

## Maryland 30<sup>th</sup> Annual Reproductive Health Update

### Common Male Reproductive Health Concerns



**Arik V. Marcell, MD, MPH**  
Assistant Professor  
The Johns Hopkins University  
Department of Pediatrics  
Associate Medical Director,  
Male Training Center

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### Disclosures

- I have no financial interests or other relationships with manufacturers of commercial products, suppliers of commercial services, or commercial supporters
- This presentation will not include any discussion of the unlabeled use of a product or a product under investigational use
- There was no commercial support provided for this activity
- This presentation contains photos of male genitalia

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### Objectives

**By end of session, participants will be able to:**

- State steps for conducting a complete sexual/reproductive male exam
- Describe principal normal & abnormal findings relevant to an STIs
- Describe at least 1 symptom for 3 common male genital disorders
- Describe strategy to discuss at least 2 common male reproductive health questions

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## Why perform an SRH exam?

### Identify, address &/or reassure

- **Genitals:** Normal/abnormal findings
  - Document testosterone effect for Sexual Maturity Rating (SMR) & document SMR for hair & genitals
- **Breast:** Gynecomastia
- **Skin:** Acne, jock itch
- **Hair:** Folliculitis
- **Bone health**
- **Heart (BP), Height/Weight (BMI)**

### Screen for STIs

- **All potential sites:** Mouth, genitals, anus

### Opportunity to educate

- **Conditions:** Hygiene, STIs, pregnancy, etc.

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## Normal tasks of adolescence

- Physical growth
  - Including maturation of reproductive system
- Identity & moral system formation
  - Including sexual identity formation
- Changing relationships
  - Develop attractions, intimate relationships with members of same/opposite gender
  - Separate/gain autonomy/independence from family
  - Prepare for the future
  - Learn how to navigate health care system

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## General principles

### Examination

- For exam, have patient change into a gown
- Wash hands; put on gloves
- Use standard technique to handle clean & contaminated articles & to follow universal precautions
  - 1 hand clean, 1 hand contaminated, remaining consistent throughout exam
  - 2 hands gloved, remove 1 glove before touching any other surface area

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## Exam - Mouth/oral cavity

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- Inspect mouth including lips, tongue, tonsils, hard & soft palate & gum lines for
  - Lesions, discoloration, mucus patches
  - Infections that can occur include
    - Chlamydia, gonorrhea, syphilis, HSV, thrush

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## Exam - Lymph nodes

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- Palpate nodes
  - Sublingual
  - Cervical
  - Epitrochlear
  - Axillary
  - Inguinal

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## Exam - Skin

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- Inspect
  - Face, trunk & legs
  - Hands, palms & forearms
  - Soles of feet if syphilis is suspected
- Look for lesions, rashes, discoloration

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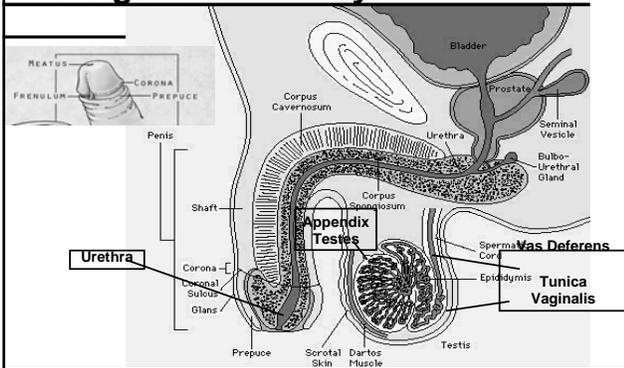
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## Male genital anatomy




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## Genital exam: Principles

### Example explanation for importance of genital exam

*"For the next part of the exam I need to check your genital area. We do this to screen for any problems like lumps, bumps & any signs of an infection, such as warts, sores & discharge that may not be normal."*

### Pointers for provider

- Ask patient to stand for the exam
- Use a stool to sit comfortably
- Use a source light

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## Genital exam: Principles cont.

### Briefly review with patient what to expect during exam

- Touch a "non-genital" area of body first
- Comment as exam progresses
- Make eye contact
- Talk to patient during exam; let them findings are normal
- Watch for signs of fainting
- Avoid lengthy discussions with patient in compromising position
- Remove exam light off genital area as soon as possible
- Examine painful areas last

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## Exam - Genitals

### Palpate

- Inguinal lymph nodes for
  - Fluctuance, swelling or tenderness

### Inspect

- Pubic hair for
  - Crabs, lice or nits
  - Sexual Maturity Rating to confirm adult hair stage (also called Tanner Stage)
- Skin around genital area for
  - Lesions, warts, skin conditions



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## Exam - Genitals cont.

### Palpate

- Scrotal contents
  - Gently compress testes & epididymis between thumb & 1<sup>st</sup> 2 fingers
    - Note tenderness, shape, mass, swelling, nodule
  - Size testicle for adult Sexual Maturity Rating (e.g., Tanner Stage)
  - Identify spermatic cord with vas deferens & note for
    - Tenderness, swelling, masses



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## Exam - Genitals cont.

### Palpate cont.

- Penis
  - Inspect skin on shaft/glans for
    - Ulcers, raised lesions, or signs of inflammation
  - Retract foreskin if present (*Ask patient to retract*)
  - Gently compress glans between thumb & index finger to open urethral meatus
    - Inspect meatus for
      - Stenosis, lesions, urethral opening position
      - If no discharge visible, strip/milk shaft of penis from base to glans
- (?) Perform hernia examination



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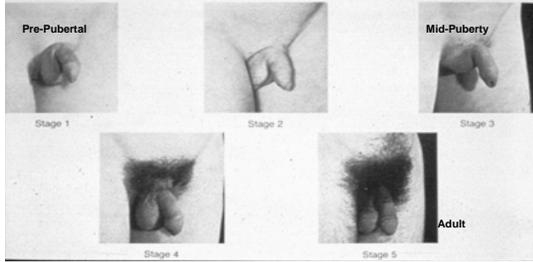
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## Exam - Genitals cont.

### Sexual Maturity Rating (SMR)




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## Exam - Developmental sequence

|                                |                 | <u>SMR</u> |
|--------------------------------|-----------------|------------|
| 1. Testes enlarge - Gonadarche | 11-12yrs        | 2          |
| 2. Pubic hair - Pubarche       | 6 mos later     | 2          |
| 3. Phallus enlarge             | 11-14yrs        | 3          |
| 4. Spermarche                  | 1-1.5 yrs later | 3          |
| 5. Voice change                | -               | 3-4        |
| 6. Growth spurt                | 2-2.5 yrs later | <u>3-4</u> |

Duration: 4.5 yrs  
 Work-up: Precocious: Genital changes before 9.5 yrs  
 Delayed: No change in Genitals by 13.7 yrs  
 No change in Hair by 15.1 yrs  
 More than 4-5 yrs lapse after TS2

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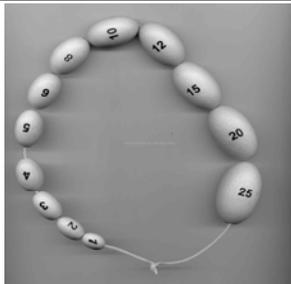
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## Orchidometer




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## Exam cont.

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### Anal inspection

- Lay on table on side (Recommended exam position)
- Examine **perianal areas & intergluteal cleft** for
  - lesions, rashes, discharge, warts & fissures
- Inspect **anus** for ulcers, discharge, lesions

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## Exam - Chaperone

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- Provider should be “sensitive to patient’s feelings about an examination”
- “[Provider] judgment & discretion must be paramount in evaluating need for a chaperone”

American Academy of Pediatrics

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## Common genital symptoms & physical exam findings

Normal or abnormal?

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## Balanitis



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## Smegma



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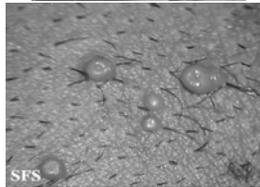
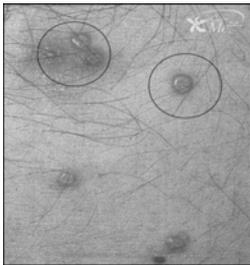
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## Molluscum contagiosum



SFS  
CDC, Division of STD Prevention

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## Pearly penile papules




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## Sebaceous cysts




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## Summary: Rash - Flat lesions

| Flat Lesions                                             | Description                      | Diagnostic Approach | Treatment                                                                                           |
|----------------------------------------------------------|----------------------------------|---------------------|-----------------------------------------------------------------------------------------------------|
| Tinea                                                    | Sharp border<br>Central clearing | Scrape, KOH         | Imidazole<br>Lamisil                                                                                |
| Candida                                                  | Satellite<br>pustules            | Scrape, KOH         | Imidazole,<br>Nystatin +HC                                                                          |
| Contact dermatitis<br>Psoriasis<br>Seborrhea<br>Vitiligo |                                  |                     | Burrow's soaks<br>(Epson salts & water<br>x 15 minutes) +<br>HC cream 2.5% +<br>Imidazole cream BID |

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## Summary: Rash - Raised lesions

| Raised Lesions               | Description               | Diagnostic Approach | Treatment                                                                          |
|------------------------------|---------------------------|---------------------|------------------------------------------------------------------------------------|
| <b>Molluscum</b>             | Small umbilicated papules | --                  | Freeze, or leave alone                                                             |
| <b>Warts</b>                 | Exophytic, flesh colored  | --                  | Freeze & return, podophyllin, TCA, poliflox, imiquimod, sinecatechins 15% ointment |
| <b>Pearly penile papules</b> | Ectopic sebaceous glands  | --                  | Normal, no therapy                                                                 |

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## Primary syphilis - Chancre




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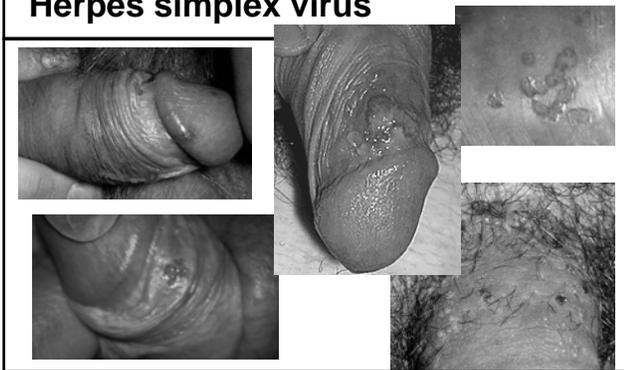
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## Herpes simplex virus




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## Ulcers

|                                    | Syphilis<br><i>T. pallidum</i>                                  | Herpes<br>HSV                                     | Chancroid<br><i>H. Ducreyi</i>                                         | Lymphogranuloma<br>Venereum   |
|------------------------------------|-----------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------|-------------------------------|
| <b>Incubation</b>                  | 10-90d                                                          | 4-7d                                              | 1-14d                                                                  |                               |
| <b>Lesions</b>                     | Deep, single, inflam<br>Painless<br>Starts as papule            | Shallow, multiple<br>Painful<br>Start as vesicles | Single or multiple<br>Painful<br>Start as papules,<br>ulcerates in 24h | Ulcer                         |
| <b>Lymph node/<br/>Systemic sx</b> | Non-tender<br>Not common with 1°                                | Tender, bilat, firm<br>+ Constitutional sx        | Tender, unilat,<br>suppurative                                         | Tender, bilat                 |
| <b>Diagnosis</b>                   | VDRL or RPR<br>1° - only 75% sensitive<br>Darkfield exam or DFA | HSV Cx – gold std                                 | H. Ducreyi Cx                                                          | Chlamydia                     |
| <b>Treatment</b>                   | PCN                                                             | Acyclovir                                         | Azithro 1g PO x1                                                       | Doxycycline 100mg<br>BID x21d |

- Treat for most likely diagnosis
- Treat for both syphilis & chancroid if unsure of dx, high incidence, or f/u is uncertain

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## Ulcerative skin lesions differential

- Syphilis (*Treponema pallidum*)
- Herpes Simplex Virus (HSV 1, 2)
- Chancroid (*Hemophilus ducreyi*)
- Lymphogranuloma Venereum (Chlamydia)
- Granuloma Inguinale (Donovanosis)
- Trauma
- Scabies
- Fixed drug eruption
- System condition (Crohn's disease)

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## Ulcers - Diagnosis

### Herpes simplex

- Culture (polyester flocked swab in viral media)
- PCR test (Polymerase Chain Reaction)
- Serology type-specific glycoprotein G (gG)-based assays

### Syphilis

- 1. Microscopy:** Darkfield examination (Direct)
  - 2. DFA-TP:** Direct fluorescent antibody (Direct)
  - 3. Rapid test** Syphilis Health Check™ just approved
  - 4. Culture:** Not available
  - 5. Serology:** Screening tests: RPR/VDRL  
Confirmatory tests: FTA-Abs/ TP-PA
- **Screening tests** measure IgM & IgG against cardiolipin-lecithin cholesterol  
–VDRL may not be positive until 4 weeks
  - **Confirmatory tests** measure antibodies against *T. pallidum* by immuno-fluorescence or hemagglutination  
–FTA may be positive at 2 weeks, but it is not a screening test

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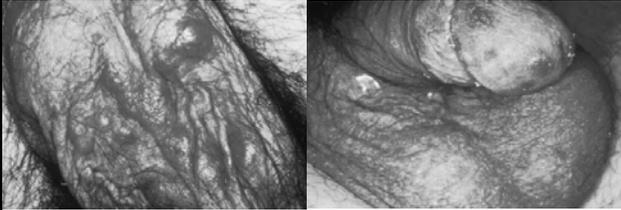
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## Scabies



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## Rashes - Helpful hints

### Scabies

Lesions in fingerwebs & genitalia, None above neck  
Severe pruritis

Tx: Elimite (Permethrin) Crm 5%, neck down 8-12hrs (repeat 1wk later)  
Ivermectin 200 ug/kg oral, repeat in 2 weeks  
Lindane 1% (or 30 g cream) neck down wash off after 8hrs

### Pediculosis Pubis

Tx: Shave hair

Elimite (Permethrin) Crm 1%, wash in 10 min  
Ivermectin 250 ug/kg oral, repeat in 2 weeks  
Pyrethrins with piperonyl butoxide, Malathion 0.5% applied 8-12hrs & wash off

### Body Lice

Tx: Need to clean or get rid of clothes

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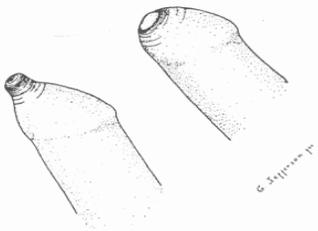
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## Phimosis



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## Phimosis

|                   |                                                                                                                                                                       |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Definition</b> | Inability to retract foreskin due to narrow preputial ring                                                                                                            |
| <b>Etiology</b>   | Primary (rare)<br>Secondary (due to recurrent infection & scarring with rigid, fibrous foreskin & xerotic obliterans)                                                 |
| <b>Symptoms</b>   | Difficult voiding<br>Ballooning of the prepuce                                                                                                                        |
| <b>Treatment</b>  | If infected → Amox or Bactrim<br>Chronic → Circumcision may not relieve sx<br>Inflam → Topical betamethasone 0.05% crm 4-6wks<br>→ Check for urethral meatal stenosis |

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## Paraphimosis



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## Paraphimosis

|                     |                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------|
| <b>Definition</b>   | Inability to pull forward the retracted foreskin                                             |
| <b>Etiology</b>     | Iatrogenic (instrumentation); erection                                                       |
| <b>Symptoms</b>     | Acute pain<br>Glans enlarged & congested                                                     |
| <b>Treatment</b>    | <b>Urologic Emergency</b><br>Manual reduction with anesthesia<br>If recurrent → circumcision |
| <b>Consequences</b> | Ischemia<br>Penile gangrene<br>Autoamputation                                                |

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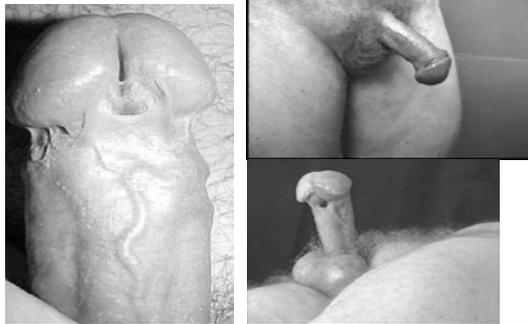
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## Hypospadias



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## Hypospadias - Congenital

|                        |                                                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>Incidence</b>       | 1/150 births<br>Familial predisposition: 8% if father; 14% risk if sibling has it                                                  |
| <b>PE</b>              | Meatus displaced onto ventral surface of glans or onto shaft or perineum                                                           |
| <b>Treatment</b>       | Typically corrected early in life                                                                                                  |
| <b>Issues</b>          | Inadequate enlargement causes urinary obstruction<br>Curvature of penis due to dysgenetic fibers interfering with normal erections |
| <b>Assoc anomalies</b> | Diverticulum of urogenital sinus (utricle);<br>Increased UTI risk; Cryptorchidism; Inguinal hernia                                 |

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## Condyloma acuminata



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## Purulent discharge




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## Urethritis - Clinical features

|                          | GU       | NGU     |
|--------------------------|----------|---------|
| <b>Incubation period</b> | 2-8d     | 7-14d   |
| <b>Onset</b>             | Abrupt   | Gradual |
| <b>Dysuria</b>           | Severe   | Mild    |
| <b>Asymptomatic</b>      | 1-3%     | >10%    |
| <b>Discharge</b>         |          |         |
| <i>Quality</i>           | Purulent | Mucoid  |
| <i>Quantity</i>          | More     | Less    |




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## Urethritis - Diagnosis

### Test for GC & CT (culture & non-culture methods):

- **Penile d/c:** use 1<sup>st</sup> void collection of urine (FCU) using nucleic acid amplification test (NAAT)
- Non-FCU tests
- CT – Insert swab  $\geq$  2 cm (optimal results)
- GC – Okay to culture urethral exudate at penis tip
- **Anal/pharyngeal d/c:** use endocervical swab (NAAT test)

### If NAAT not available

- For gonorrhea, collect culture/do gram stain & give presumptive treatment
- For chlamydia give presumptive treatment since EIA is not readily available

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## CDC treatment updates 2010 Urethritis treatment

| GU - Gonococcal<br>Urethritis                                                                                                                                                                                                                                            | NGU – Chlamydial<br>Urethritis                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Recommended regimens:</b><br><u>Cephalosporins:</u><br><b>Ceftriaxone 250mg IM x1</b><br><b>PLUS</b><br><b>Azithromycin 1gm POx 1</b><br><b>OR</b><br>Doxycycline 100mg PO BID<br>x7d<br><u>No Quinolones – resistance</u><br><u>Cefixime – increasing resistance</u> | <b>Recommended regimens:</b><br><b>Azithromycin 1gm PO x 1,</b><br><b>OR</b><br>Doxycycline 100mg PO BID<br>x7d<br><b>Alternate regimens:</b><br>Erythromycin base 500mg PO QID<br>x 7d<br>Ethylsuccinate 800mg PO QID<br>x 7d<br>Ofloxacin 300mg PO BID<br>x 7d<br>Levofloxacin 500mg QD x7d |

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## Urethritis - Recurrent or persistent

### Possible etiologies

1. Reinfection
2. Non-compliance
3. Persistent infection due to:
  - Inadequate drug-tissue levels
  - Resistant pathogen (quinolone-resistant GC; tetracycline-resistant ureaplasma/mycoplasma)
  - HSV
  - Trichomonas
  - Intraurethral growth (HPV)
  - Non-infectious etiology

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## Urethritis - Recurrent or persistent

### Approach

- Ask about re-exposure during or after treatment, compliance & concurrent treatment of partner(s)
- Examine
  - And establish objective evidence of urethritis
    - Urethral Gram stain, urine sediment or leukocyte esterase test
  - For Trichomonas with
    - Saline wet mount of urethral discharge or urine sediment &/or trichomonas culture
    - Trich pouch or NAAT
  - For Penile lesions (e.g., HSV)
    - Consider HSV culture

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## Urethritis - Recurrent or persistent

### Treatment

- Compliance issues or re-exposure to untreated sex partner
  - Re-treat with initial regimen
- If none of above, consider
  - Metronidazole 2 grams PO, PLUS
  - Erythromycin base 500 mg PO QID for 7 days, OR
  - Erythromycin ethylsuccinate 800 mg PO QID for 7 days
- If symptoms persist
  - Refer to urologic specialist

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## Urethritis - Recurrent or persistent

### Counseling/Education including explaining

- Urethritis
  - As syndrome vs. infection
  - Share etiology if known
  - Discuss routes of transmission & acquisition
- WHY patient is being treated including possible sequelae to self & partners
  - Increased HIV susceptibility, PID/infertility/ectopic pregnancy in female partners
- Need to refer/treat sex partner(s) for diagnosis & treatment

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## CDC treatment updates 2010 Treatment cont.

|                  | Simple Infection                                     | Complex Infection                                              |                             |
|------------------|------------------------------------------------------|----------------------------------------------------------------|-----------------------------|
| <b>Male:</b>     | <b>Urethritis</b>                                    | <b>Epididymitis</b>                                            |                             |
| <b>Female:</b>   | Cervicitis                                           | PID                                                            |                             |
| <b>Treatment</b> | <b>Outpatient</b>                                    | <b>Outpatient</b>                                              | <b>Inpatient</b>            |
| <b>Gonorrhea</b> | Ceftriaxone 250mg IM shot plus Azithromycin 1g PO x1 | Ceftriaxone 250mg IM shot                                      | IV Cefotetan or Clindamycin |
| <b>Chlamydia</b> | Macrolide (Azithromycin oral 1g)                     | Doxycycline 100mg oral BID*                                    |                             |
| <b>Anaerobes</b> | n/a                                                  | For PID: +/- anaerobic coverage (Metronidazole 500mg oral BID) |                             |
| <b>Length</b>    | One-time doses                                       | *10-d to 14-d therapy total                                    |                             |

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## Role of STIs in HIV Transmission

- STIs increase HIV transmission between 2-5-fold
  - Attributable risk of STIs for HIV transmission substantial in some populations (e.g. MSM)
  - HIV susceptibility mechanism
    - STIs increase HIV viral load in genital secretions
    - Recruitment of endocervical CD4 cells by nonulcerative STIs, including GC
    - “Portal of entry” created by ulcers (syphilis, chancroid, herpes)
- *Treatment of STIs significantly reduce HIV infectiousness*

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## Case

14 year old sees you for a sports physical. You note he has bilateral breast development.

What do you think?  
How do you approach his history & PE?  
What if he was 17 years old?

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## Gynecomastia

### Physiologic

- Timing: SMR 2-3
- 25% unilateral, size
- Resolves 1-2 years, common

### Pathologic

- Timing: prepubertal or SMR 4-5
- Large breasts (> SMR 2-3); r/o fatty tissue (pseudo-)
- PE: testes, adrenal, CNS, chronic illness
- Drugs: psychiatric, H2 blockers, marijuana, heroin
- Medical: Klinefelter's, Testicular failure, Thyroid, Tumor

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## Case

17 year old is in clinic for a routine physical examination. At the end of the visit he asks you I want my penis to be bigger. Are pumps safe?

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## Case

- Normal for a boy to wonder if he “measures up”
- Reassure wide range of normal penis sizes
  - Also depends on where he is in pubertal development
  - Less differences in penis size when erect versus flaccid
- Educate that pumps can be dangerous (destroy ligaments, blood vessels)
- No method (supplements , diets) can impact a male's size
- Discuss other safer methods
  - Sex toys: penis rings
- **Reassure & educate**

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## Case

16 year old Zach's chief complaint in your primary care clinic is testicular pain. He denies ever having sex. He states that he has a girlfriend and that they have been "fooling around a lot" over the past 2 days.

Testicle examination is unremarkable including no evidence of torsion, spermatocele, varicocele, hernia, or mass.

What might explain Zach's symptoms?

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## Case

### Congestion of Vas Deferens or "Blue Balls"

- Congestion with sperm can cause pain & discomfort if not released
- Pain will subside overtime (~24 hours) with body absorption or with voluntary release of pressure (ejaculation)
- Once other issues are ruled out
  - Reassure patient symptoms will subside
  - Discuss treatment option can include masturbation

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## Summary

### You are now able to describe...

- Steps for conducting a complete SRH male exam
- Principal normal & abnormal findings relevant to STIs
- Symptoms for common male genital disorders
- Strategies to discuss common male SRH questions

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## Additional Questions?

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MALE TRAINING CENTER  
FOR FAMILY PLANNING & REPRODUCTIVE HEALTH

**Website:** <http://www.fpcmtc.org>

- Ask the Experts Forum
- Featured Quarterly Article
- Upcoming events & resources

**Photo Acknowledgements**

- Dermatology Image Atlas
- Centers for Disease Control & Prevention

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## Thank You

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## Testicular mass

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**Differential Diagnosis**

**Painful Mass**

- Epididymitis
- Torsion of spermatic cord
- Torsion of appendix

**Painless Mass**

- Testicular cancer
- Hydrocele
- Spermatocele
- Varicocele
- Indirect hernia

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## Testicular cancer

|                         |                                                                                                                                                                                                          |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Risk Factors</b>     | Caucasian; Age 15 to 35y/o<br>Undescended testicle<br>Testicular atrophy<br>HIV; Klinefelter's syndrome<br>Testicular trauma<br>FHx testicular cancer<br>? Mumps orchitis<br>? Childhood inguinal hernia |
| <b>General Symptoms</b> | Painless hard smooth mass (unilat)<br>Ache or heaviness in scrotum (40%)<br>Secondary hydrocele<br>Acute scrotum (hemorrhage)<br>Back/bone pain 2° to metastasis                                         |

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## Testicular cancer

|                  |                                                                                                                                |
|------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Exam</b>      | Firm, irregular mass<br>Transillumination negative<br>Hydrocele or varicocele may be present                                   |
| <b>Diagnosis</b> | Verify mass by scan, ultrasound<br>Refer to urology<br>Assist urology with metastatic work-up<br>96% germinal type & malignant |
| <b>Prognosis</b> | Untreated --> malignant & fatal<br>Seminoma treated --> 90% 5 yr cure rate<br>Sperm banking before surgery & radiation         |

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## Cryptorchidism - congenital

### Undescended testicle

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|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Location</b>        | Usually lies in line of testicular descent<br>Intra-abdominal, in inguinal canal, or distal to external ring<br>or Ectopic                                       |
| <b>Assoc risks</b>     | Malignancy, infertility, torsion                                                                                                                                 |
| <b>Treatment</b>       | Orchiopexy - brought down & fixed surgically                                                                                                                     |
| <b>Prevention</b>      | TSE (no evidence if TSE identifies earlier cancer)                                                                                                               |
| <b>Assoc disorders</b> | Klinefelter, Prader-Willi (chromosomal); Kallman synd,<br>hypopituitarism (CNS); Adrenal or testicular nz def; Prune-<br>belly synd, meningomyelocele (anatomic) |

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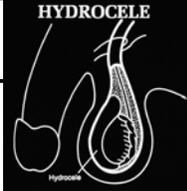
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## Hydrocele

|                   |                                                                         |
|-------------------|-------------------------------------------------------------------------|
| <b>Background</b> | Fluid in tunica vaginalis<br>Communicating &<br>non-communicating types |
| <b>Etiology</b>   | Idiopathic, infection, torsion, tumor,<br>lymph block                   |
| <b>Symptoms</b>   | Painless enlargement, fluid-filled mass                                 |
| <b>Diagnosis</b>  | Transilluminates                                                        |
| <b>R/O</b>        | Testicular torsion & inguinal hernia                                    |
| <b>Treatment</b>  | Only if painful                                                         |



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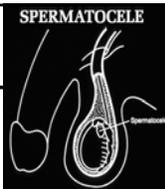
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## Spermatocele

|                   |                                                                                                  |
|-------------------|--------------------------------------------------------------------------------------------------|
| <b>Background</b> | Cyst nodule in tunica vaginalis<br>May be bilateral & multiple                                   |
| <b>Etiology</b>   | Congenital weakness of excurrent walls,<br>epididymitis, epididyl obstruction,<br>scrotal trauma |
| <b>Exam</b>       | Nodule above & posterior to testes                                                               |
| <b>Diagnosis</b>  | Transilluminates                                                                                 |
| <b>R/O</b>        | Testicular torsion & inguinal hernia                                                             |
| <b>Treatment</b>  | Only if painful                                                                                  |



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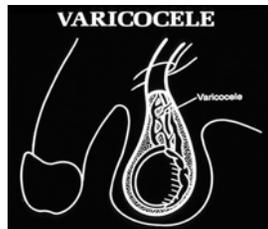
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## Varicocele



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## Varicocele

|                   |                                                                                                                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Background</b> | Abnormal dilation of pampiniform plexus<br>Idiopathic or 2° vena caval obstruction<br>78% L, 1-2% R-sided, up to 20% bilateral<br>Drainage pattern L & R internal spermatic vein<br>Unilateral R-side (rare) → Intrarenal mass? |
| <b>Types</b>      | Grade I: palpable only during valsalva<br>Grade II: palpable, not visible at rest<br>Grade III: palpable & visible at rest                                                                                                      |
| <b>Exam</b>       | “Bag of worms” appearance                                                                                                                                                                                                       |
| <b>Diagnosis</b>  | No transillumination                                                                                                                                                                                                            |
| <b>R/O</b>        | Testicular torsion & inguinal hernia                                                                                                                                                                                            |
| <b>Treatment</b>  | Only if painful or halts normal growth                                                                                                                                                                                          |

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## Epididymitis



### Epidemiology

- Accounts for over 600,000 visits to physicians per year

### Complications

- Abscess formation
- Testicular infarction
- Chronic epididymitis
- Infertility

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## Epididymitis

- Majority seen in sexually active young men
  - Also seen with GU anomalies & pre-sexually active males (rare, etiology unknown)
  - STIs: 70% Chlamydia; 30% Gonorrhea; *E. coli* (MSM)
  - Non-STIs: *Pseudomonas*, *E. coli* vs. *Orchitis due to Mumps*, *EBV*, *Echovirus*, *Coxsackie*, *Adenovirus*
- History:** Acute swelling, localized to epididymis & testis, +/- fever, dysuria
- Exam:** Firm, tender & swollen testis & epididymis
- Lab:** Pyuria, ↑ed blood flow on U/S doppler scan  
Send 1<sup>st</sup> void urine for CT/GC PCR

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## Epididymitis - Treatment

### Outpatient Therapy

Ceftriaxone 250mg IM x1  
Plus  
Doxycycline 100mg BID x10d

### For enteric organisms, or pts with allergies

Ofloxacin 300mg BID x10d  
OR  
Levofloxacin 500mg QD x10d

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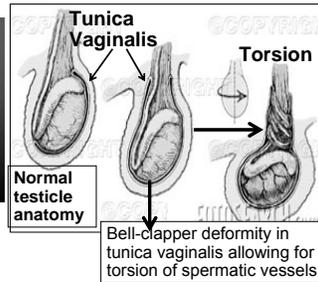
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## Testicular (Spermatic cord) torsion



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## Testicular torsion (Spermatic cord)

- 1° cause of acute scrotum = **Urologic emergency**
- Incidence: 1 in 4000 males <25 y/o
- Most cases (65%) present during puberty; Peak age=13
- Due to suspension anomaly (bell-clapper deformity)

**History** Acute, severe onset with testicle swelling

**Exam** Testes may be high-riding, swollen, & very tender

**Lab** ↓ed blood flow on ultrasound doppler scan

**Treatment** Urologic consult & emergent surgery

**Prognosis** 100% testes released @ 3hrs will be preserved  
(75% @ 8hrs; 10-20% @ 24hrs)

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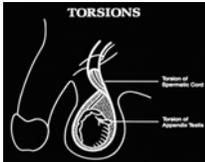
## Torsion of appendix testes

- Due to torsion of a vestigial structure

**History** Pain is usually gradual & intermittent & localized to appendix testes, with minimal inflammation

**Exam** Normal or may see small firm pea-sized mass at upper pole, distinct from epididymis  
"Blue-dot sign"

**Treatment** Most resolve in 2-12 days  
Excise if persistent



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## Painful masses - Overview

### Localized pain

- Upper pole: Testicular appendiceal torsion
- Epididymis: Epididymitis

### Generalized pain (not localized)

- Parotitis present: Mumps orchitis
- No parotitis: Isotope scan/ doppler scrotum

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## Painless masses - Exam

Firm Mass



Neoplasm

Mass not firm & transilluminates



Hydrocele or Spermatocele

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## Urologic referral

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- Firm, irregular mass
- Large hydrocele & small testicle
- Varicocele that halts testicle growth at puberty
- Concern of incarcerated inguinal hernia
- If difficulty with fertility

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