

ICM for Urology History Taking and Physical Examination

Smith & Tanagho's General Urology

18th EDITION 2012

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دانشجو در پایان باید بتواند:

- 1. علایم و نشانه های بیماریهای ارولوژی را فهرست کند.
- 2. تشخیص افتراقی های مهم هر کدام از علایم و نشانه ها را بیان کند.
 - محل های مختلف در د کولیکی را تفسیر کند.
 - 4. علایم ادر اری تحتانی را طبقه بندی نماید.
 - 5. انواع بی اختیاری ادر اری را تعریف کند.



Symptoms of Disorders of the Genitourinary Tract





• It is important to know not only whether the disease is acute or chronic but also whether it is recurrent.





SYSTEMIC MANIFESTATIONS

- Fever
 - Pyelonephritis
 - It is the rule that chronic pyelonephritis does not cause fever.
 - Prostatitis
 - Renal carcinoma
- Weight loss
 - Cancer
 - Renal insufficiency
- Failure to thrive
 - Chronic obstruction
 - UTI





SYSTEMIC MANIFESTATIONS

- General malaise
 - Tumors
 - Chronic pyelonephritis
 - Renal failure
- The presence of many of these symptoms may be compatible with human immunodeficiency virus





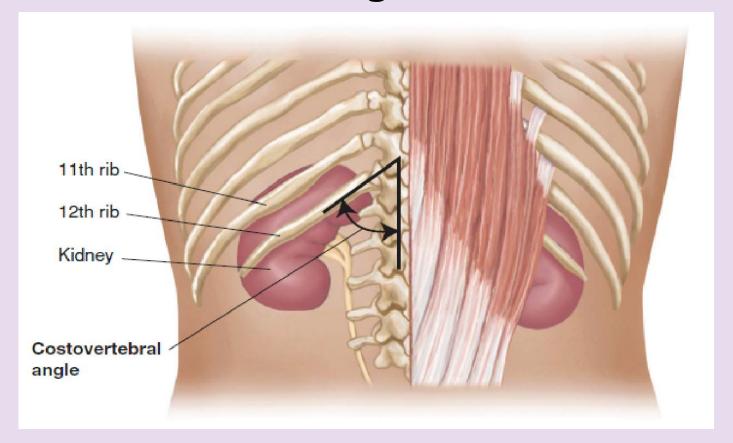
• The pain from a diseased kidney (T10–12, L1) is felt in the costovertebral angle and in the flank in the region of and below the 12th rib.

Pain from an inflamed testicle is felt in the gonad itself.





• Kidneys and costovertebral angle







A stone in the <u>lower ureter</u> may cause pain referred to the <u>scrotal</u> wall.

• The <u>burning pain</u> with voiding that accompanies acute cystitis is felt in the distal urethra in females and in the glandular urethra in males (S2–3).



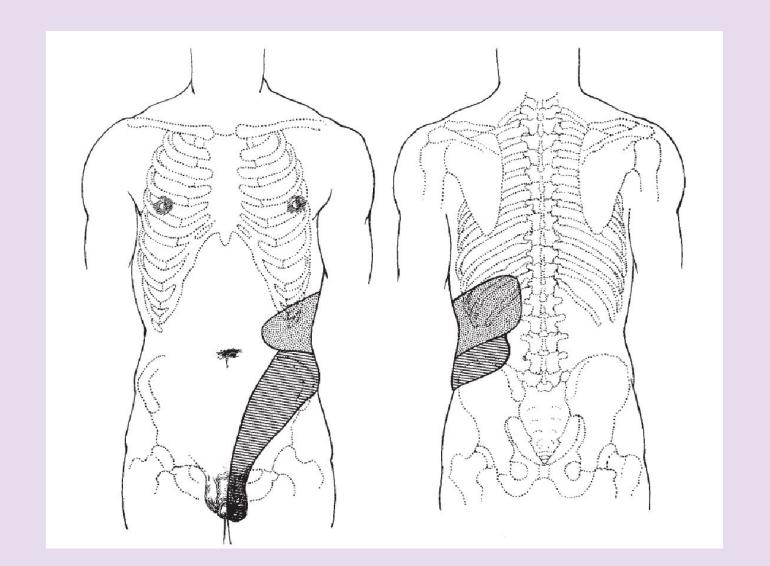


• Abnormalities of a urologic organ can also cause <u>pain in any other</u> <u>organ</u> (eg, gastrointestinal, gynecologic) that has a sensory nerve supply common to both.



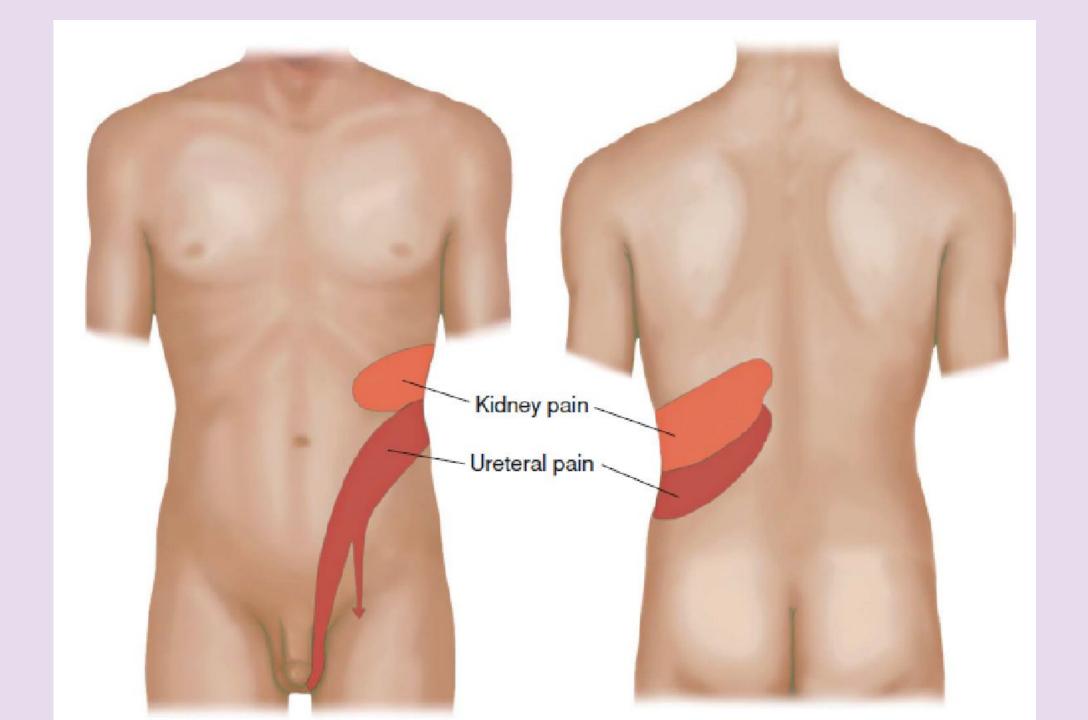


Referred pain from kidney (dotted areas) and ureter (shaded areas)













Kidney Pain

• Dull and constant, lateral to the sacrospinalis muscle, below the 12th rib





Ureteral Pain

Colicky pain, radiates

- The physician may be able to judge the position of a ureteral stone
 - Upper ureter □ Testicle (T11–12)
 - Midportion ☐ McBurney's point (T12, L1)
 - Lower ureter

 Vesical irritability





Vesical Pain

Agonizing pain in the suprapubic area.

- Other than this, however, constant suprapubic pain not related to the act of urination is usually not of urologic origin.
- The most common cause of bladder pain is infection.





Prostatic Pain

• <u>Direct pain</u> from the prostate gland is **not common**.

• Vague discomfort or fullness in the perineal or rectal area (S2-4).





Testicular Pain

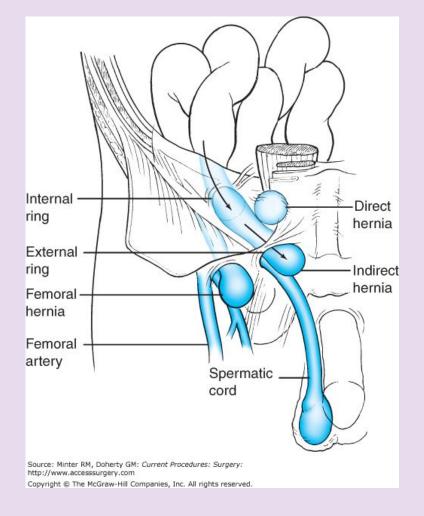
• Uninfected <u>hydrocele</u>, <u>spermatocele</u>, and <u>tumor</u> of the testis do not commonly cause pain.

• A <u>varicocele</u> may cause a dull ache in the testicle that is increased after heavy exercise.





• At times, the first symptom of an early indirect inguinal hernia may be testicular pain (referred).







Epididymal Pain

• Acute infection of the epididymis is the <u>only painful disease</u> of this organ and is quite common.





GASTROINTESTINAL SYMPTOMS OF UROLOGIC DISEASES

Acute pyelonephritis: generalized abdominal pain and distention

Passing a stone: severe N/V, abdominal distention





SYMPTOMS RELATED TO THE ACT OF URINATION

Frequency, Nocturia, and Urgency

• Day frequency without nocturia and acute or chronic frequency lasting only a few hours suggest <u>nervous</u> tension.

• A very low or very high urine **pH** can <u>irritate the bladder</u> and cause frequency of urination.





Dysuria

• Painful urination is usually related to acute <u>inflammation</u> of the bladder, urethra, or prostate.

• Dysuria often is the <u>first symptom</u> suggesting urinary infection and is often associated with urinary frequency and urgency.





Enuresis

• It **may** present as a symptom of <u>organic disease</u> (eg, infection, distal urethral stenosis in girls, posterior urethral valves in boys, neurogenic bladder).





Symptoms of Bladder Outlet Obstruction

- A. Hesitancy
- B. Loss of Force and Decrease of Caliber of the Stream
- C. Post Voiding Dribbling (Terminal Dribbling)
- D. Urgency
- E. Acute Urinary Retention
- F. Chronic Urinary Retention
- G. Interruption of the Urinary Stream
- H. Sense of Residual Urine
- I. Cystitis





Incontinence

A. True Incontinence

- The patient may lose urine without warning; this may be a constant or periodic symptom.
- B. Stress (=effort) Incontinence
- C. Urge Incontinence
 - Urge incontinence is a common symptom of an upper motor neuron lesion.

D. Overflow Incontinence

 <u>Paradoxic incontinence</u> is loss of urine due to chronic urinary retention or secondary to a flaccid bladder.





Oliguria and Anuria

• Oliguria and anuria may be caused by acute renal failure (due to shock or dehydration), fluid-ion imbalance, or bilateral ureteral obstruction.





Pneumaturia

• <u>Carcinoma</u> of the sigmoid colon, <u>diverticulitis</u> with abscess formation, regional <u>enteritis</u>, and <u>trauma</u> cause most vesical fistulas.







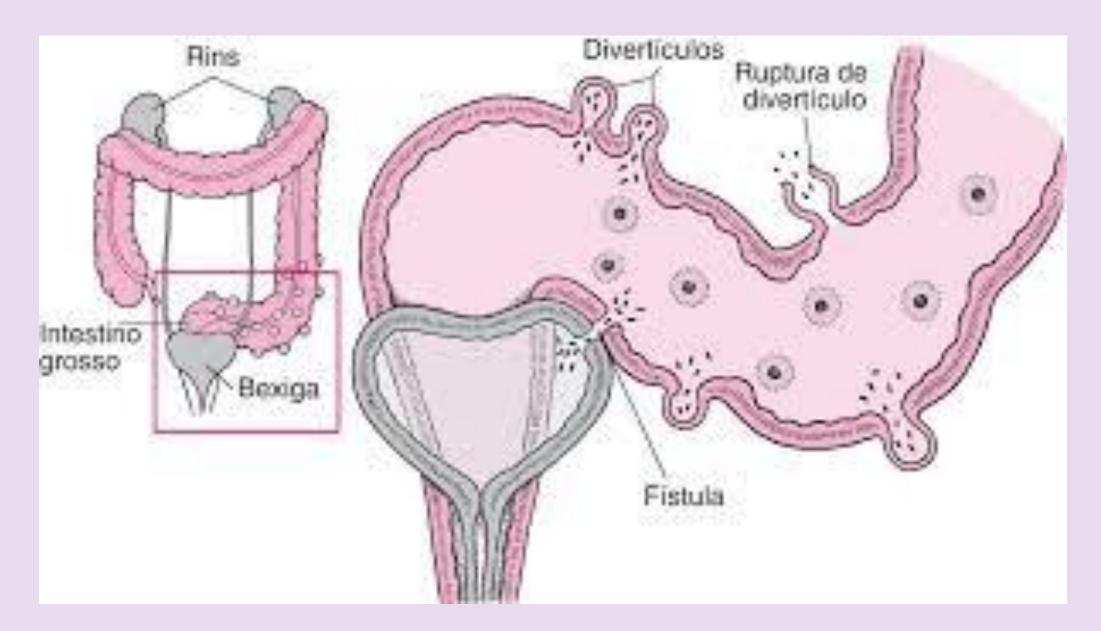






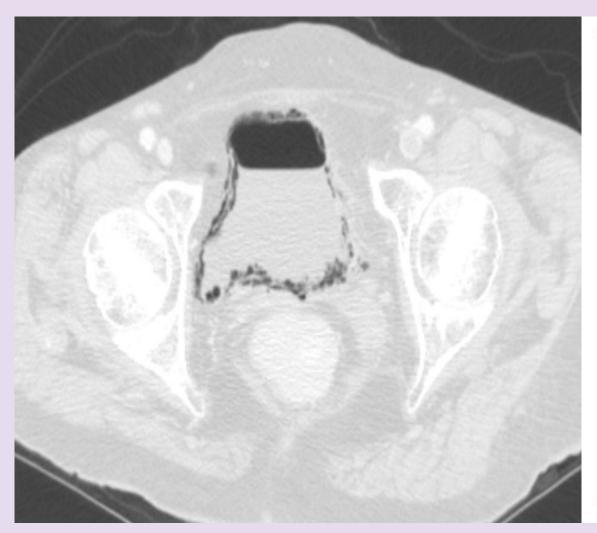


















Cloudy Urine

• Patients often complain of cloudy urine, but it is most often cloudy merely because it is **alkaline**.





Chyluria

• The passage of lymphatic fluid or chyle is noted by the patient as passage of **milky white urine**.

• <u>Filariasis</u>, <u>trauma</u>, <u>tuberculosis</u>, and retroperitoneal <u>tumors</u> have caused the problem.





Bloody Urine

• It is important to know whether urination is <u>painful or not</u>, whether the hematuria is associated with symptoms of vesical <u>irritability</u>, and whether blood is seen in <u>all or only a portion</u> of the urinary stream.





A. Bloody Urine in Relation to Symptoms and Diseases

• The bleeding is often terminal (bladder neck or prostate), although it may be present throughout urination (vesical or upper tract).





B. Time of Hematuria

• <u>Initial hematuria</u> suggests an anterior urethral lesion (e.g., urethritis, stricture, meatal stenosis in young boys).

• <u>Terminal hematuria</u> usually arises from the posterior urethra, bladder neck, or trigone.

• Total hematuria has its source at or above the level of the bladder.





Urethral Discharge

• The discharge is often accompanied by <u>local burning</u> on urination or an <u>itching sensation</u> in the urethra.





Skin Lesions of the External Genitalia

• An <u>ulceration</u> of the glans penis or its shaft may represent syphilitic chancre, chancroid, herpes simplex, or squamous cell carcinoma.

• Venereal warts of the penis are common.





Visible or Palpable Masses

- Mass in the upper abdomen
- Enlarged lymph nodes
- Lumps in the groin
- Painless masses in the scrotal contents





Edema

• Edema of the legs may result from compression of the iliac veins by lymphatic metastases from <u>prostatic cancer</u>.

• Edema of the genitalia suggests <u>filariasis</u>, chronic <u>ascites</u>, or <u>lymphatic blockage</u> from radiotherapy for pelvic malignancies.





Bloody Ejaculation

• Inflammation of the prostate or seminal vesicles can cause hematospermia.





Gynecomastia

• Often idiopathic, gynecomastia is common in <u>elderly men</u>, particularly those taking estrogens for control of prostatic cancer.





COMPLAINTS RELATED TO SEXUAL PROBLEMS

Sexual Difficulties in Men

• Men may complain directly of sexual difficulty. However, they are often so <u>ashamed</u> of loss of sexual power that they cannot admit it even to a physician.



COMPLAINTS...

Sexual Difficulties in Women

• Women who have the <u>psychosomatic cystitis syndrome</u> almost always admit to have an unhappy sex life.



COMPLAINTS...

• Many of them recognize the inadequacy of their sexual experiences as one of the underlying causes of urologic complaints; too frequently, however, the physician either does not ask them pertinent questions or, if patients volunteer this information, ignores it.



Physical Examination of the Genitourinary Tract

Smith & Tanagho's General Urology 18th EDITION 2012

BATES' Guide to Physical Examination & History Taking 12th edition 2017





دانشجو در پایان باید بتواند:

- 1. نحوه ی معاینه صحیح قسمتهای مختلف سیستم ادر اری-تناسلی را توضیح دهد.
 - 2. تشخیص افتراقی های مرتبط با یافته های معاینه را نام ببرد.
 - نحوه ی صحیح معاینه رکتال را شرح دهد.
 - 4. بتواند به صورت صحیح نتایج معاینات خود را ثبت نماید.



• A careful history and assessment of symptoms will suggest whether a complete or limited examination is indicated, and also help direct the appropriate selection of subsequent diagnostic studies.





ABDOMEN

Begin with light palpation of the abdomen







ABDOMEN

Use two hands for deep palpation







Inspection

• Mass/Fullness in the costovertebral angle.

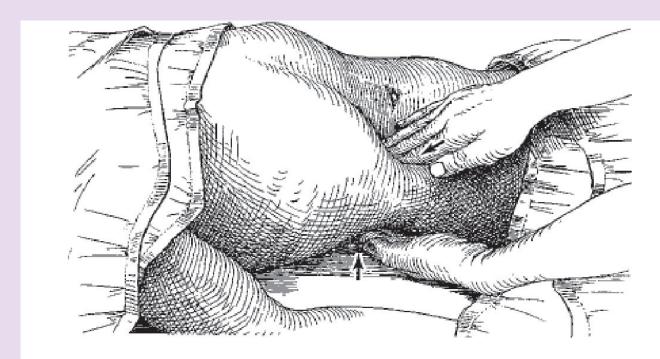
Indentations in the skin from lying on wrinkled sheets.





Palpation

• The kidneys are difficult to palpate in men



▲ Figure 4–1. Method of palpation of the kidney. The posterior hand lifts the kidney upward. The anterior hand feels for the kidney. The patient then takes a deep breath; this causes the kidney to descend. As the patient inhales, the fingers of the anterior hand are plunged inward at the costal margin. If the kidney is mobile or enlarged, it can be felt between the two hands.



Palpate the right kidney







Percussion

• **At times**, an enlarged kidney <u>cannot be felt</u>, particularly if it is soft as in some cases of hydronephrosis.

• However, such masses may be outlined by both anterior and posterior percussion and this part of the examination should not be omitted.





Percuss for costovertebral angle tenderness







Transillumination

• Transillumination may prove helpful in children younger than 1 year who present with a suprapubic or flank mass.

• A <u>distended bladder</u> or <u>cystic mass</u> will transilluminate; a solid mass will not. Flank masses may be assessed by applying the light posteriorly.











Differentiation of Renal an Radicular Pain

• Every patient who complains of flank pain should be examined for evidence of <u>nerve root irritation</u>.

• <u>Radiculitis</u> usually causes hyperesthesia of the area of skin served by the irritated peripheral nerve.



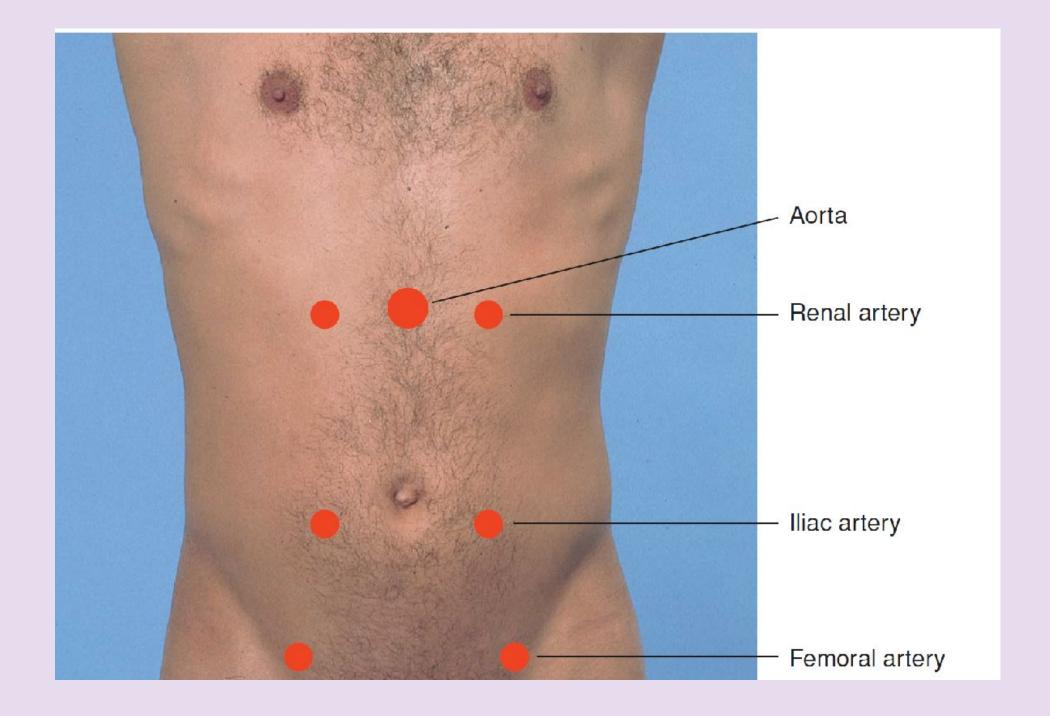


Auscultation

• Bruits over the femoral arteries may be found in association with Leriche syndrome, which may be a cause of impotence.











EXAMINATION OF THE BLADDER

• Normally, the bladder is not palpable unless it is distended above the symphysis pubis.

• Percuss for dullness and the height of the bladder above the symphysis pubis.

• On palpation, the dome of the distended bladder feels smooth and round. Check for tenderness.





EXAMINATION OF THE BLADDER

• In **male infants** or **young boys**, palpation of a hard mass deep in the center of the pelvis is compatible with a thickened, hypertrophied bladder.





EXAMINATION OF THE EXTERNAL MALE GENITALIA

Penis

A. Inspection

- The observation of a poor urinary stream
- Scars of healed syphilis active ulcer
- Venereal warts
- Meatal stenosis
- position of the meatus
- Micropenis or macropenis





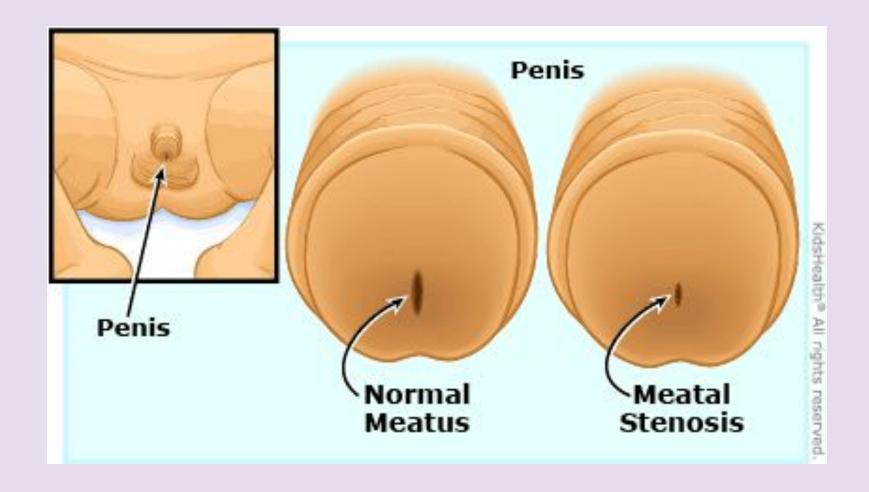
Gently compress the glans to inspect the urethral meatus.







Meatal stenosis







Meatal stenosis









Genital Warts (Condylomata Acuminata)







Genital Herpes Simplex









Hypospadia s





Carcinoma of the Penis







Standard Penis Size

AGE	MEAN ± SD	MEAN - 2.5 SD
Neonate, 30-wk gestation	2.5 ± 0.4	1.5
Neonate, 34-wk gestation	3.0 ± 0.4	2.0
0-5 mo	3.9 ± 0.8	1.9
6-12 mo	4.3 ± 0.8	2.3
1-2 yr	4.7 ± 0.8	2.6
2-3 yr	5.1 ± 0.9	2.9
3-4 yr	5.5 ± 0.9	3.3
4-5 yr	5.7 ± 0.9	3.5
5-6 yr	6.0 ± 0.9	3.8
6-7 yr	6.1 ± 0.9	3.9
7-8 yr	6.2 ± 1.0	3.7
8-9 yr	6.3 ± 1.0	3.8
9-10 yr	6.3 ± 1.0	3.8
10-11 yr	6.4 ± 1.1	3.7
Adult	13.3 ± 1.6	9.3





• B. Palpation

- Fibrous plaque
- Tender areas of induration felt along the urethra







Peyronie's Disease





C. Urethral Discharge

- Urethral discharge is the <u>most common complaint</u> referable to the male sex organ.
- Gonococcal pus is usually profuse, thick, and yellow or gray—brown.
- Nongonorrheal discharges may be similar in appearance but are often thin, mucoid, and scant.
- <u>Bloody discharge</u> suggests the possibility of a foreign body in the urethra, urethral stricture, or tumor.





Primary Syphilis







Chancroi d







Scrotum

- Small sebaceous cysts are occasionally seen
- Edema
- Bifid
- Elephantiasis
- Small hemangiomas of the skin are common and may bleed spontaneously.





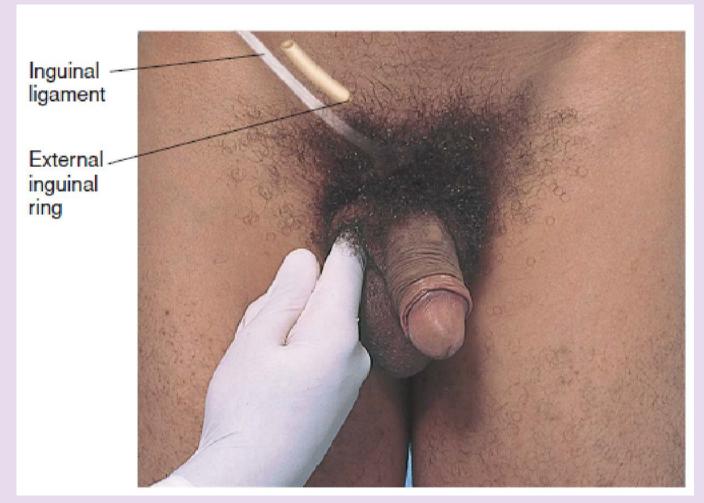
Palpate the testis and epididymis.







Invaginate the scrotum.





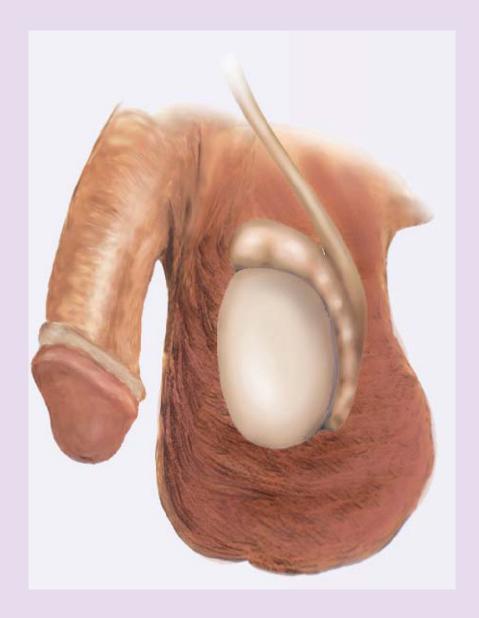


Epidermoid cysts









Scrotal Edema





Testis

- Hard area
- Transillumination
- The testis may be absent
- The atrophic testis...



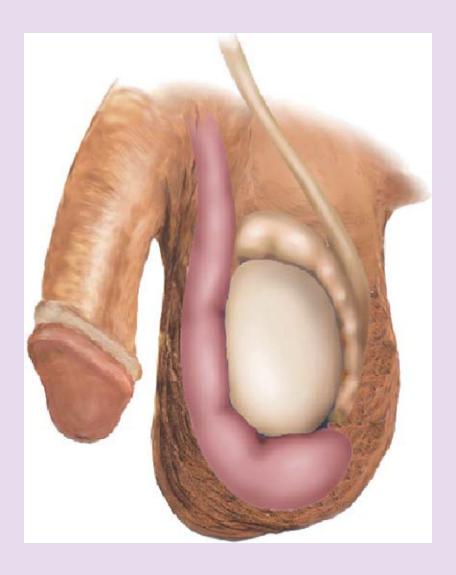


Prader Orchidometer









Scrotal Hernia







Cryptorchidis m







Small Testis





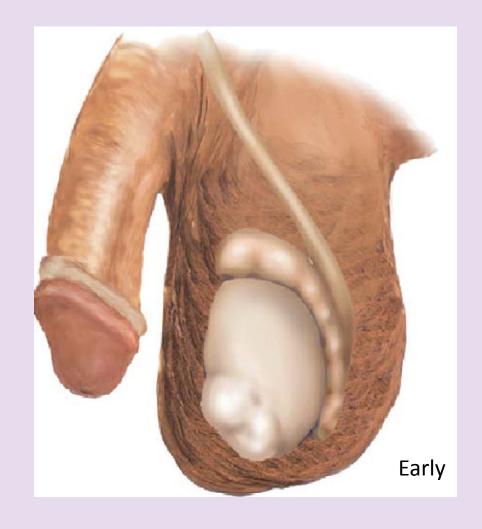


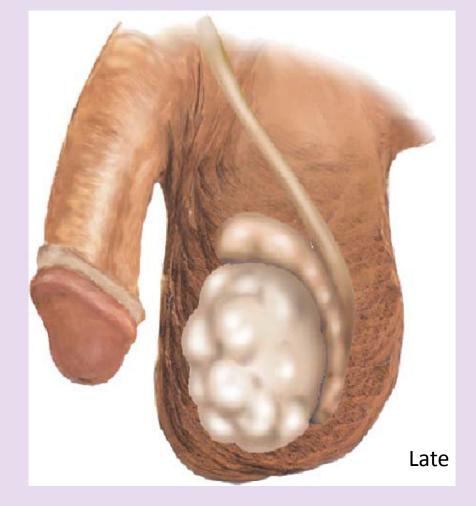
Acute Orchitis





Tumor of the Testis









Epididymis

Posterior surface of the testis.

- In the acute stage of epididymitis, the testis and epididymis are indistinguishable by palpation;
- Chronic painless induration suggests tuberculosis or schistosomiasis, although nonspecific chronic epididymitis is also possible.





Acute **Epididymitis**







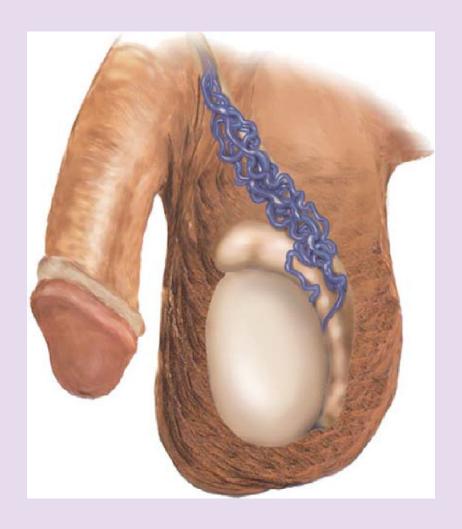
Spermatic Cord and Vas Deferens

- Swelling (cystic, solid)
- Absence of the vas
- Fusiform enlargements ("beading")
- Thickening
- Dilated veins





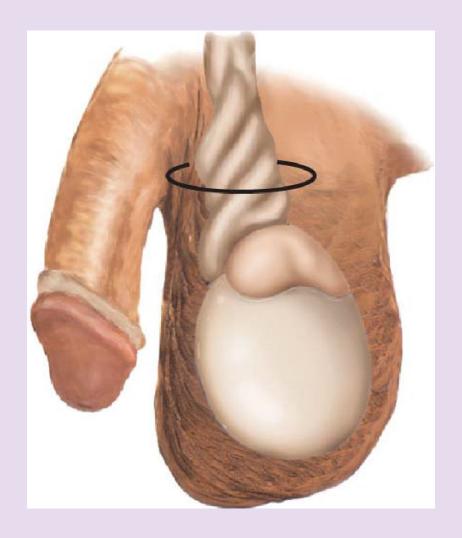
Varicocele of the Spermatic Cord







Torsion of the Spermatic Cord







Tuberculous Epididymitis







Testicular Tunics and Adnexa

- Hydroceles
- Spermatoceles





Hydrocel e







Spermatocele and Cyst of the Epididymis







EXAMINATION OF THE FEMALE GENITALIA

Vaginal Examination

 Diseases of the female genital tract may secondarily involve the urinary organs



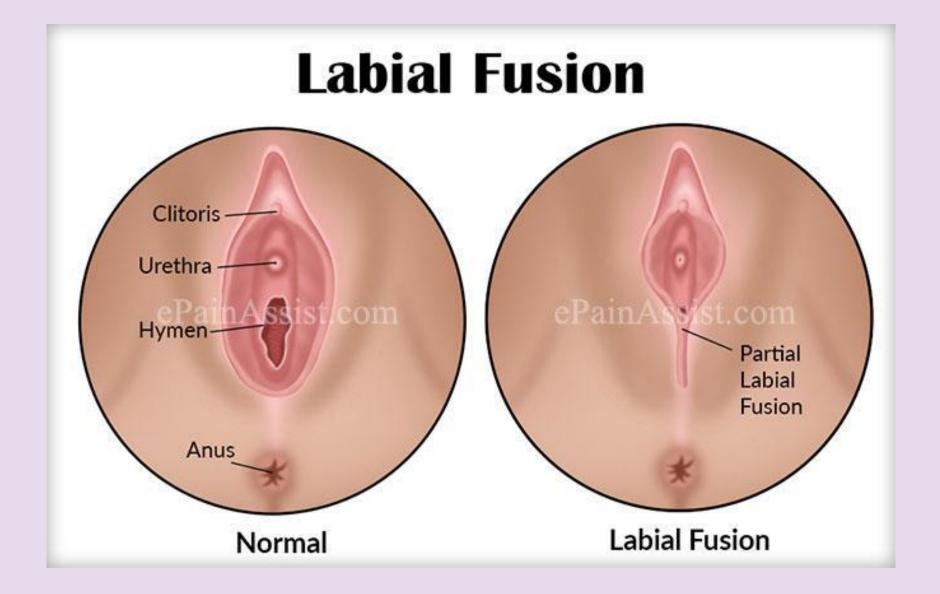


A. Inspection

•In newborns and children, the **vaginal vestibule** should be inspected for a <u>single opening</u> (common urogenital sinus), <u>labial fusion</u>, <u>split clitoris</u> and lack of fusion of the anterior fourchette (epispadias), or <u>hypertrophied clitoris</u> and <u>scrotalization</u> of the labia majora (adrenogenital syndrome).











- Urinary meatus
- Multiple painful small ulcers or blister-like lesions
- The condition of the vaginal wall should be observed.
- The cervix



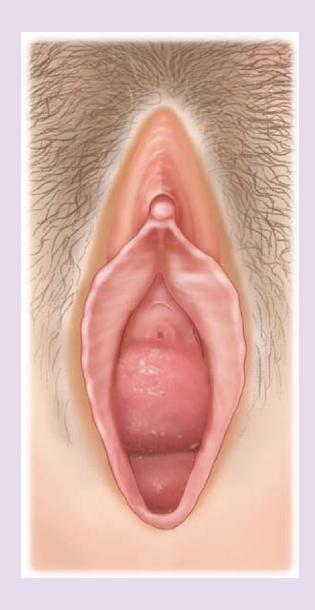


• B. Palpation

• Rectal examination may provide further information and is the obvious route of examination in children and virgins.







Cystocele







Urethral Caruncle







Prolapse of the Urethral Mucosa



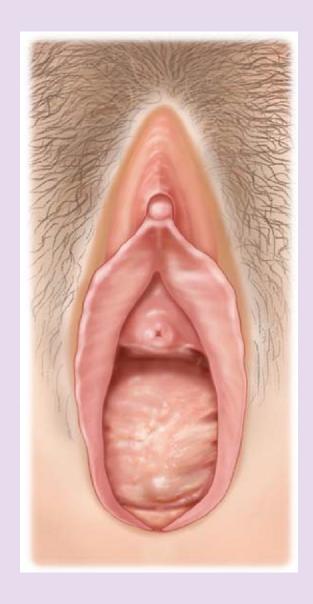




Bartholin Gland Infection





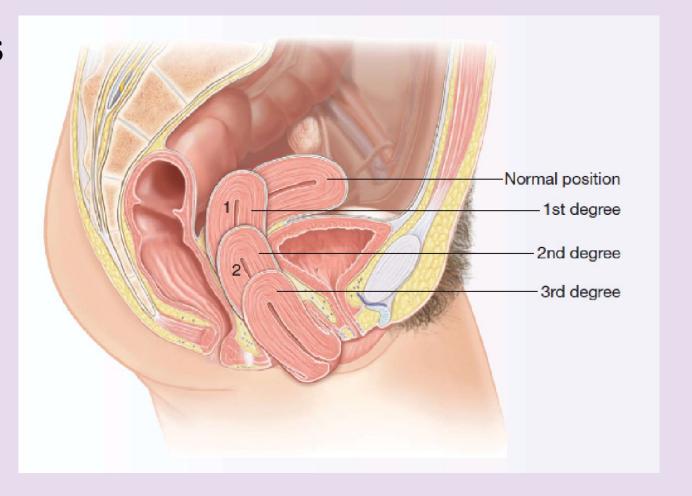


Rectocele





Prolapse of the Uterus







RECTAL EXAMINATION IN MALES

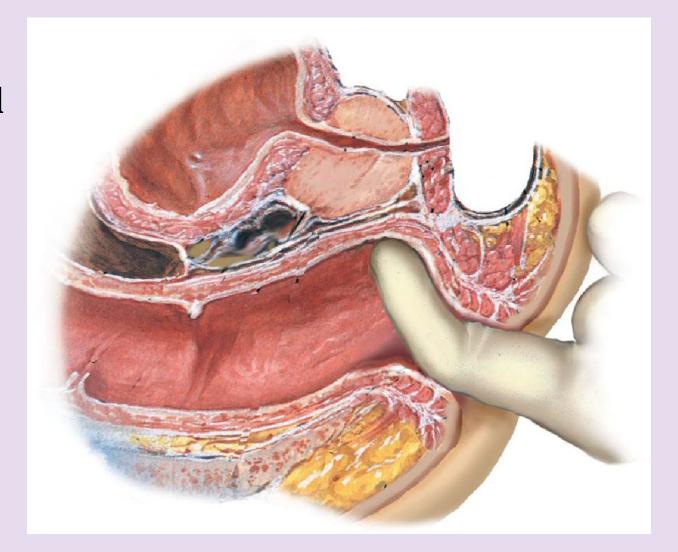
Sphincter and Lower Rectum

Testing perianal sensation is mandatory.





Palpate the prostate gland



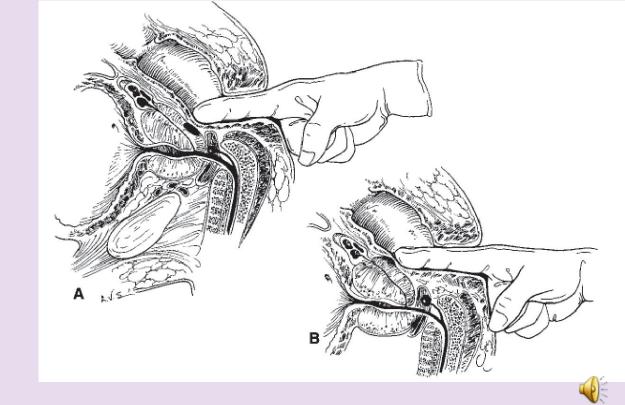




Prostate

• A specimen of urine for routine analysis should be collected before

the rectal examination.





A. Size

• The average prostate is about 4 cm in both length and width.





• B. Consistency

• Normally, the consistency of the gland is similar to that of the contracted thenar eminence of the thumb.

• The difficulty lies in **differentiating firm areas** in the prostate: fibrosis from nonspecific <u>infection</u>, <u>granulomatous</u> prostatitis, nodularity from <u>tuberculosis</u>, or firm areas due to prostatic <u>calculi</u> or early <u>cancer</u>.





• C. Mobility

• D. Massage and Prostatic Smear





Seminal Vesicles

• Palpation of the seminal vesicles should be attempted. The vesicles are situated under the base of the bladder and diverge from below upward.





Lymph Nodes

• A. Inguinal and Subinguinal Lymph Nodes

• B. Other Lymph Nodes





NEUROLOGIC EXAMINATION

• A careful neurologic survey may uncover sensory or motor impairment that account for residual urine or incontinence.

• It is wise, particularly in children, to <u>seek a dimple</u> over the lumbosacral area.





Recording the Male Genitalia Examination

"Circumcised male. No penile discharge or lesions. No scrotal swelling or discoloration.

Testes descended bilaterally, smooth, without masses. Epididymis is nontender. No inguinal or femoral hernias."

OR

"Uncircumcised male; prepuce easily retractible. No penile discharge or lesions.

No scrotal swelling or discoloration. Testes descended bilaterally; right testicle

smooth; 1 × 1 cm firm nodule on left lateral testicle. It is fixed and nontender.

Epididymis nontender. No inguinal or femoral hernias."





Recording the Anus, Rectum, and Prostate Examination

"No perirectal lesions or fissures. External sphincter tone intact. Rectal vault without masses. Prostate smooth and nontender with palpable median sulcus. (Or in a female, uterine cervix nontender.) Stool brown; no fecal blood."

OR

"Perirectal area inflamed; no ulcerations, warts, or discharge. Unable to examine external sphincter, rectal vault, or prostate because of spasm of external sphincter and marked inflammation and tenderness of anal canal."

OR

"No perirectal lesions or fissures. External sphincter tone intact. Rectal vault without masses. Left lateral prostate lobe with 1*1 cm firm, hard nodule; right lateral lobe smooth; median sulcus obscured. Stool brown; no fecal blood."





