

Asymptomatic Bacteriuria



Diagnosis

- Asymptomatic bacteriuria (ASB) is a positive urine culture in a patient with no signs or symptoms of a urinary tract infection (e.g., dysuria, frequency, urgency, fever, flank pain).
- Asymptomatic bacteriuria (ASB) is common and often associated with pyuria (urine containing ≥ 10 white blood cells per high-powered field).

Population	Prevalence of ASB	Prevalence of Pyuria in Persons With ASB
Healthy premenopausal women	< 5%	32%
Women 65-90 years old	6-16%	
Women > 90 years old	22-43%	
Diabetic women	9-27%	70%
People receiving hemodialysis	28%	90%
Female long-term care residents	25-50%	90%
Male long-term care residents	15-35%	90%
Presence of indwelling urinary catheter	100%	50-100%

Treatment

- The majority of patients with ASB and/or asymptomatic pyuria **SHOULD NOT** be treated.
- Studies have demonstrated that treatment of ASB does not prevent urinary tract infections (UTIs), but is associated with adverse events related to antibiotic use and the development of future UTIs that are antibiotic resistant.
- Exceptions
 - Pregnant patients: treatment prevents preterm labor and pyelonephritis.
 - Patients about to undergo a urologic procedure in which mucosal bleeding is expected (not urinary catheter placement): treatment prevents urosepsis.

How can I prevent unnecessary treatment of asymptomatic bacteriuria?

- Do not order urine cultures unless your patient has signs and symptoms of a UTI, including in patients undergoing preoperative evaluation or patients with urinary catheters (except in pregnant patients or those about to undergo a urologic procedure in which mucosal bleeding is expected).

Note:

- Foul-smelling or cloudy urine does not indicate a UTI.
- Mental status change alone does not indicate a UTI.

4 Opportunities for Antimicrobial Stewardship in Urinary Tract Infections



When It Comes To Urine Testing, Hold It.

Four opportunities for antimicrobial stewardship in urinary tract disease

Only order a UA to assess for a UTI if symptoms are present

- Symptoms of UTI include dysuria, hematuria, urinary urgency, urinary frequency, fever, suprapubic pain/tenderness, costovertebral pain tenderness and mental status changes without other explanations.
- An abnormal UA does not equal a UTI.

Only order a urine culture if symptoms of a UTI are present

- Without UTI symptoms, a urine culture is not a useful test.
- Symptoms of UTI do NOT include: dizziness, falls, cloudy urine, foul smelling urine, isolated nausea and vomiting.
- Overuse of this test can lead to downstream antibiotic use, allergic reactions and Clostridium difficile infection.

Do not start antibiotics for an abnormal UA

- Many patients can have abnormalities (white blood cells, blood, bacteria, etc.).
- Without symptoms of a UTI, antibiotics are not required.

Do not start antibiotics for an abnormal urine culture

- Urine cultures are frequently abnormal, particularly in females and the elderly.
- There are very few indications for treatment of bacteriuria without symptoms; these include an upcoming urologic surgery or if the patient is pregnant.