DYSURIA SUMMARY NOTES

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DIFFERENTIAL DIAGNOSIS OF DYSURIA

Diagnosis	Signs and symptoms	Investigations
Uncomplicated cystitis	Dysuria Suprapubic pain Frequency and urgency Gross hematuria A common part of the differential for delirium Any one of these = 50% chance of UTI but both dysuria AND frequency = 90% *Symptoms may be subtle in older women*	None are needed! Your history is best. But a urine dipstick and cultures may be helping in those that are immunocompromised or have diabetes. Look for leukocytes and nitrites on urinalysis! (75% sensitive and 85% specific)
Prostatitis	Chronic pelvic pain Pain with ejaculation Premature ejaculation Erectile dysfunction Tender prostate on exam	Urine dipstick and NAAT or cultures
Vaginitis	New vaginal discharge/odour Vaginal pruritis Dyspareunia	Urine dipstick and NAAT or cultures Swab Speculum exam and bimanual exam for PID
Urethritis	Dysuria	Urinalysis – consider especially when there is pyuria without bacteriuria
Chemical and mechanical irritation	Dysuria Pruritis Consider if using of contraceptive gels, scented cleansers, clothing irritating area	Urinalysis to rule out other causes

Treatment options

1. **Uncomplicated UTI:** Nitrofurantoin, Cephalexin, Septra, or Ciprofloxacin (avoid if pregnant.)
2. **STI:** ceftriaxone + azithromycin or doxycycline +/- metronidazole.
3. **Pyelonephritis:** Consider and send to ER if fever or CVA tenderness. May need IV ceftriaxone. Note nitrofurantoin WILL NOT work in these patients!

High Risk Groups with an Increased risk of Complicated UTI

Group	Why	Changes in Management
Pregnant People	Smooth muscle relaxation and urethral dilation Pressure of the uterus on the bladder	Screen all pregnant patients Treat asymptomatic bacteriuria Monthly urinalysis in those with a UTI in pregnancy
Children	Often don't present with classic symptoms. Always consider in those with fever. May have anatomic abnormalities	Consider investigating for anatomic abnormalities UTI calculator for pediatrics: https://uticalc.pitt.edu
Diabetes	Increased glucose in urine for bacteria to feed on, especially if on an SGLT2 inhibitor Impaired immune response Peripheral and autonomic neuropathy	Get a urine culture because they are more likely to have atypical pathogens

Renal Stones	Obstruction and colonization of stone	Screen for UTI in those with stones and treat if present

Recurrent Dysuria

Recurrent dysuria: 2+ infections in 6 months OR 3+ infections in 1 year.
*Note, these guidelines, mainly targeted at women, are not for those who are pregnant, immunocompromised, or recently catheterized. *

Risk factor	**Why**	**Treatment**
Post-coital	Proximity of anus to vagina Irritants such as lubricants and spermicides	Void after intercourse Avoid spermicides Prophylaxis with septra, nitrofurantoin, or cephalexin as a single dose before or after intercourse
Retention	Stasis is the basis!	Target intake of fluids to 2-3L per day Timed urination to avoid retaining Consider US to look at PVR and renal anatomy for cause
Vaginal atrophy	Low estrogen changes the flora	Vaginal estrogen (provided that there are no contraindications) Antibiotic prophylaxis with nitrofurantoin, Fosfomycin, septra Consider referral to ObGyn

Can also initiate self-start therapy provided that the patient is reliable and will provide a culture prior to initiation.