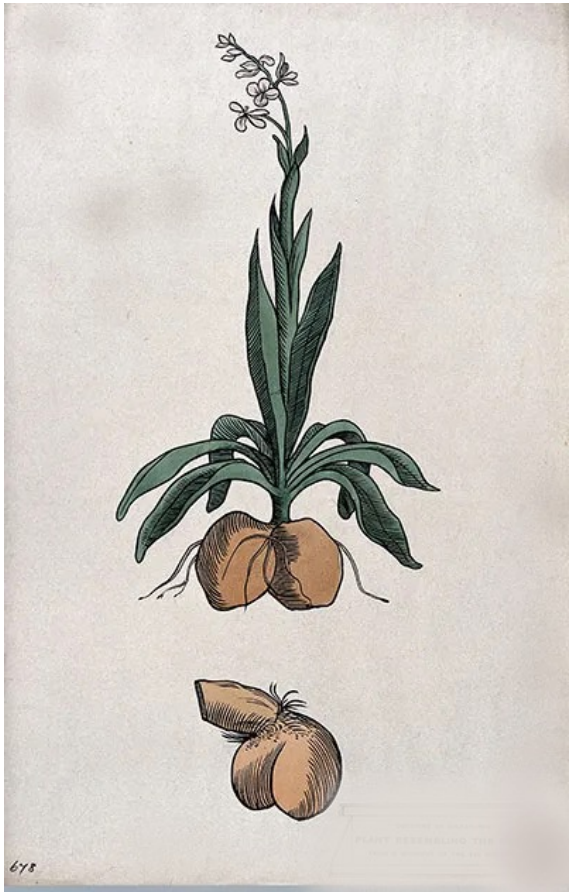
Pediatric Surgery



Ad- VS Disad-

vantages

of Early Orchidopexy

The importance of DESCENDED testes

Duos habet et bene pendentes

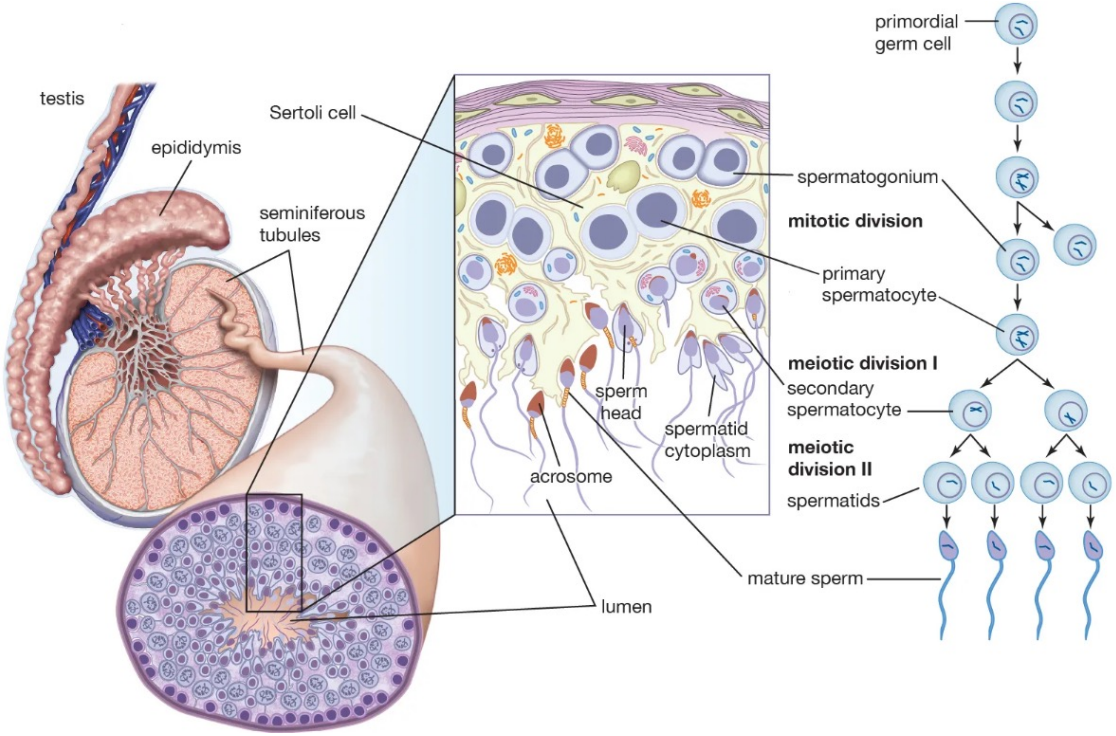


Ioannes Anglicus
855–857



Essential steps for the formation of mature sperms

Predict future fertility by understanding embryology



Gonocytes disappearance

AdS Appearance

AdS differentiate into **primary spermatocyte**

Onset of **spermatogenesis**

Effectiveness of Orchiopexy

Aims:

- Reduce testicular atrophy
- Reduce impaired sperms
- Prevent further deterioration
- Improve fertility

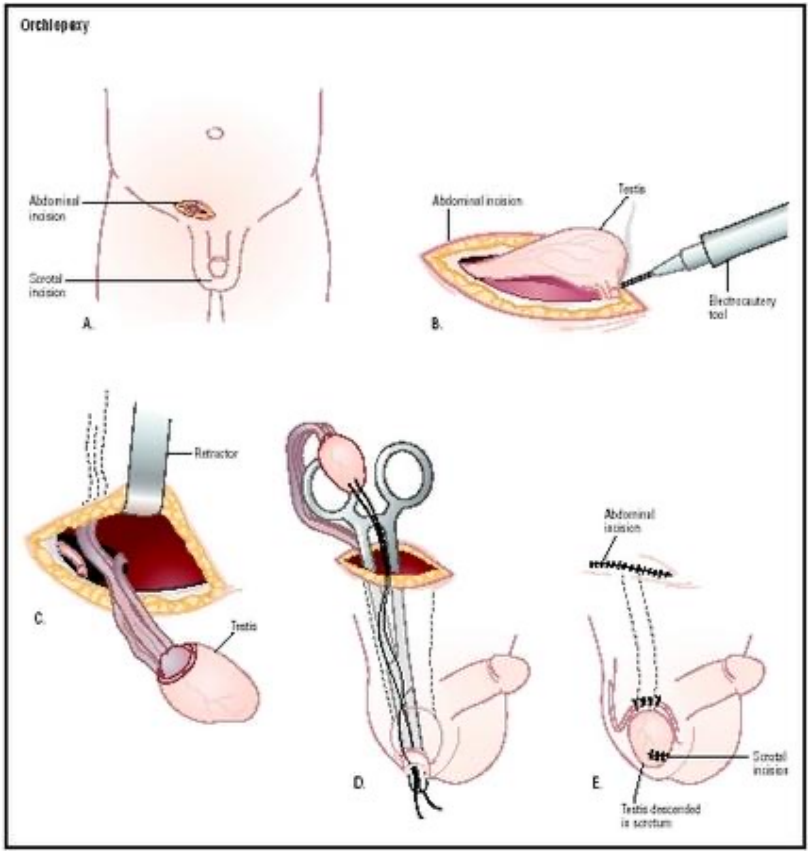
Complications:

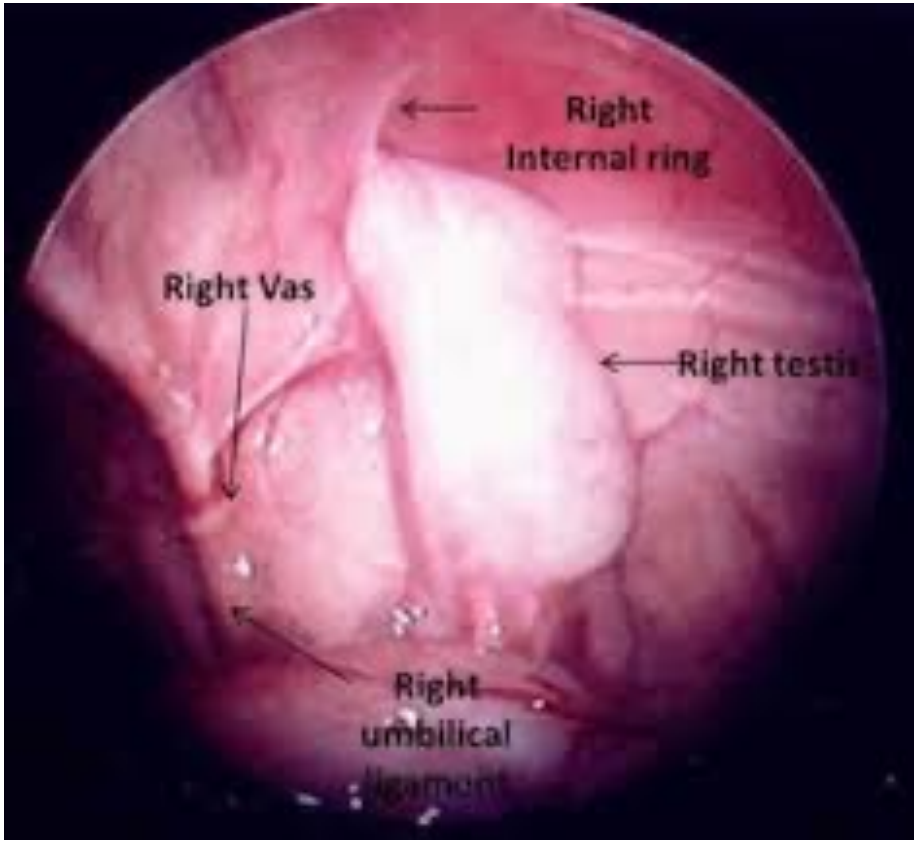
- Damage of blood vessels
- Damage of vas deference

Factors influencing the result:

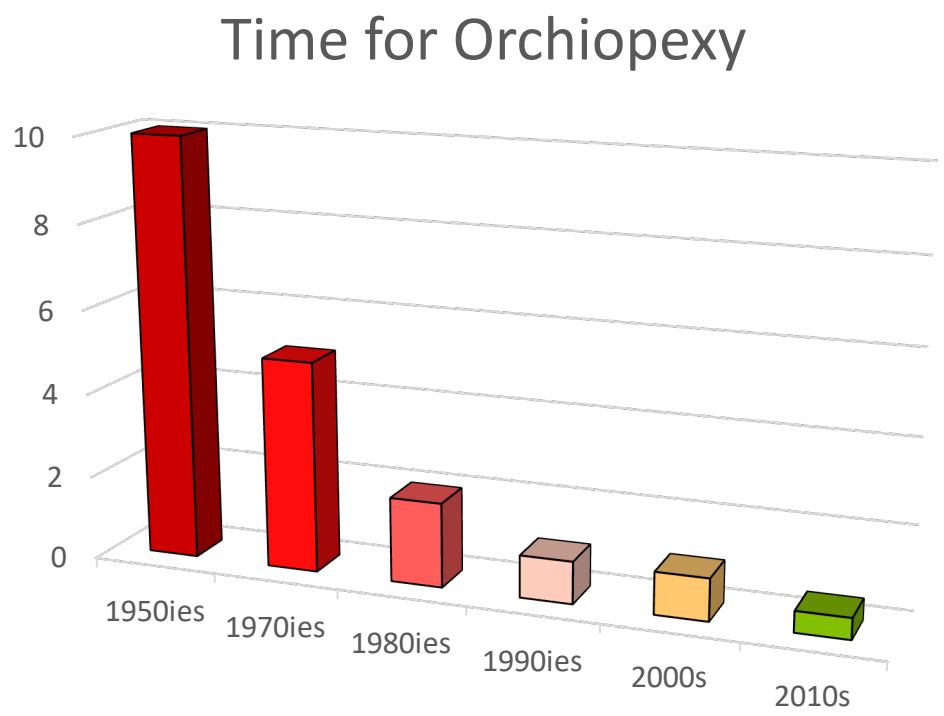
- Surgical technique
- Inherently developmentally defective testis
- Elevated temperature affecting the testes
- Abnormal hypothalamic-pituitary axis
- Reversibility of the process?

Surgical technique





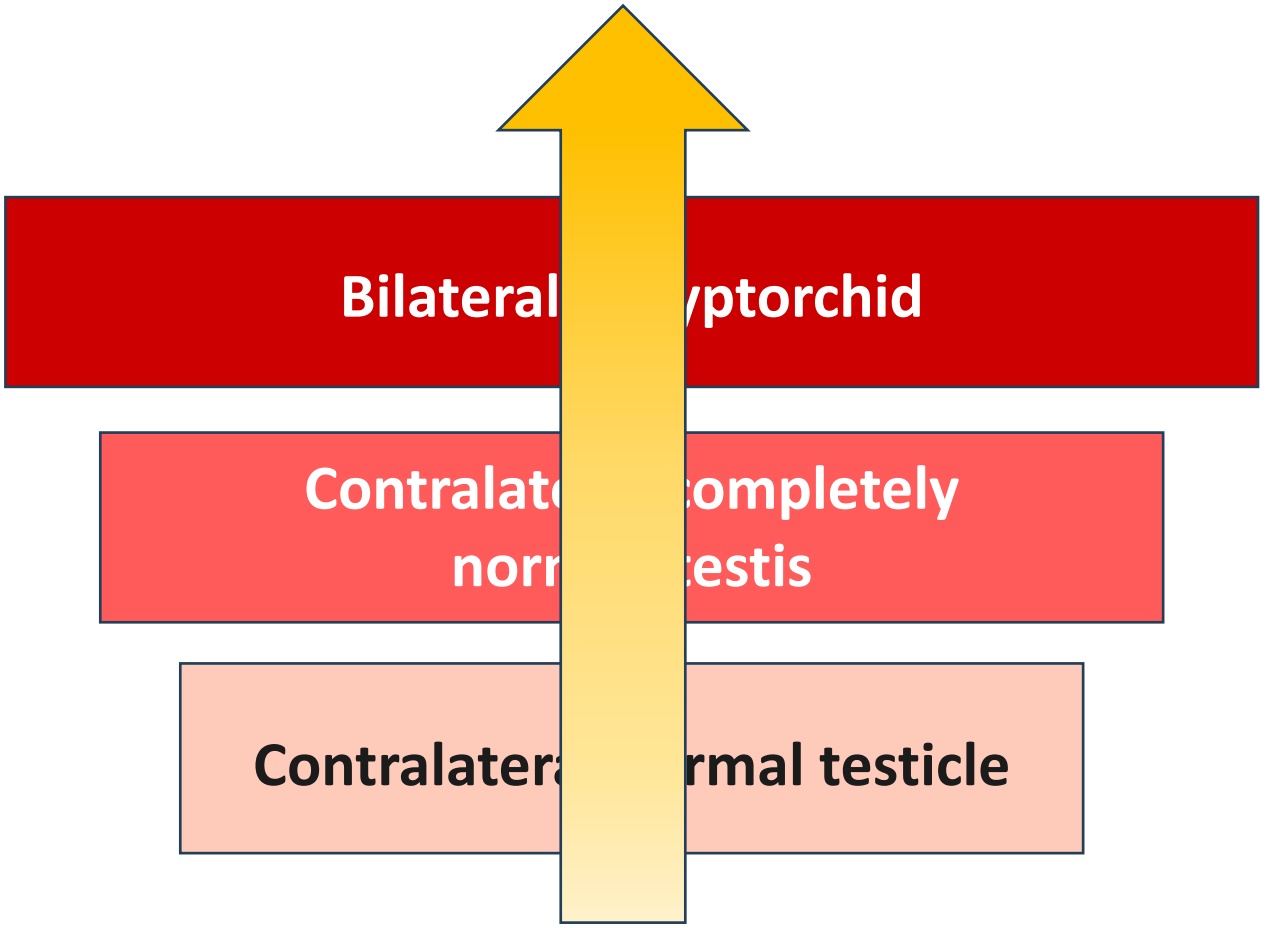
Recommended age for orchiopexy



Widely debated optimal timing of surgical intervention

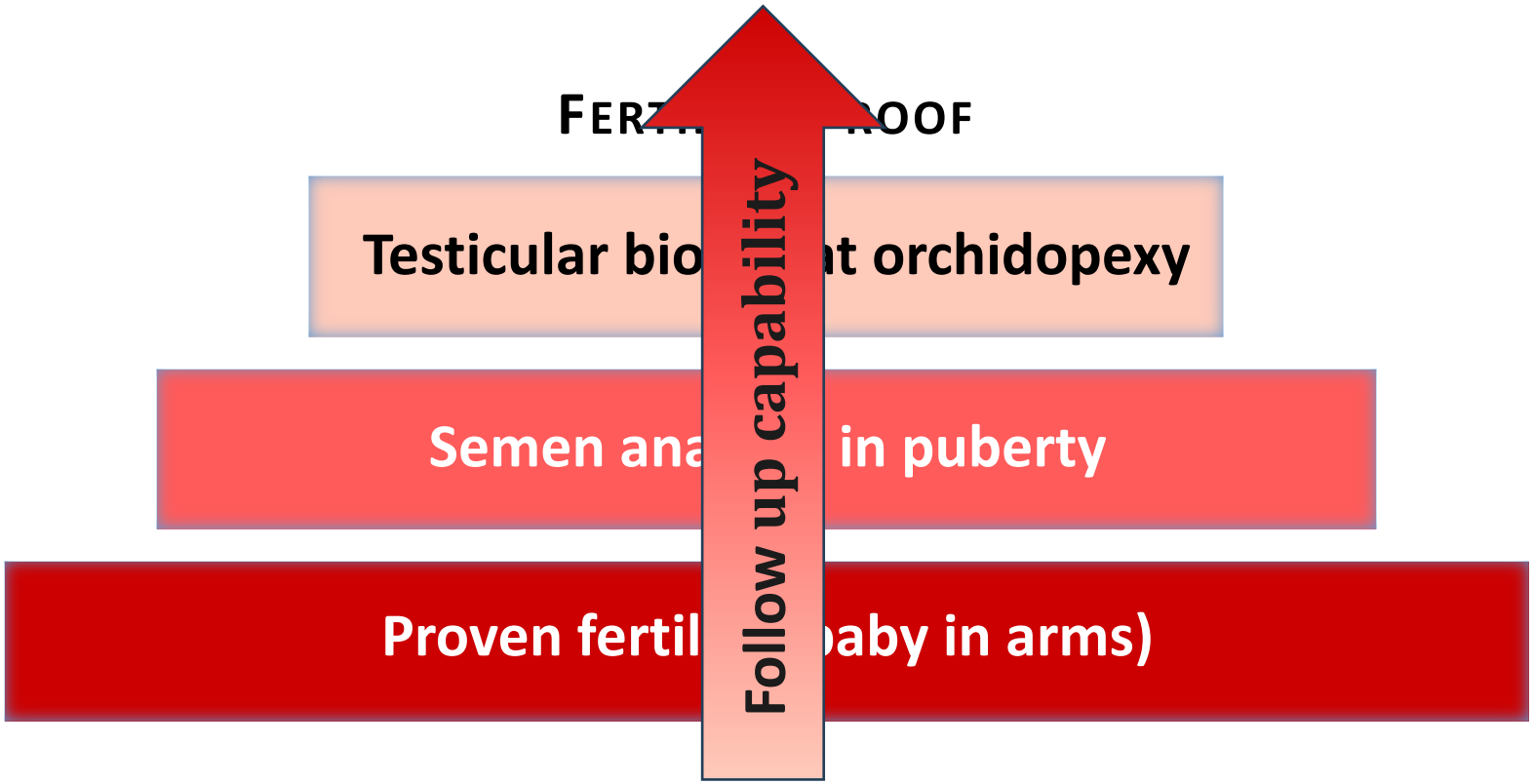
Still average age of boys with UDS at the time of surgery is **above the recommended age**

Is the risk of infertility in cryptorchidism real?



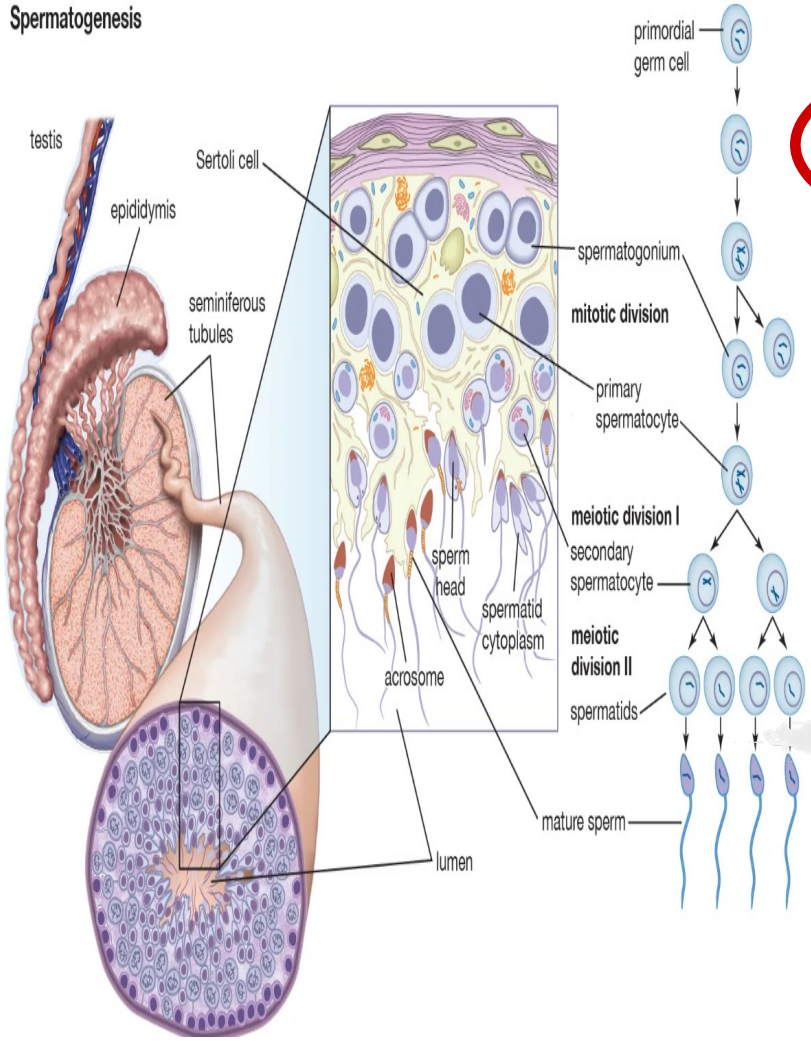
Fertility potential

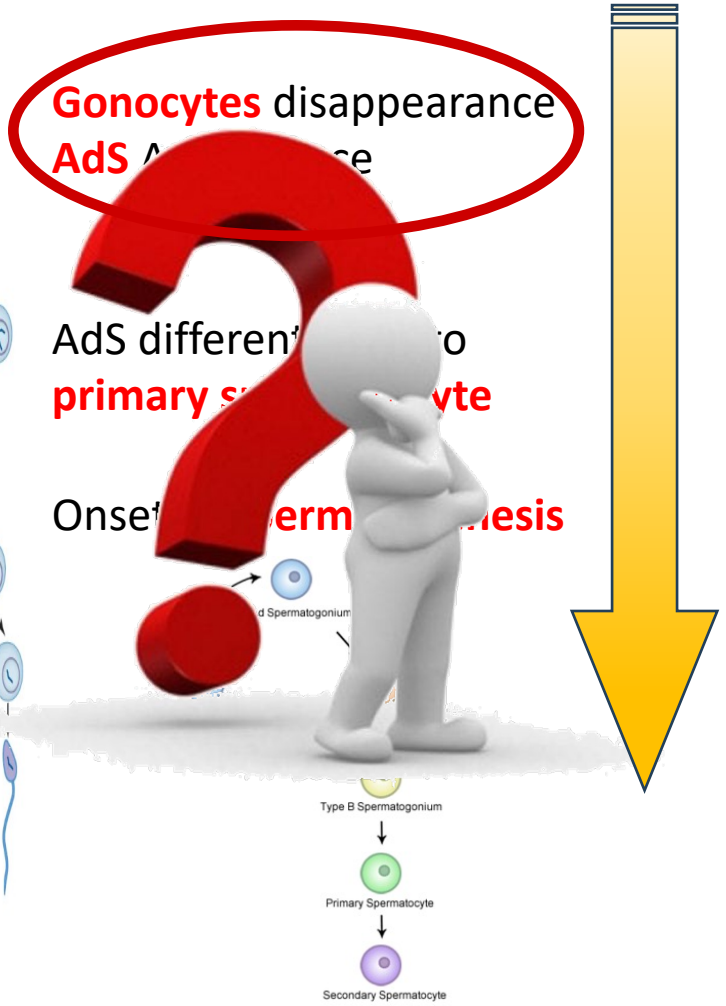
How to measure?



Studies are plagued by bias

Essential steps for the formation of mature sperms



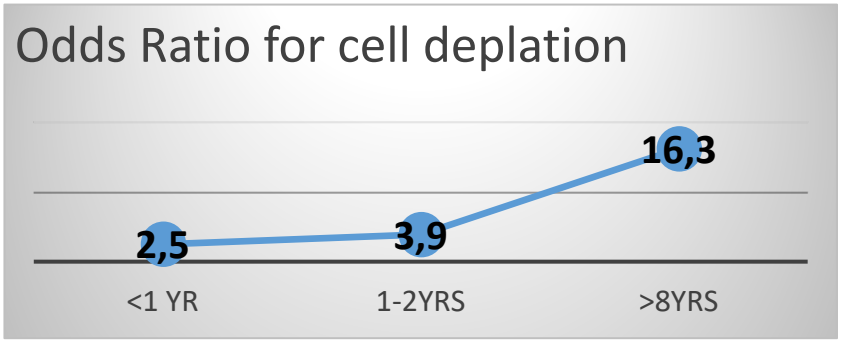


3 – 12 months
Mini Puberty

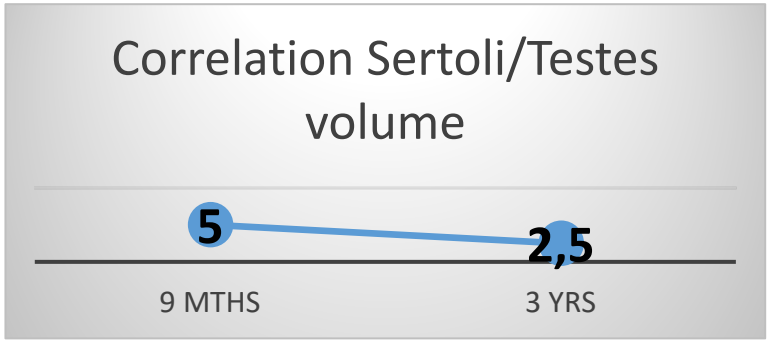
3-5 years

Puberty

Evidence favoring early orchidopexy

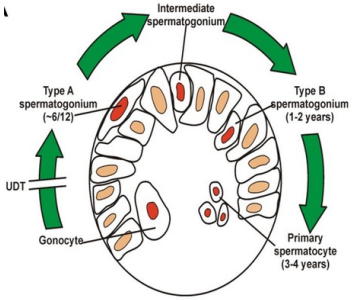


Tasian GE, Hittelman AB, Kim GE, et al. Age at orchiopexy and testis palpability predict germ and Leydig cell loss: clinical predictors of adverse histological features of cryptorchidism. J Urol 2009;182:704-9.



Kollin C, Stukenborg JB, Nurmio M, et al. Boys with undescended testes: endocrine, volumetric and morphometric studies on testicular function before and after orchidopexy at ninemonths or three years of age J Clin Endocrinol Metab 2012;97:4588-95.

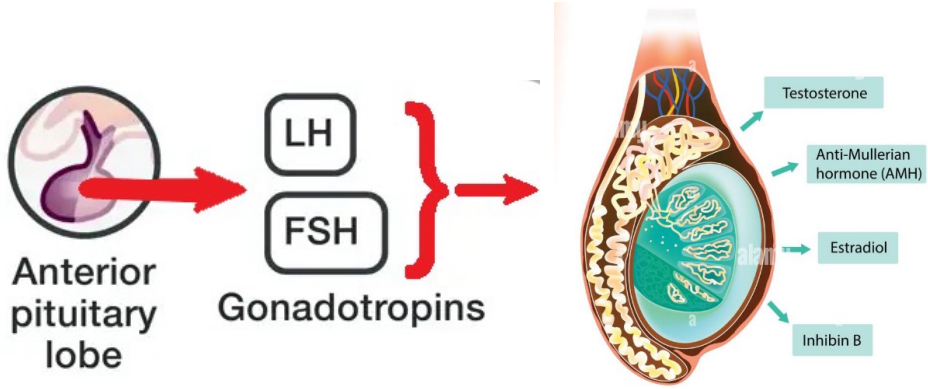
Gem cell maturation



Hadziselimovic F, Herzog B. The importance of both an early orchidopexy and germ cell maturation for fertility. Lancet. 2001

Thorup J, Kvist K, Clasen-Linde E, Petersen BL, Cortes D. The relation between adult dark spermatogonia and other parameters of fertility potential in cryptorchid testes. J Urol. 2013

Testicular hormone production



Thorup J, Petersen BL, Kvist K, Cortes D. Bilateral undescended testes classified according to preoperative and postoperative status of gonadotropins and inhibin B in relation to testicular histopathology at bilateral orchiopexy in infant boys. J Urol. 2012

Conclusion / Conclusiveness?

Delayed surgery of UDT ⚢ Decrease in potential fertility

- Spontaneous descent is rare beyond 6 months of age
- Testicles may not be inherently normal at baseline
- Presence of germs cells or AdS
- Abnormal hypothalamic-pituitary axis

- Simply prevent deterioration in an already pathologic testicle or testicles
- Operating on children who would not need surgery continues to be debated
- Reversibility of the process?