SMALL TESTES

Microorchidism

Abnormally small testicular volume.

♀ Symptom ♂ Male

About Small testes

Abnormally small testicles (testicular volume < 12 ml in adult men) may appear due to several causes. Specifically, there are genetic predispositions (syndromes), infections, malformations, testicular traumatic injuries and intoxication by some drugs that can cause the testicular atrophy (the male reproductive organs diminish in size and may be accompanied by loss of function) or testicular underdevelopment. The function of small testicles is most often maintained but significantly reduced making natural conception more difficult.

The most common instrument used to measure testicular size is called orchidometer (Pic. 1) and consist of testicle-shaped beads differentiating in their size according to specific volumes. This instrument is based upon the fact, that impaired spermatogenesis (the process of sperm production) if often accompanied by small-volume testicles. The normal testicular volume of adult men should be between 12 – 20 ml (Asian males have typically smaller testes, man of other races should have at least testicles matching the 20ml bead).

Genetically predisposed syndromes

To name some genetically predisposed syndromes that are affecting male reproduction capacity and manifest by small testicles, the Klinefelter’s syndrome can be named, as well as the Kenny – Caffey syndrome, Prader – Willi syndrome, Kallmann syndrome or 46, XX testicular disorder of sex development (also known as 46,XX male syndrome). All these syndrome happens to negatively influence the hormonal balances within the human body affecting the function of whole body, resulting in physiological, behavioural and visage changes. As an example of testicular underdevelopment related to genetically predisposed syndrome, a man suffering from Klinefelter’s syndrome has testicles of approximately 5 ml volumes (4 times smaller than regular testicular size of an adult man).

Infections: Mumps

The mumps can serve as typical example of infection that manifests by the presence of small testicles. It is a viral disease of parotid glands that was commonly affecting children in entire world, but now days a vaccination is available. Mumps are highly contagious and spread through contact with respiratory secretions of infected person. The disease can spread into testicular tissue causing an inflammation which can lead also to development of testicular atrophy resulting in small volume testicles.

Malformations: Varicocele

The malformation of venomous network around testicles consisting in enlargement of blood-vessels is called varicocele and it is also connected with small testicular size. Varicocele effects include elevated temperature, adrenal hormone reflux, gonadotoxic metabolite reflux, altered testicular blood flow, antisperm antibody formation, alterations in the hypothalamic-pituitary-gonadal axis, and oxidative stress. This conditions do not deteriorate only the spermatogenesis but may also lead to testicular atrophy resulting in decreased size of testicles.
Find more about related issues

**Diagnoses**

**Azoospermia**
Complete absence of sperm in the ejaculate of a man.
Learn more at: [www.fertilitypedia.org/therapy/diag/azoospermia](http://www.fertilitypedia.org/therapy/diag/azoospermia)

**Anorexia Nervosa**
An eating disorder characterized by the maintenance of a body weight below average, fear of gaining weight, and a distorted body image.
Learn more at: [www.fertilitypedia.org/therapy/diag/anorexia-nervosa](http://www.fertilitypedia.org/therapy/diag/anorexia-nervosa)

**Undescended testes**
In the case of cryptorchidism one or both testes are absent from the scrotum. It is the most common etiologic factor of azoospermy in the adult.
Learn more at: [www.fertilitypedia.org/therapy/diag/undescended-testes](http://www.fertilitypedia.org/therapy/diag/undescended-testes)

**Ejaculatory disorders**
A class of sexual disorders defined as the subjective lack of normal ejaculation.
Learn more at: [www.fertilitypedia.org/therapy/diag/ejaculatory-disorders](http://www.fertilitypedia.org/therapy/diag/ejaculatory-disorders)

**Klinefelter syndrome**
The set of symptoms that result from two or more X chromosome in males.
Learn more at: [www.fertilitypedia.org/therapy/diag/klinefelter-syndrome](http://www.fertilitypedia.org/therapy/diag/klinefelter-syndrome)

**Kallmann syndrome**
A genetic condition where the primary symptom is a failure to start puberty or a failure to fully complete puberty.
Learn more at: [www.fertilitypedia.org/therapy/diag/kallmann-syndrome](http://www.fertilitypedia.org/therapy/diag/kallmann-syndrome)

**Non-obstructive azoospermia**
Complete absence of sperm in the ejaculate due to testicular failure.
Learn more at: [www.fertilitypedia.org/therapy/diag/non-obstructive-azoospermia](http://www.fertilitypedia.org/therapy/diag/non-obstructive-azoospermia)

**XX male syndrome**
The male sex chromosomal disorder characterized by a spectrum of clinical presentations, ranging from ambiguous to normal male genitalia.
Learn more at: [www.fertilitypedia.org/therapy/diag(xx-male-syndrome](http://www.fertilitypedia.org/therapy/diag(xx-male-syndrome)

**Hypogonadism**
A medical term which describes a diminished functional activity of the gonads – the testes and ovaries.
Learn more at: [www.fertilitypedia.org/therapy/diag/hypogonadism](http://www.fertilitypedia.org/therapy/diag/hypogonadism)

**Aspermia**
Male diagnosis connected with male infertility characterised by the complete absence of semen.
Learn more at: [www.fertilitypedia.org/therapy/diag/aspermia](http://www.fertilitypedia.org/therapy/diag/aspermia)

**Y-chromosome deletions**
A family of genetic disorders caused by missing gene(s) in the Y chromosome.
Learn more at: [www.fertilitypedia.org/therapy/diag/y-chromosome-deletions](http://www.fertilitypedia.org/therapy/diag/y-chromosome-deletions)
Pic. 1: A scheme of orchidometer

Orchidometer is used to determine testicular size by matching testicles with teacle-shaped-beads of determined size. The number on each bead correspond with testicular volume in ml which correlates to testicular size.

Sources

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