Child and Adolescent Male Genital Examination

HEALTHY MALE
Generations of healthy Australian men

When to perform an examination

A physical examination of male children and adolescents is vital for the detection of conditions such as testicular cancer, Klinefelter syndrome, and penile and hormonal abnormalities.

How to approach an examination with young patients

Good communication can assist the process of physical examinations with children and adolescents.

- Communicate with both the patient and their parents, using simple language and visual aids if available.
- Explain why you need to perform the examination and ask for permission to proceed.
- Allow the patient to ask questions and express any discomfort before/during the examination.
- When it seems appropriate, humour can be used (particularly with children) to reduce anxiety, foster rapport and improve cooperation before or during the examination.
- If you refer the patient to another specialist, take the time to explain why, and what may be involved.
- Never perform an examination of a child if they are restrained by a parent.
- Always wear gloves during an examination unless there is a specific indication for not doing so (e.g. neonatal examination, detection of a small scrotal mass).

Childhood history and examination

Presentation with acute testicular pain

- Testicular torsion.
- Refer immediately for evaluation for possible surgery.
- This is a medical emergency.
- Later follow up review (e.g. epididymo–orchitis).

History

- Undescended testes (increased risk of testicular cancer, and associated with inguinal hernia).
- Inguinal-scrotal surgery or hypospadias.

Testicular examination

- Undescended testes.
- Testicular volume: Normal childhood (pre-pubertal) range of testicular volume is ≤ 3 mL.

Penile examination

- Hypospadias.
- Micropenis.
- Phimosis (physiological or pathological).

Best time to perform an examination

1. Part of a standard health check-up with new or existing patients.
2. On presentation of relevant disorders or symptoms, including:

Risk factors	Associated disorders
Undescended testes as an infant	Testicular cancer
Delayed puberty	Androgen deficiency
Gynecomastia	Androgen deficiency Klinefelter syndrome Testicular cancer
Past history of testicular cancer	Testicular cancer
Acute testicular - groin pain	Testicular cancer
Testicular pain or lumps	Testicular torsion

Adolescent history and examination

Presentation with acute testicular pain

- Testicular torsion.
- Refer immediately for evaluation for possible surgery.
- This is a medical emergency.
- Later follow up review (e.g. epididymo–orchitis).

History

- Undescended testes.
- Pubertal development.
- Testicular trauma, lump and/or cancer.
- Gynecomastia.
- Prior inguinal-scrotal surgery or hypospadias.

Testicular examination

- Testicular volume.
  - Normal pubertal range is 4-14 mL.
  - < 4 mL by 14 years indicates delayed or incomplete puberty.
  - Small testes (< 4 mL) may suggest Klinefelter syndrome.
  - Adult testis size is established after completion of puberty.
- Scrotal and testicular contents.
  - Abnormalities in texture or hard lumps (tumour or cyst).

Penile examination

- Hypospadias.
- Micropenis.
- Infections (STI) or inflammation.
- Phimosis (physiological or pathological).
- Balanitis.

Examination of secondary sexual characteristics

- Gynecomastia: excessive and/or persistent breast development.
- Delayed puberty (average onset is 12-13 years). Indicators:
  - Short stature compared to family, with reduced growth velocity
  - Absent, slow or delayed genital and body hair development compared to peers
  - Anxiety, depression, school refusal, or behaviour change in school years 8-10 (age 14-16 years).

Puberty: delayed onset or poor progression

Presentation

- Short stature compared to family.
- Absent, slow or delayed genital development.
- Anxiety, depression, school refusal and/or behaviour change.

(±) Other features

- Headache/visual change (CNS lesions).
- Inability to smell (Kallmann's syndrome).
- Behavioural or learning difficulty (47,XXY).
- Unusual features (rare syndromes).

Primary investigations

- Growth chart in context of mid parental expectation (velocity, absolute height).
- Penile size (standard growth chart).
- Testicular volume (> 4 mL puberty imminent).
- Bone age.

Specific investigations

- LH/FSH (may be undetectable in early puberty but if raised can be useful).
- Total testosterone level (rises with onset of puberty).
- Karyotype (if suspicion of 47,XXY).

General investigations

- U&E, FBE & ESR, coeliac screen, TFT.

Treatment and specialist referral

- If all normal for prepubertal age, observe for 6 months.
- Refer to paediatric endocrinologist if patient is > 14.5 years without pubertal onset and/or a specific abnormality.

Klinefelter syndrome (47,XXY)

Presentation

- Small testes < 4 mL characteristic from mid puberty.
- Presentation varies with age and is often subtle.
- Behavioural and learning difficulties.
- Gynecomastia (adolescence).
- Poor pubertal progression (adolescence).

Investigations

- Total testosterone level (androgen deficiency).
- LH/FSH level (both elevated).
- Karyotype.

Treatment and specialist referral

- Refer to paediatric endocrinologist.
- Refer for educational and allied health assistance if needed.

Refer to Clinical Summary Guide 10: Klinefelter Syndrome

Testicular mass

Presentation

- Painless lump.
- Self report, incidental.
- Past history undescended testes (cancer risk).
- Consider possibility of epididymal cyst.

Primary investigations

- Testicular ultrasound.

Treatment and specialist referral

- Refer to uro-oncologist.
- Offer pre-treatment sperm cryostorage.

Refer to Clinical Summary Guide 6: Testicular Cancer

Penile abnormality

Presentation

- Hypospadias.
- Micropenis.
- Phimosis.

Treatment and specialist referral

- Refer to urologist for investigation and treatment plan.
- Refer to paediatric endocrinologist for investigation of micropenis.

Gynecomastia

Presentation in adolescence

- Excessive and/or persistent breast development.
- More prominent in obesity.
- Often normal, resolves over months.

Rare secondary causes

- Hypothalamic pituitary lesions.
- Adrenal/testis lesions (oestrogen excess).

Treatment and specialist referral

- If persistent or acute onset, refer to paediatric endocrinologist.

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Australian Government
Department of Health

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