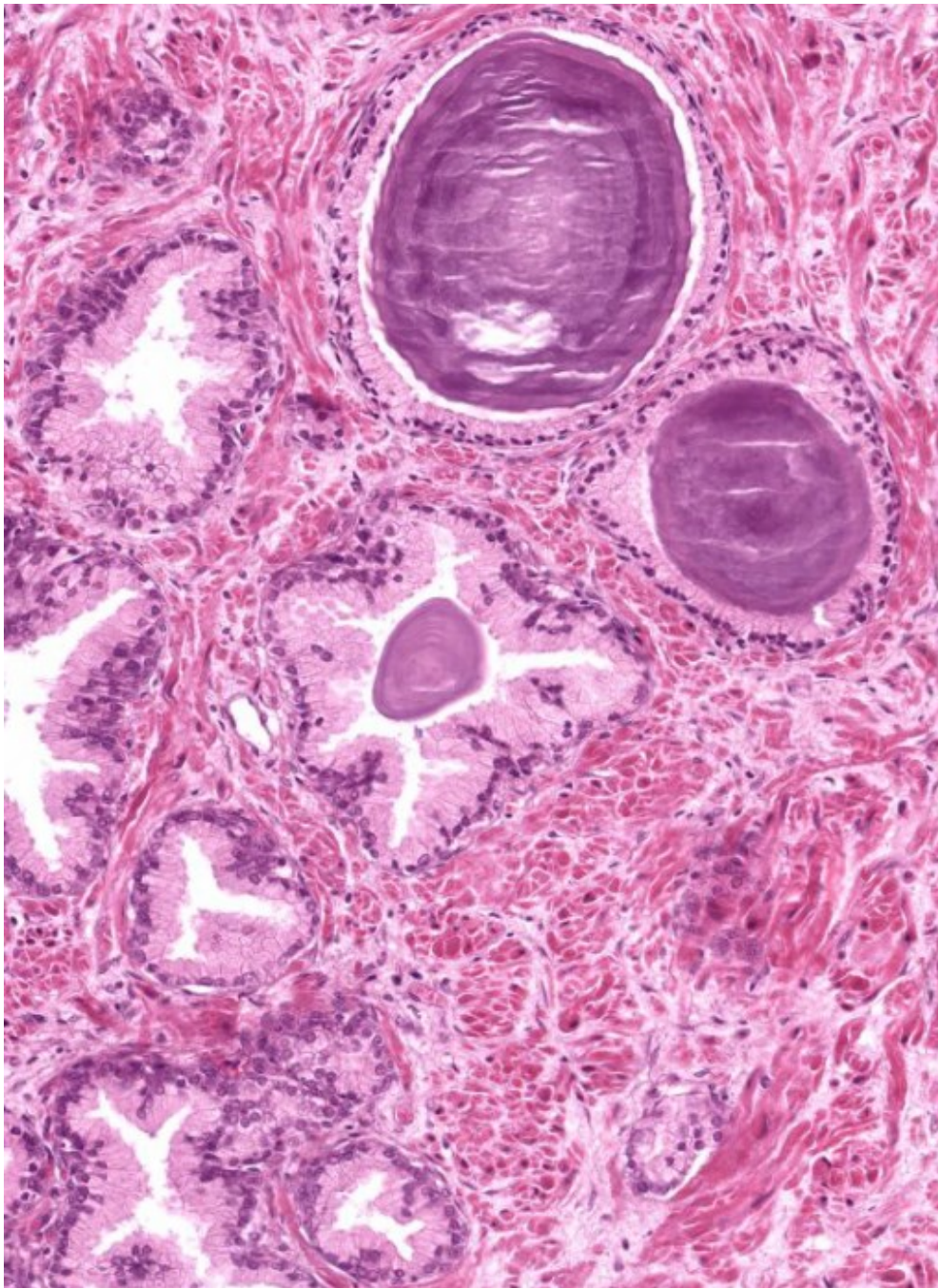
A. vesicalis inferior

A. rectalis media

Lymphgefäße:

A. Iliaca interna und sacrale Lymphknoten

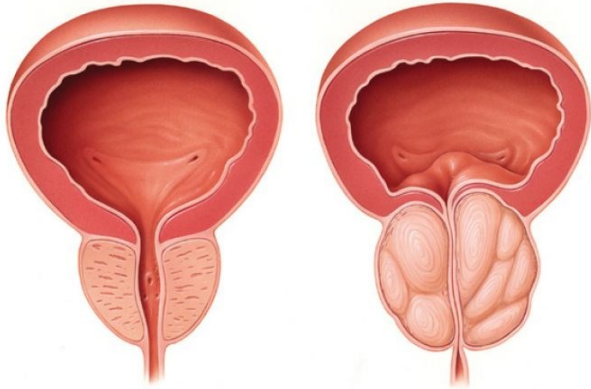




30-40 tubuloalveoläre Drüsen
Glatte Muskulatur
Zweireihiges hochprismatisches Epithel

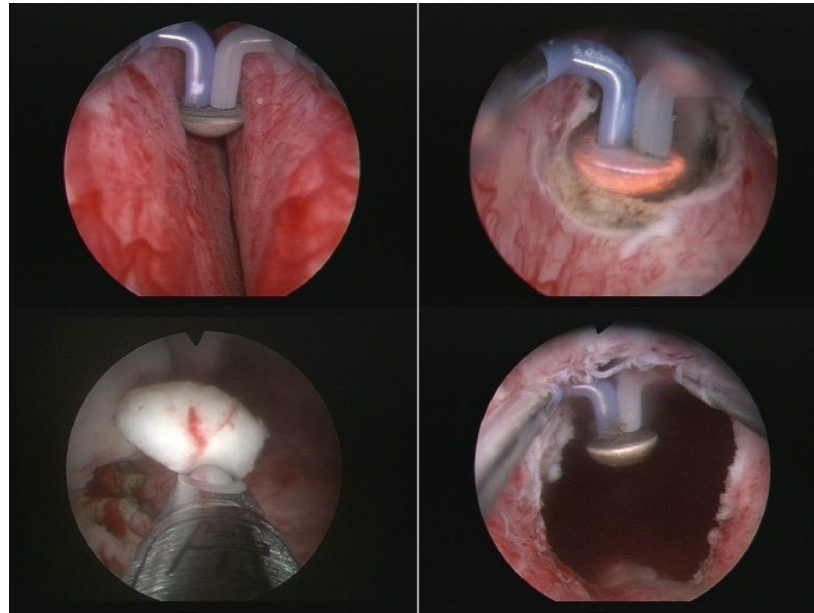
100 μ m

Prostatahyperthrophie

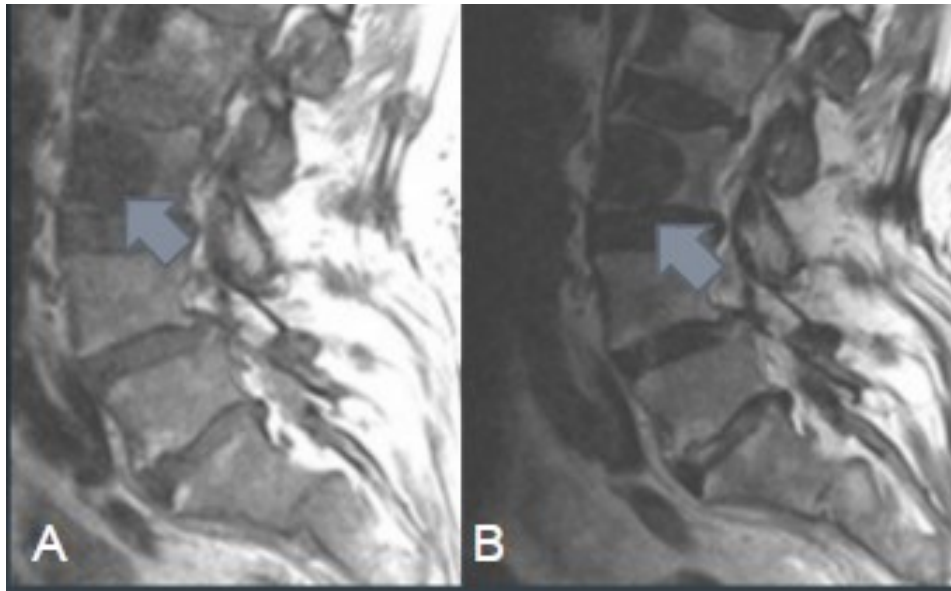


Normal Prostate

Enlarged Prostate

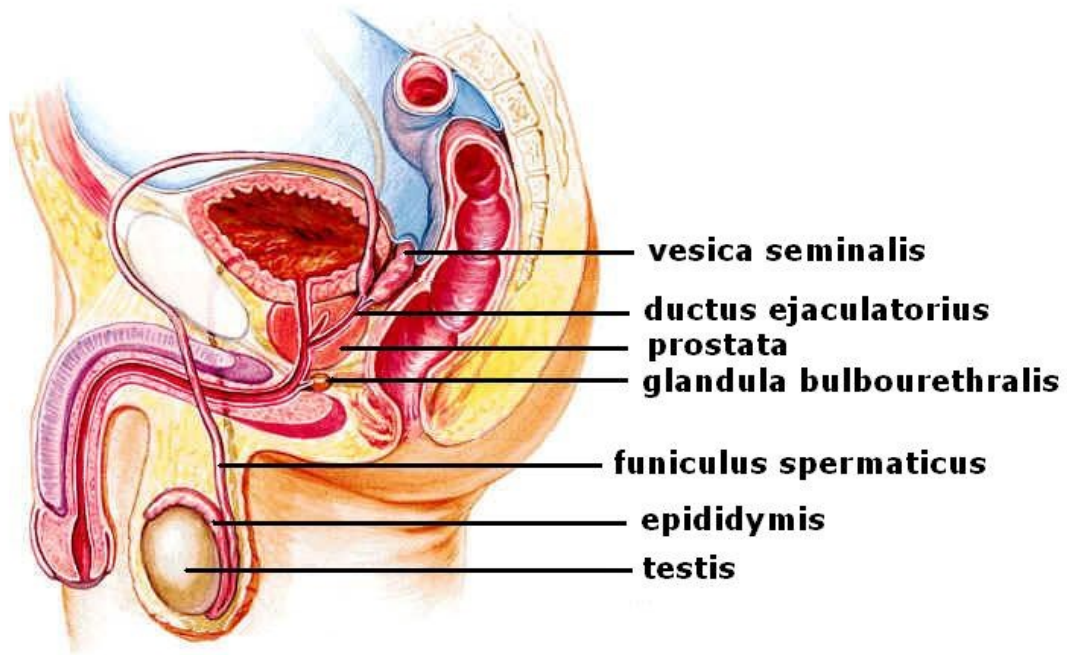


TUR



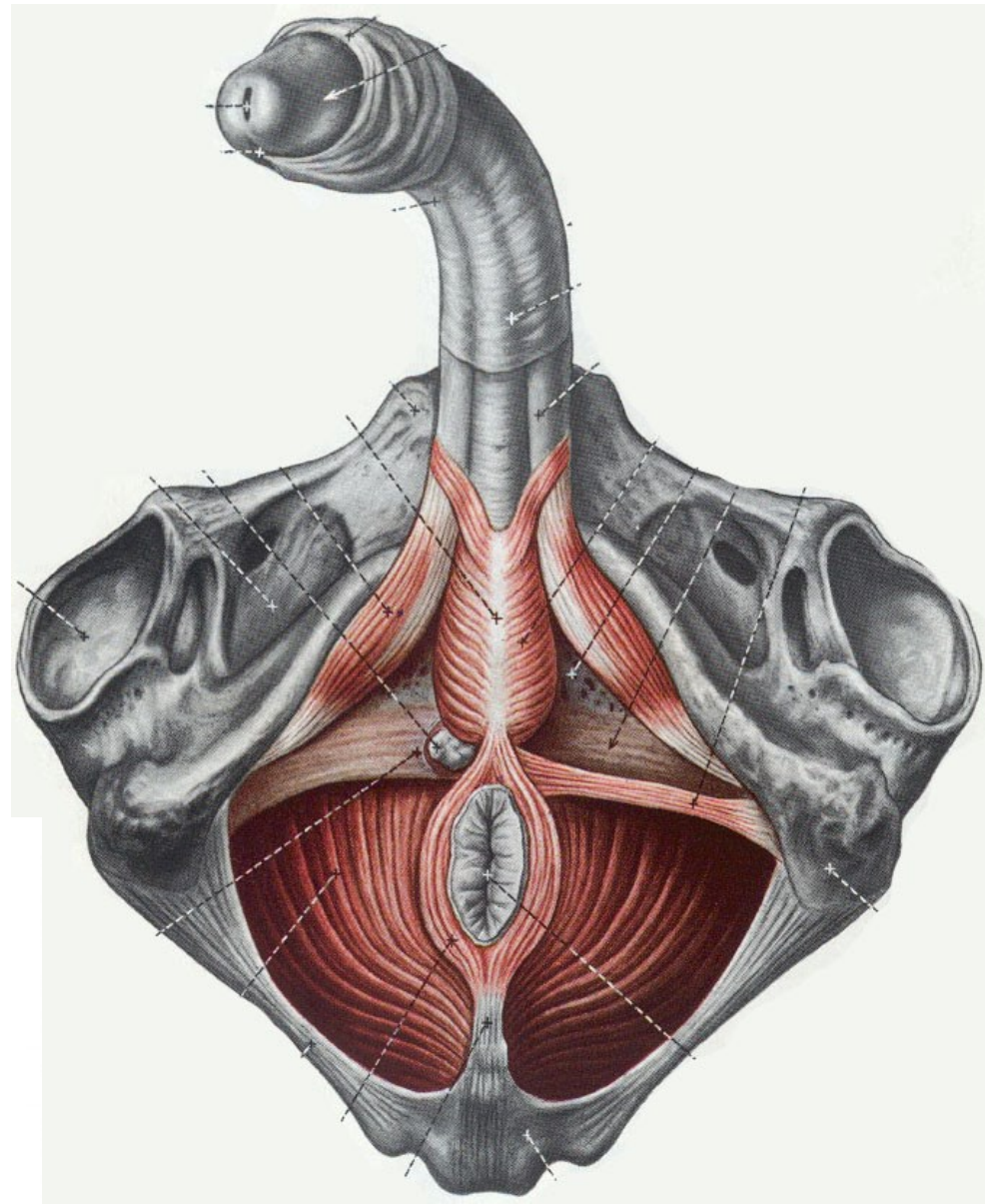
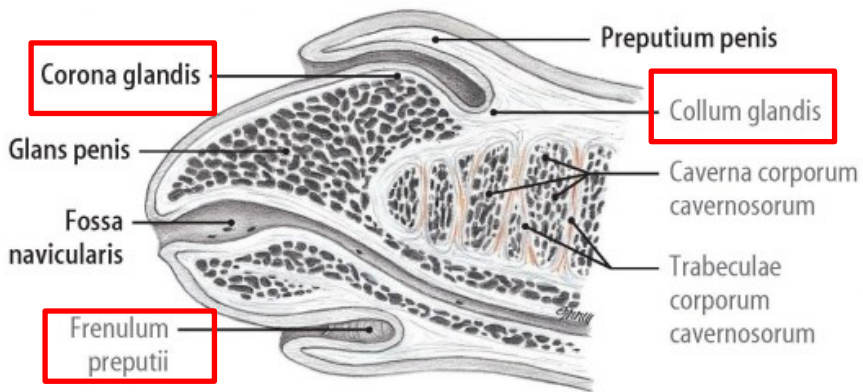
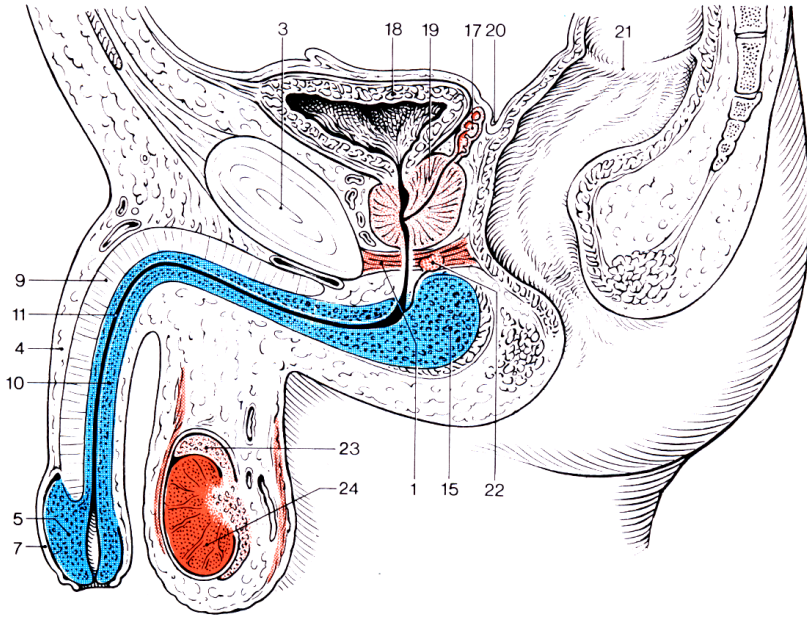
MRI Alte: 66 Jahre L3 Metastase

Cowpersche Drüse (*Glandula bulbourethralis*)

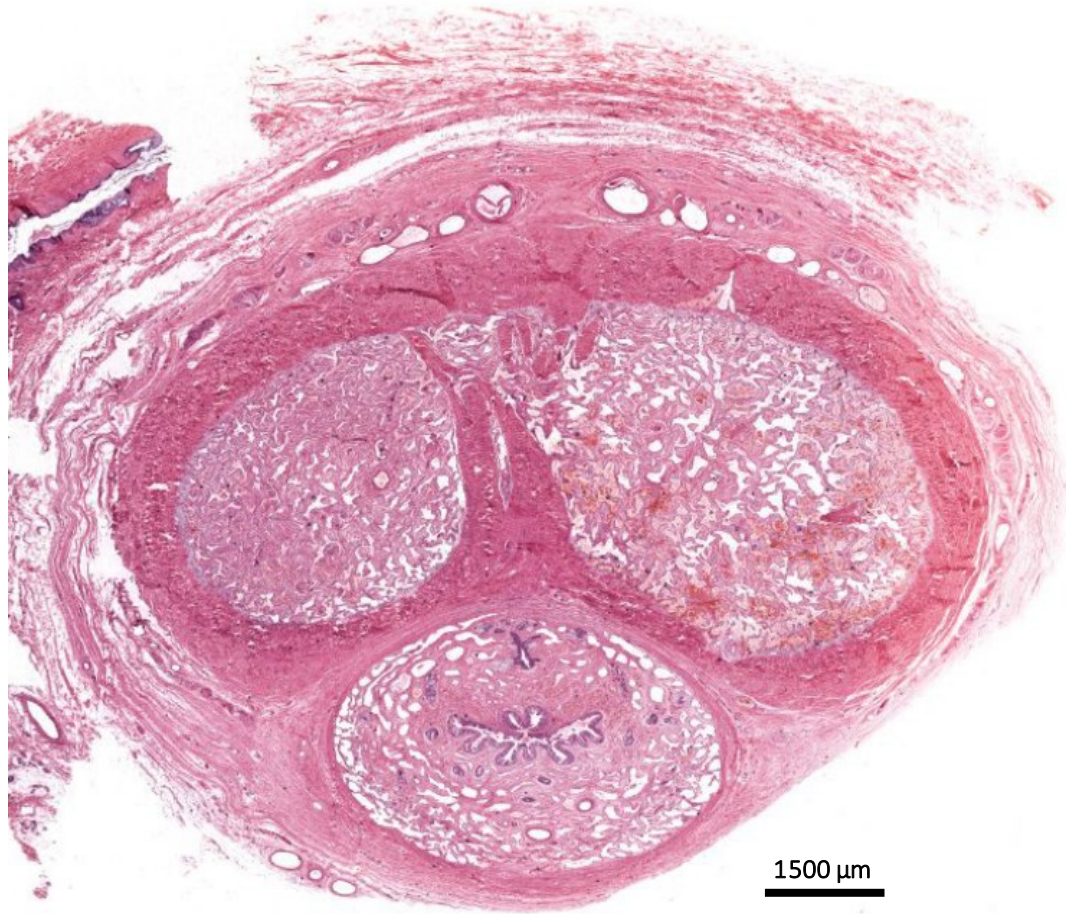
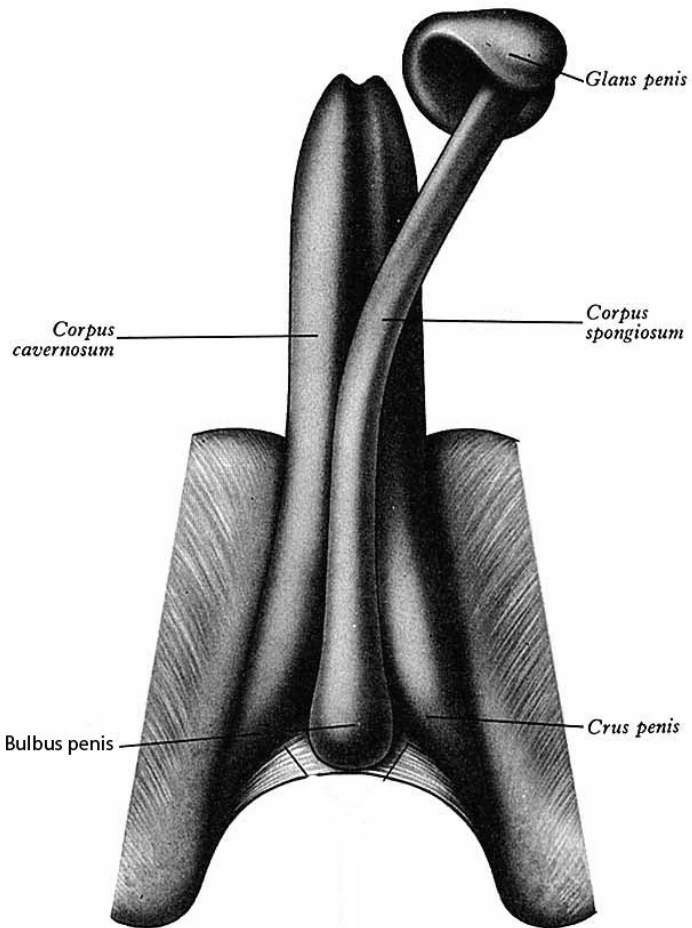


Erbsengroße,
tubuloalveolare Drüse
Liegt in Diaphragma
urogenitale

Penis



Musc. Bulbospongiosus
 Musc. Ischiocavernosus
 Diaphragma urogenitale

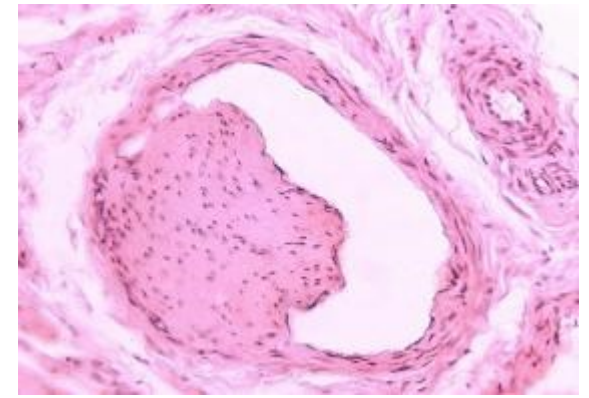
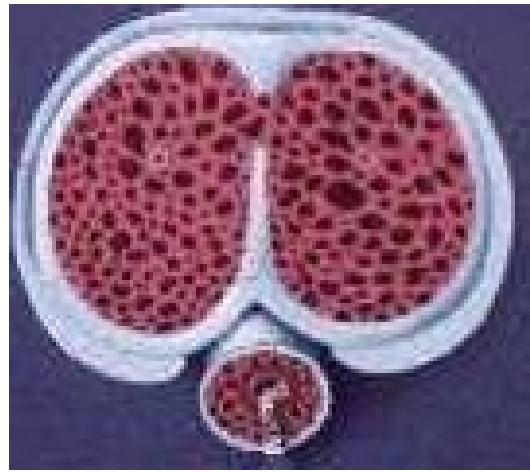


Corpus cavernosum penis
 Corpus spongiosum penis
 Glans penis
 Tunica albuginea

V. dorsalis penis
 A. dorsalis penis
 N. dorsalis penis
 Aa. profundae penis

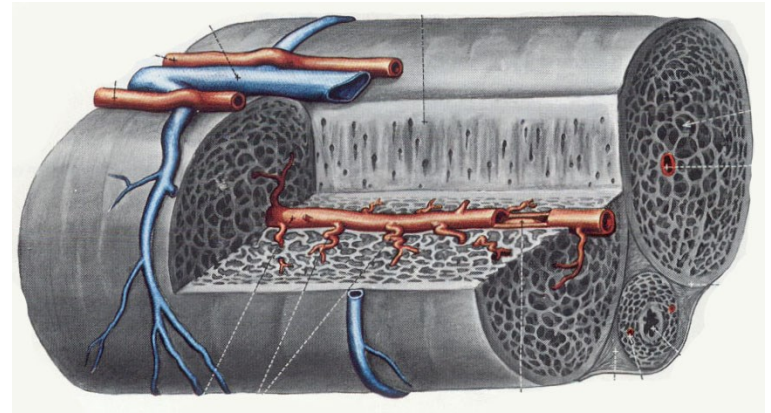
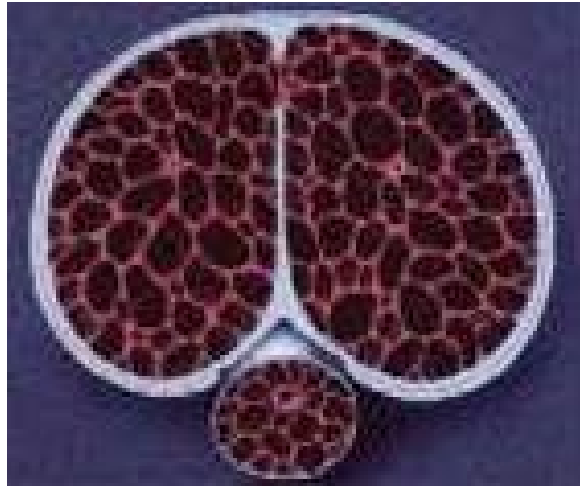
Erektion

Parasimpatischer Einfluss



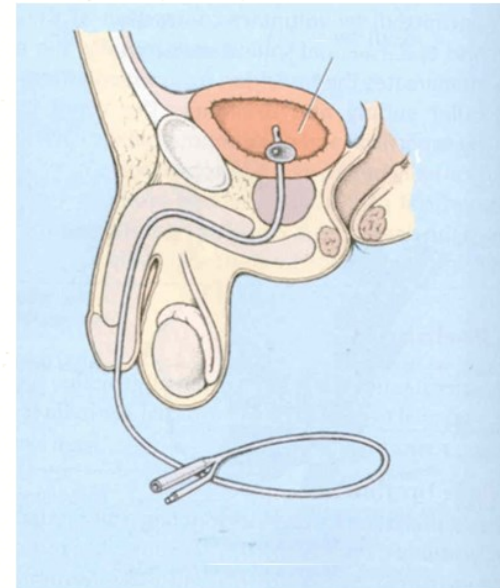
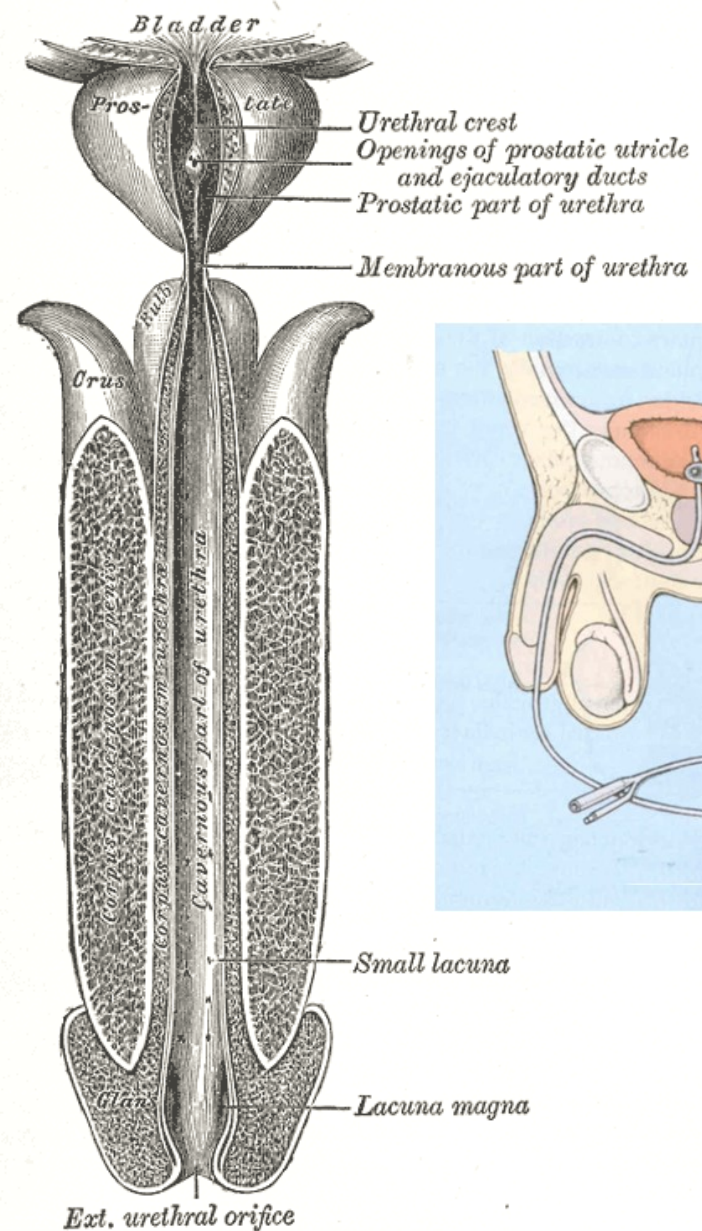
Ejakulation

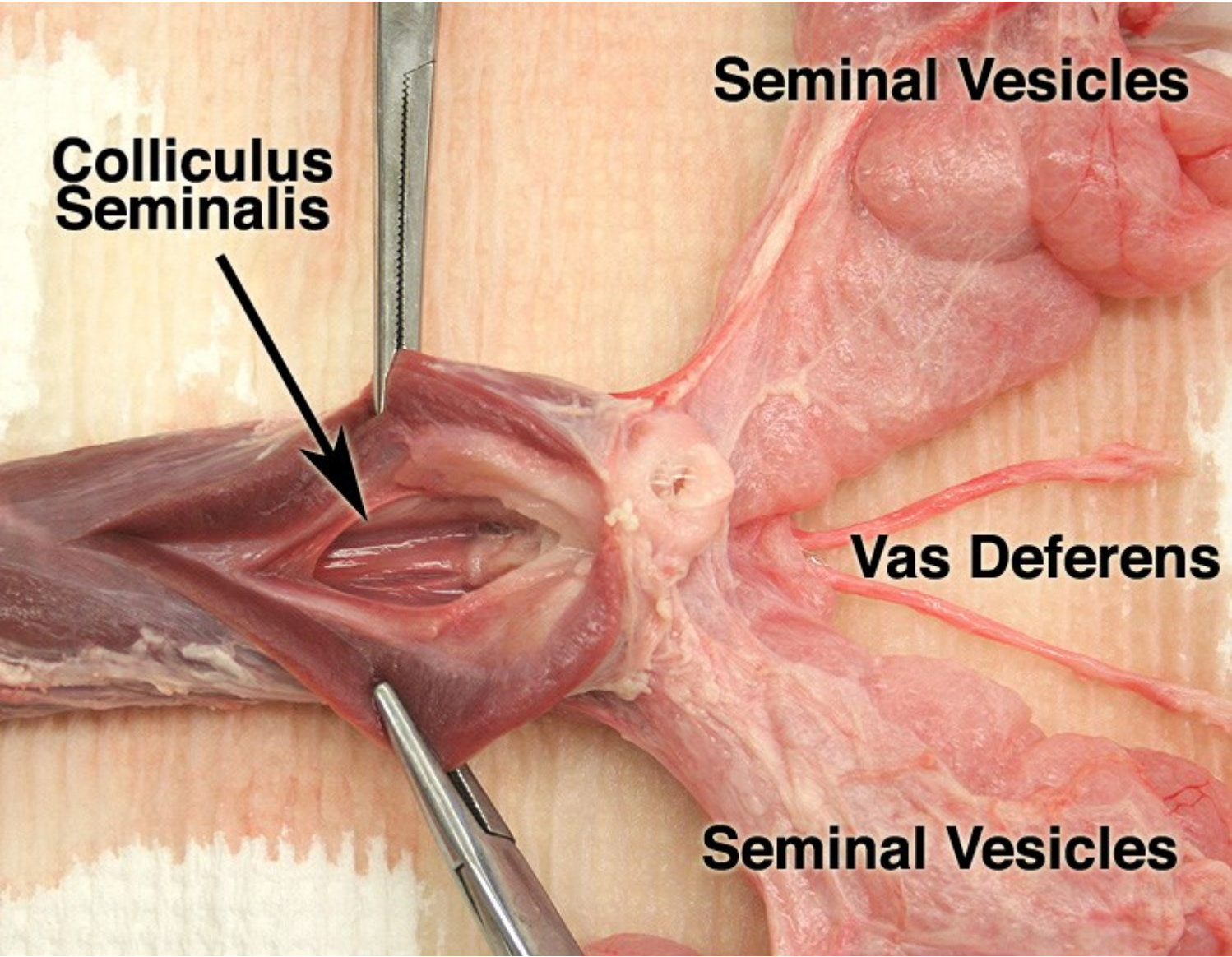
Sympatischer Einfluss



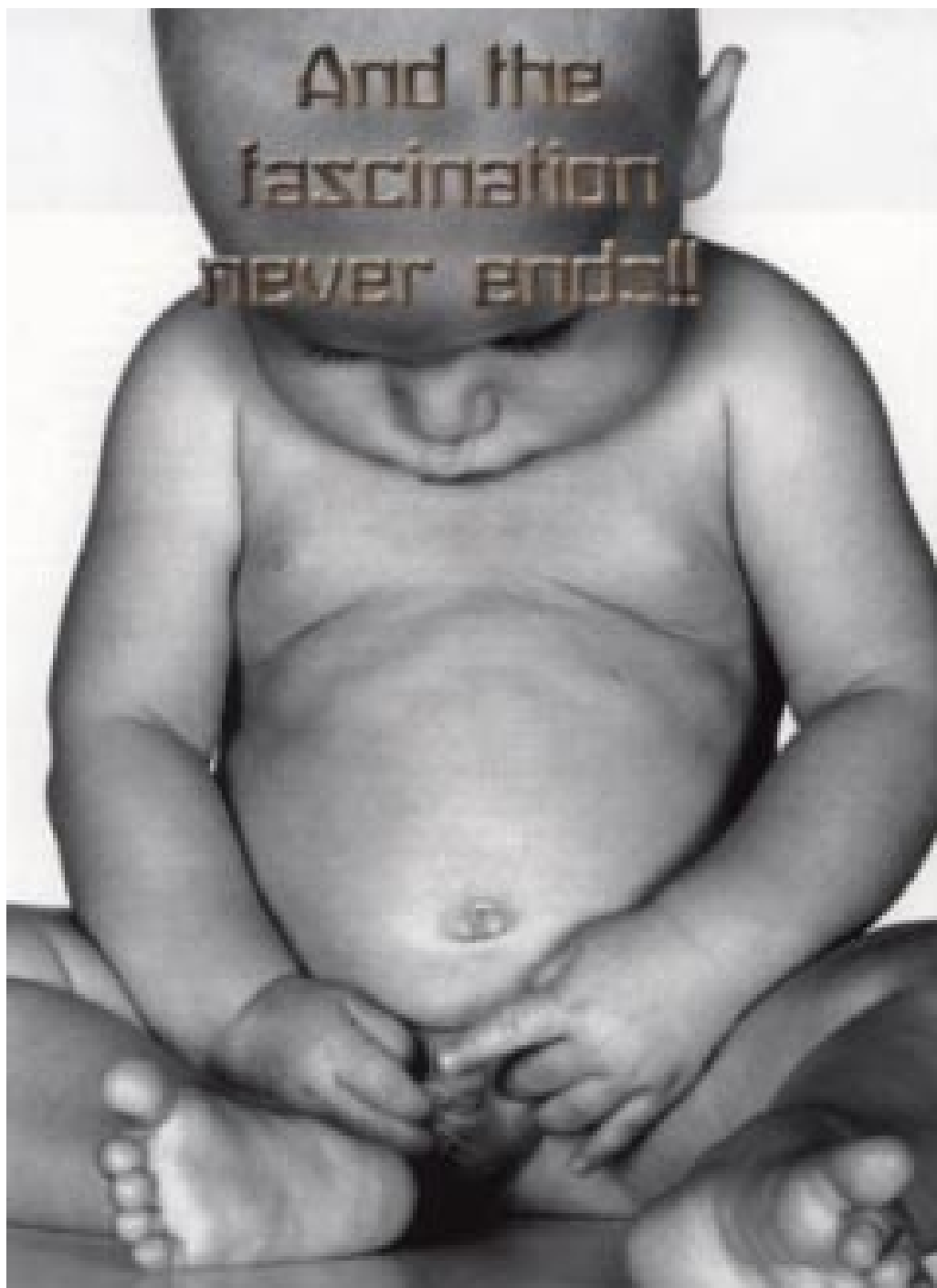
Urethra masculina

1. Ostium urethrae internum
2. Pars prostatica:
Mündung von Ductus ejaculatorius
3. Pars membranacea: Diaphragma urogenitale
4. Pars spongiosa: Corpus spongiosum penis
5. Ostium urethrae externum

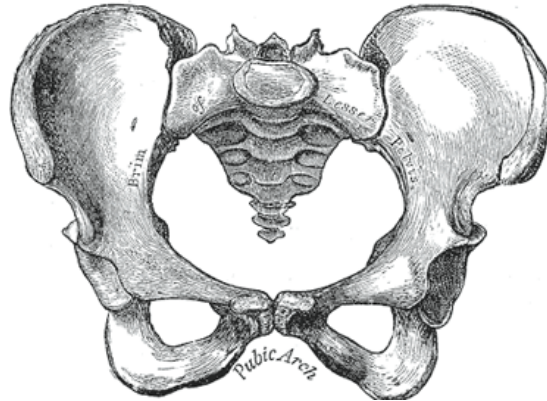
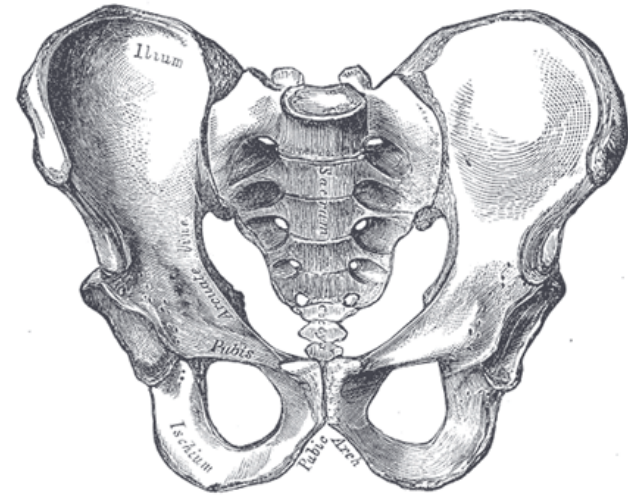




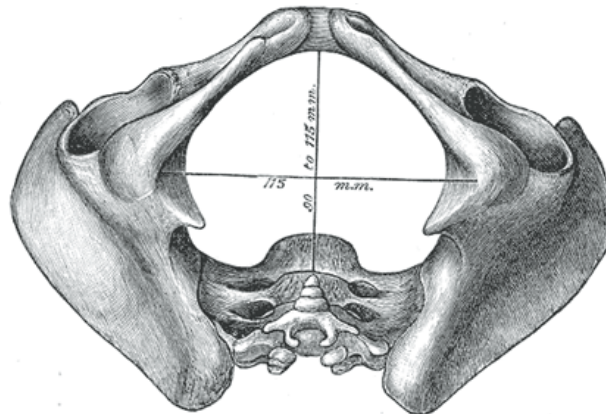
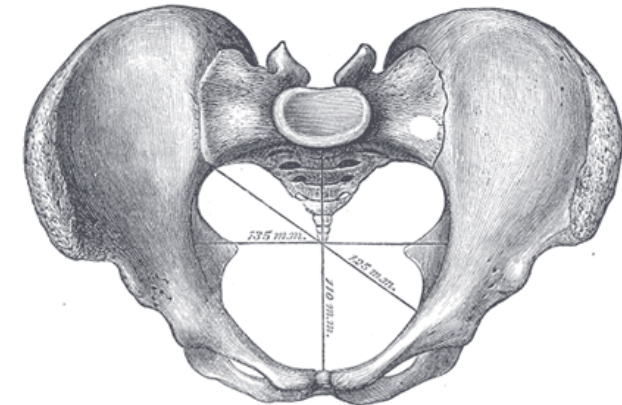
And the
fascination
never ends!!



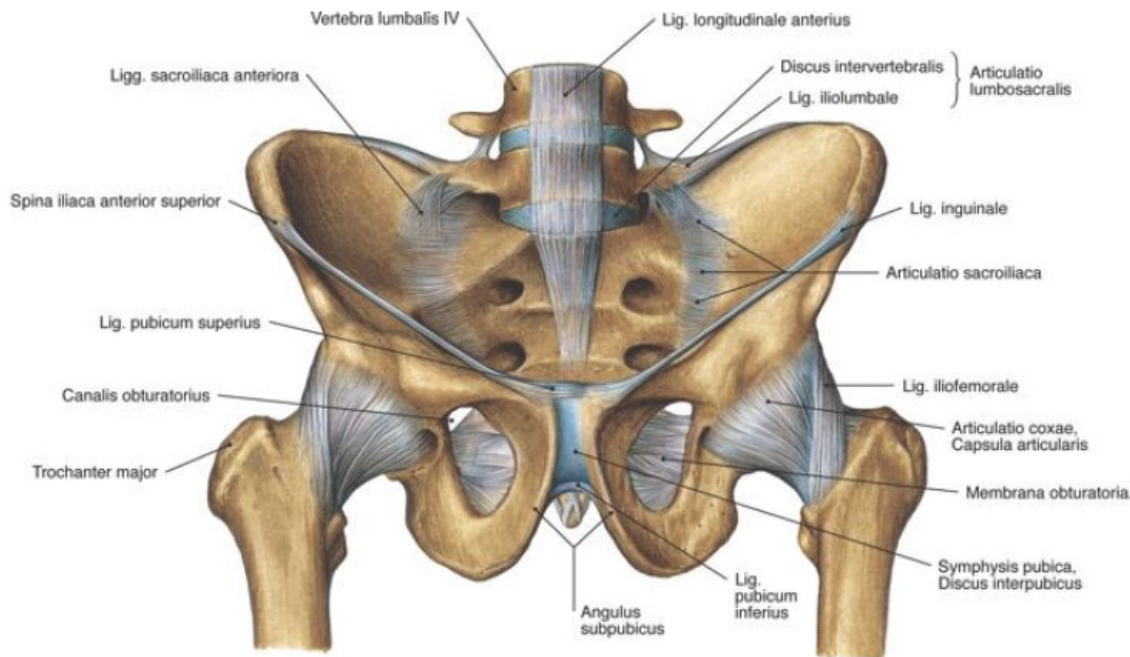
Becken



Hüftbein (*Os coxae*)
Kreuzbein (*Sacrum*)

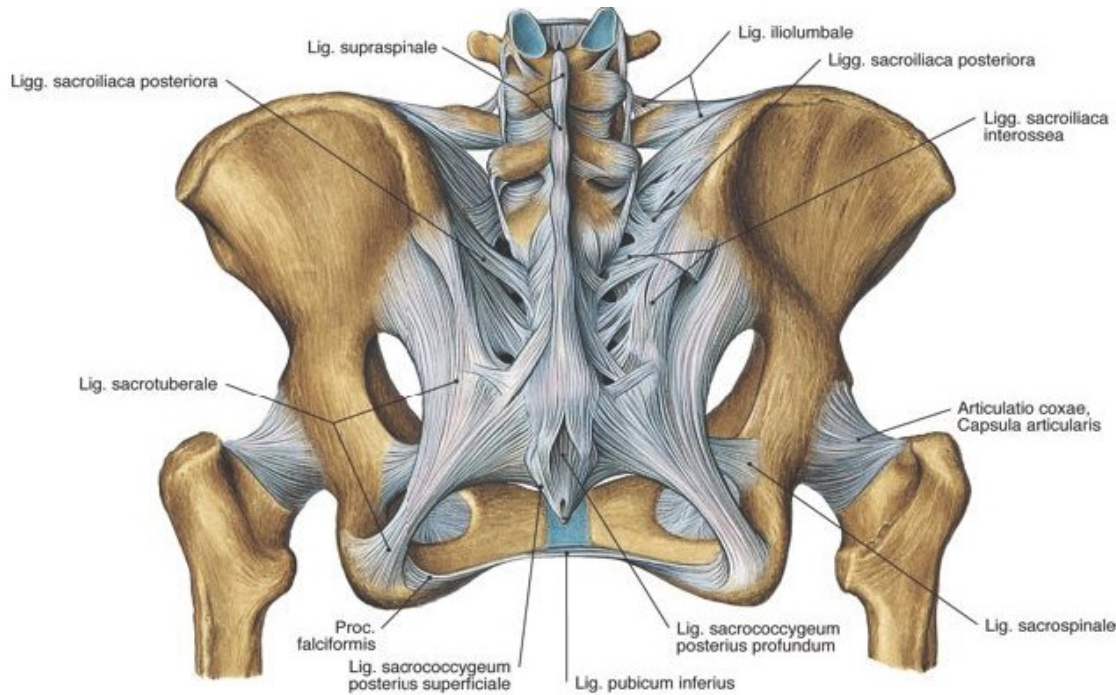


	FEMALE	MALE
PELVIC INLET		
PELVIC OUTLET		
PELVIC CAVITY		
PUBIC ARCH		

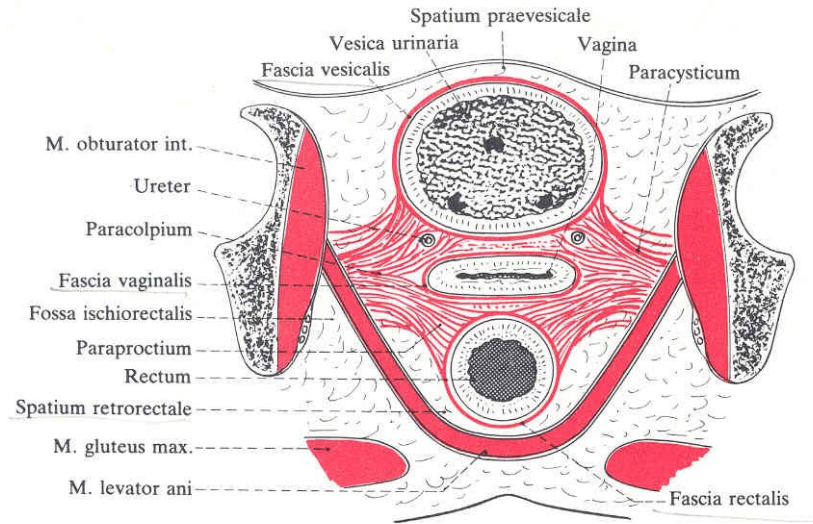
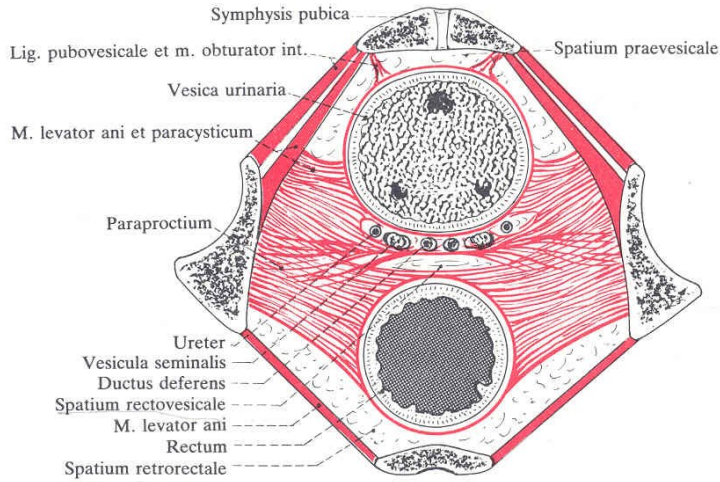


Art. sacroiliaca
Bänder:

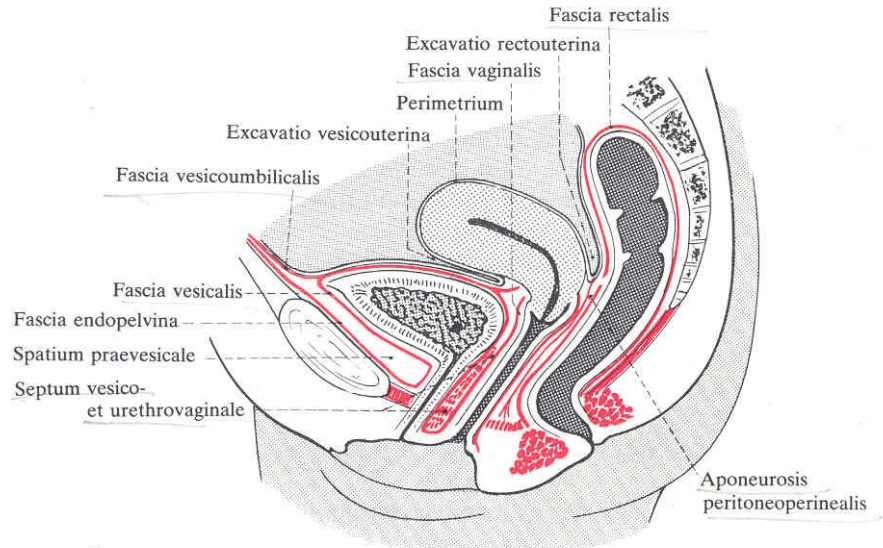
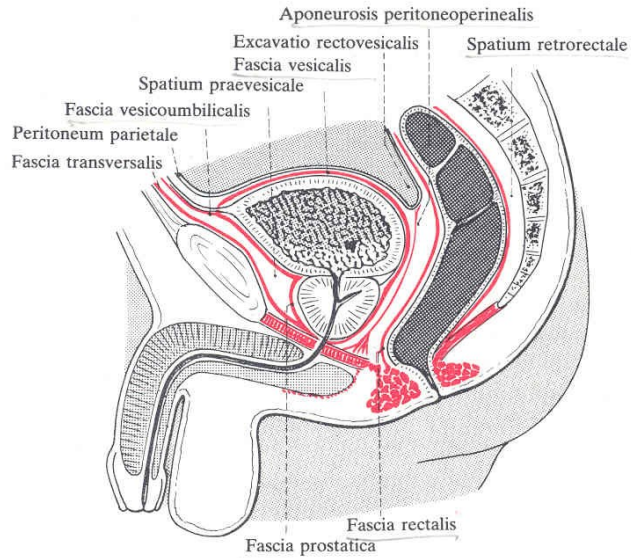
Lig. iliolumbale
Membrana obturatoria
Lig. Sacrotuberale
Lig. Sacrospinale



Beckeneingeweiden

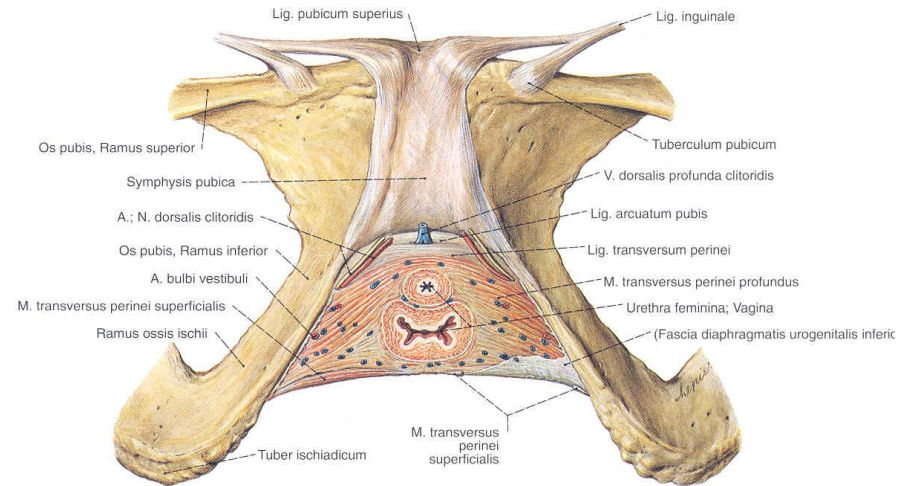
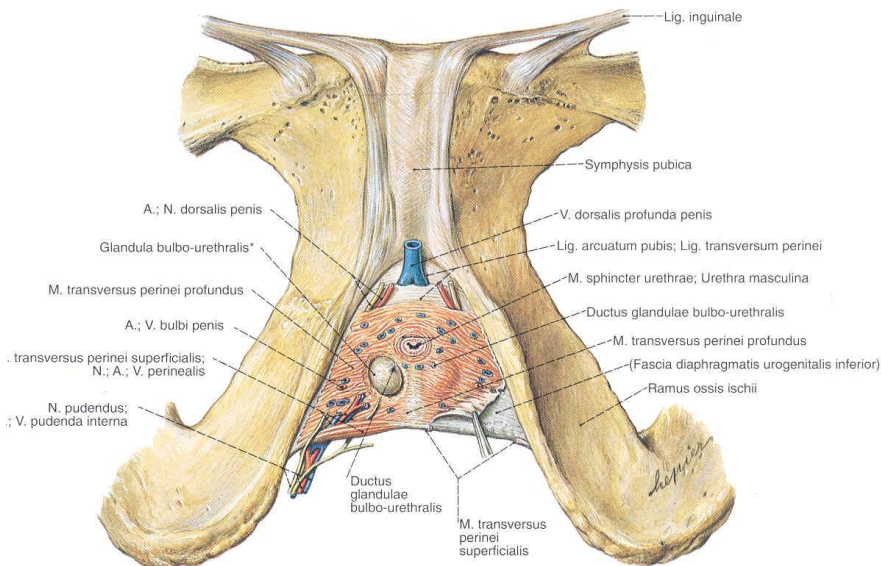
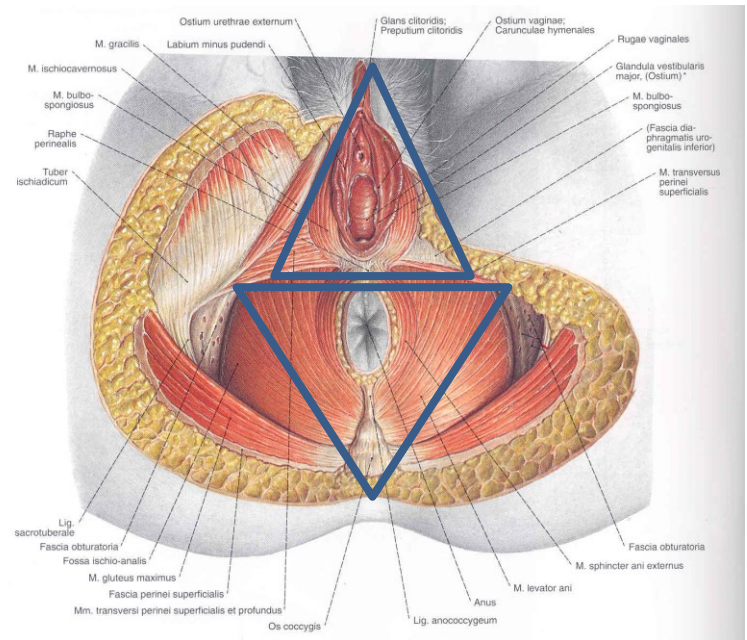
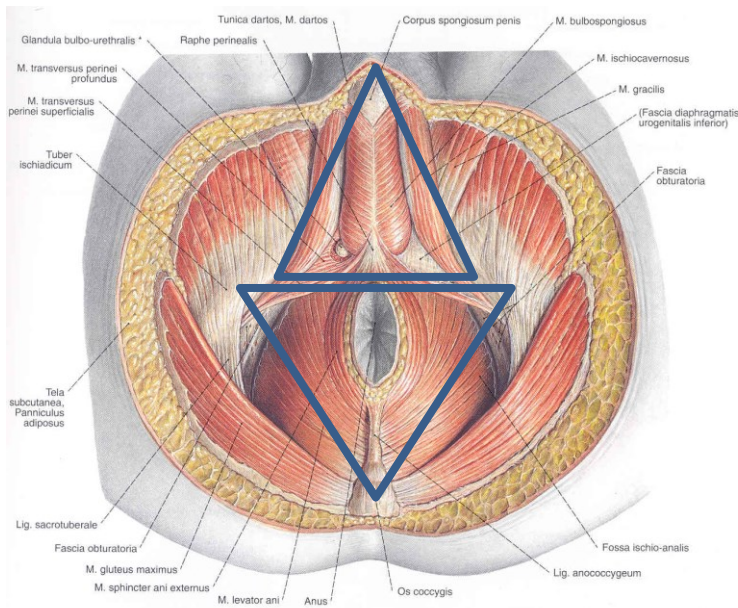


A

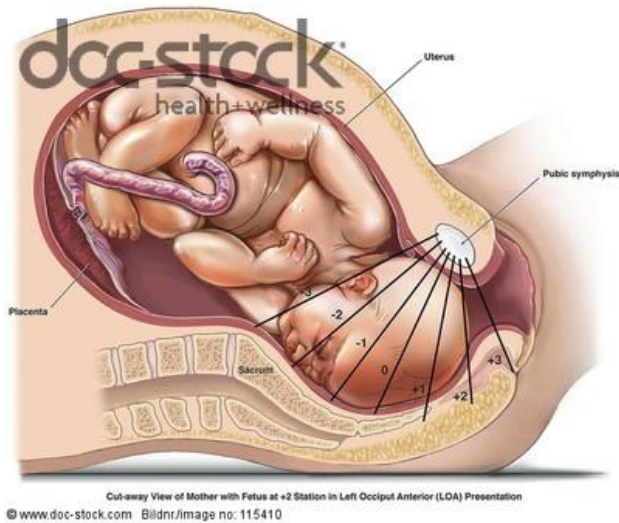


B

Diaphragma urogenitale Diaphragma pelvis



Geburtskanal



Das kindliche Köpfchen beugt sich und dreht sich im Nacken, um tiefer in die runde Beckenhöhle eintreten zu können. Auf seinem ganzen Weg vom Beckeneingang bis auf den Beckenbogen ist das kindliche Köpfchen gebeugt.

Danke für die Aufmerksamkeit!

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