



# Male Adulthood Genital Examination

Examination of male genitals and secondary sexual characteristics in adults.

## When should I perform an examination?

1. As part of a standard health check-up with new or existing patients
2. 45-49 year old health assessment (MBS) (Note, Aboriginal and Torres Strait Islander men are eligible at younger ages)
3. Prior to initiation of drug treatment (e.g. testosterone, PDE5 inhibitors) or investigation of conditions such as infertility or prostate disease
4. On presentation of relevant risk factors and symptoms (below)

Risk Factor	Associated disorder
Undescended testes as an infant	Testicular cancer
Past history of delayed puberty	Androgen deficiency
Gynecomastia	Androgen deficiency, Klinefelter syndrome, Testicular cancer
Infertility	Androgen deficiency, Testicular cancer
Erectile dysfunction (ED)	Co-morbidities
Past history of testicular cancer	Testicular cancer
Pituitary disorders	Androgen deficiency, Male infertility
Osteoporosis and atraumatic fractures	Androgen deficiency
Haemochromatosis	Androgen deficiency, Male infertility

Symptoms	Associated disorder
Testicular pain or lumps	Tumour or cyst
Reduced libido, hot flushes, fatigue, gynecomastia, ED, mood changes, reduced beard or body hair, poor or reduced muscle development	Androgen deficiency

## How do I best approach an examination with my patient?

- Posters or pamphlets in your clinic can raise awareness about men's health examinations and convey that patients can discuss reproductive health concerns with you
- 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
- Ask specific questions during history-taking, to assist those patients reluctant to raise sensitive problems

## Adulthood history and examination

### Presentation with acute testicular pain

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

### History

- Fertility in current and past relationships
- Testicular trauma, cancer, STI
- Inguinal-scrotal surgery (undescended testes, childhood hernia)
- Symptoms of androgen deficiency
- Systemic treatment for malignancy, immunosuppression, organ transplant (for possible testicular damage)
- Gynecomastia
- Occupational or toxin exposure

### Testicular examination

#### Testicular volume

- Normal range of adult testicular volume: 15-35 mL
- Small testes <4 mL suggests Klinefelter syndrome

#### Scrotal and testicular contents

- Abnormalities in the texture or hard lumps: suggests tumour or cyst
- Enlargement, hardening or cysts of the epididymides
- Varicocele
- Nodules or absence of vas deferens

### Penile examination

- Hypospadias
- Peyronie's disease
- Micropenis
- Urethral stricture
- Evidence of infection (STI) or inflammation
- Foreskin: balanitis, phimosis

### Secondary sexual characteristics of androgen deficiency

- Reduced facial, body and pubic hair
- Gynecomastia
- Reduced or poor muscle development

### Prostate and other examinations

- In suspected prostate disease, digital rectal examination may be considered, or an initial referral to urologist
- If prostate enlargement, tenderness or nodularity is found, refer to urologist
- General medical review of erectile dysfunction. Focus on cardiovascular risk (BP, pulses) & diabetes (including neuropathy)

## Androgen deficiency (AD)

### Presentation

- Symptoms of AD in men of any age
- Following testis surgery, torsion, trauma, cancer treatment
- Incidental findings of small testes
- In association with infertility

### Primary investigations

- Total testosterone level (two morning fasting samples) and LH/FSH level

### Investigations if low total testosterone with normal or low LH/FSH

- Serum prolactin (prolactinoma)
- MRI pituitary (various lesions)
- Olfactory testing (Kallmann's syndrome)
- Iron studies (haemochromatosis)
- Also commonly seen with co-morbidities (obesity, depression, chronic illness): focus on underlying condition

### Other investigations

- SHBG/calculated free total testosterone (selected cases, e.g. obesity, liver disease)
- Bone density study (osteoporosis)
- Semen analysis (if fertility is an issue)
- Karyotype (if suspicion of 47,XXY)

### Treatment and specialist referral

- Testosterone Replacement Therapy (TRT)

\*Contraindicated in prostate and breast cancer

\*Withhold treatment until investigation complete

- In general, TRT is not justified in older men with borderline low testosterone levels and without underlying pituitary or testicular disease
- Low-normal total testosterone is common in obesity or other illness and may not reflect AD. Address underlying disorders first.
- Consult a specialist to plan long term management:
  - Refer to endocrinologist
  - Refer to fertility specialist as needed

Refer to Clinical Summary Guide 4: Androgen Deficiency

## Klinefelter syndrome (47,XXY)

### Presentation

- Small testes <4 mL characteristic from mid puberty. Infertility (azoospermia) or androgen deficiency
- Other features vary, and are often subtle. These include taller than average height, reduced facial and body hair, gynecomastia, behavioural and learning difficulties (variable), osteoporosis and feminine fat distribution

### Primary Investigations

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

### Other investigations

- Bone density study (osteoporosis)
- Semen analysis (usually azoospermic)
- TFT (hypothyroidism)
- Fasting blood glucose (diabetes)

### Treatment and specialist referral

- Develop a plan in consultation with an endocrinologist
- Refer to endocrinologist, as TRT is almost always needed
- Refer to fertility specialist as appropriate, for sperm recovery from testis (occasionally) or donor sperm

Refer to Clinical Summary Guide 10: Klinefelter Syndrome

## Penile abnormality

### Presentation

- Hypospadias
- Peyronie's disease
- Micropenis
- Urethral stricture
- Phimosis

### Treatment and specialist referral

- Refer to urologist for investigation and treatment plan

## Testicular mass

### Presentation

- Painless lump
- Self report, incidental
- Past history undescended testes (cancer risk)
- Confirm lump is in testis rather than 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

## Gynecomastia

### Presentation in adulthood (common)

- Excessive and/or persistent breast development
- Androgen deficiency
- Chronic liver disease
- Hyperprolactinaemia
- Adrenal or testicular tumours
- Drugs (e.g. spironolactone), marijuana, sex steroids
- Distinguish from 'pseudogynecomastia' of obesity

### Primary investigations

- Total testosterone level, estradiol, FSH/LH
- LFTs, iron studies (haemochromatosis)
- Serum prolactin (pituitary tumour)
- Karyotype (if suspicion of 47,XXY)
- $\beta$ hCG,  $\alpha$ FP, ultrasound (testicular cancer)

### Treatment and specialist referral

- Refer to endocrinologist
- Refer to plastic surgeon (after evaluation) if desired

## Male infertility

### Presentation

- Failure to conceive after 12 months of regular (at least twice weekly) unprotected intercourse
- Consider early evaluation if patient is concerned and/or advancing female age an issue

### ( $\pm$ )Other features:

- Testis atrophy (androgen deficiency)
- Past history undescended testis (cancer risk)
- Psychosexual issues (primary/secondary)
- Past history STI (obstructive azoospermia)

### Primary investigations

- Semen analysis: twice at 6-week intervals. Analysis at specialised reproductive laboratory if abnormalities
- FSH: increased level in spermatogenic failure
- Testicular ultrasound (abnormal physical examination, past history of undescended testes)
- Total testosterone and LH (small testes <12 mL or features of androgen level) Treatment and specialist referral
- Healthy lifestyle, cease smoking
- Advice on natural fertility timing
- Identification of treatable factors (often unexplained and no specific treatment)
- Refer to an endocrinologist as necessary
- Refer to a fertility specialist (ART widely applicable)

Refer to Clinical Summary Guide 5: Male Infertility

