

URINARY TRACT INFECTIONS

UTI in pregnancy

(Not if pyelonephritis is queried. See advice below)

- **Asymptomatic bacteriuria in pregnancy:** isolation of the same organism in a properly collected MSU sample on **two separate occasions**, with a colony count of >10,000 - 100,000 organisms/ml.
 - It should be treated in pregnancy because of the higher risk of pyelonephritis and an association with pre-term labour and low birth weight.
 - Treat for 7 days with an antibiotic according to the culture and sensitivity results—treatment options as below.
- **Symptomatic cystitis: send a pre-treatment MSU.** Review any previous microbiology results as a guide. Start empiric treatment as below and adjust when the sensitivities of a pre-treatment MSU are available.
- **Upper UTI/pyelonephritis.** If symptoms suggest pyelonephritis, *the antibiotics below are not suitable, and the patient should be referred for assessment as they often require IV antibiotics.*
- Short-term use of nitrofurantoin in pregnancy is unlikely to cause problems to the foetus; however, it should be avoided at term or if delivery is imminent.
- Quinolones should not be used in pregnancy or in women who are trying to become pregnant.
- Cefalexin is safe in pregnancy but is recommended for third line use in UTIs or pyelonephritis if IV antibiotics are not required. This is due to the increased risk of C. difficile and recent reports of serious C. difficile infection in pregnant women.
- Pivmecillinam is not known to be harmful in pregnancy. Long courses (>7 days) or repeated courses should be avoided as long-term use of pivmecillinam is associated with carnitine deficiency (see [here](#)).
- The use of pivmecillinam during late pregnancy may cause a false positive test for isovaleric acidaemia in the newborn as part of neonatal screening.

Drug	Dose	Duration of Treatment
First line: Nitrofurantoin Avoid at term or if delivery is imminent	100mg MR twice daily (50mg four times a day if MR caps unavailable)	All for 7 days
Second line: Pivmecillinam ²	400mg immediately, then 200mg three times daily	
Third line: Cefalexin	500mg twice daily	
If known to be sensitive based on culture and sensitivity results		
Trimethoprim ¹	200mg twice daily	

¹ Avoid trimethoprim in the first trimester or in women who have a low folate status or on folate antagonists, e.g., anti-epileptics or proguanil.

² The intake shortly before delivery may cause a false positive test for isovaleric acidaemia in the newborn's neonatal screening.

- The [TARGET antibiotics toolkit hub](#) includes leaflets to discuss with patients, [diagnostic tools](#), and other UTI resources.

Version Control- UTI in Pregnancy			
Version	Author(s)	Date	Changes
V2.1	Shary Walker Interface and Formulary Pharmacist	29/04/22	1. Updated pivmecillinam as the second-line option per the NUH Symptomatic lower UTI (cystitis) in pregnancy. 2. Added links to the antibiotics toolkit hub.
V2.2	Shary Walker	24/11/23	1. Added information about pivmecillinam may cause a false positive isovaleric acidaemia test in the newborn's neonatal screening. 2. The dose abbreviations are written in full words.