Illness	When to treat	Treatment choice	Doses		Duration	Links
			Adults	Children		
Urinary tract infections						
Lower urinary tract infection	Advise paracetamol or ibuprofen for pain. When considering antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data. See note 1 for when to culture. Amoxicillin resistance is common; only use if susceptibility confirmed. Refer to Diagnosing UTI in the over 65s. **Non-pregnant women**: back up antibiotic (to use if no improvement in 48 hours or symptoms worsen at any time) or immediate antibiotic. See note 2. **Pregnant women, men, children or young people**: immediate antibiotic. If people have symptoms of pyelonephritis (such as fever) or a complicated UTI, see acute pyelonephritis (upper urinary tract infection) for antibiotic choices. *For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management and the Public Health England urinary tract infection: diagnostic tools for primary care.*	**Non-pregnant women first choice**: nitrofurantoin (if eGFR ≥45 ml/minute) **OR**	100mg m/r BD (or if unavailable 50mg QDS)	-	3 days	CKS - Diagnosing UTI in women Diagnosing UTI in men Diagnosing UTI in children 
		trimethoprim (if low risk of resistance)	200mg BD	-		
		Non-pregnant women second choice: Choice should be guided by culture, sensitives and patient factor. It may include cefalexin and pivmecillinam				
		Pregnant women first choice: nitrofurantoin (avoid at term) – if eGFR ≥45 ml/minute	100mg m/r BD (or if unavailable 50mg QDS)	-	7 days	
		Pregnant women second choice: amoxicillin (only if culture results available and susceptible) **OR**	500mg TDS	-	7 days	
		cefalexin	500mg BD	-		
		Treatment of asymptomatic bacteriuria in pregnant women: choose from nitrofurantoin (avoid at term>37 weeks), amoxicillin or cefalexin based on recent culture and susceptibility results				
		Men first choice: nitrofurantoin (if eGFR ≥45 ml/minute) **OR**	100mg m/r BD (or if unavailable 50mg QDS)	-	7 days	
		Trimethoprim (if low risk of resistance	200mg BD	-		

		Men second choice: consider alternative diagnoses basing antibiotic choice on recent culture and susceptibility results. Choices may include and pivmecillinam				
		Children and young people (3 months and over) first choice: trimethoprim (if low risk of resistance – e.g. first UTI, no recent antibiotics) **OR**	-			
		nitrofurantoin (if eGFR ≥45 ml/minute – and can take capsules/tablets)	-			
		Children and young people (3 months and over) second choice: nitrofurantoin (if eGFR ≥45 ml/minute and not used as first choice) **OR**	-		-	
		amoxicillin (only if culture results available and susceptible) **OR**	-			
		Cefalexin (Recurrent UTIs, known underlying urological abnormality)	-			

NOTE 1: Perform cultures in all treatment failures OR when risk of resistance is considered high (e.g. recent prior antibiotic therapy, recurrent UTI, previous resistant organism)

NOTE 2: In mild to moderate, uncomplicated UTI in non-pregnant females aged 18-65 years, a recent trial showed two-thirds of women recovered without antibiotics following a 3 day course of ibuprofen 400mg/8hrs – Consider as treatment strategy in females without contraindications after discussion with patient
(See: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4688879/)

*NOTE 3: **Diagnose with caution.** Urethritis and prostatitis should be considered in young men. Underlying prostate issues should be considered in older men.*

Acute prostatitis	Advise paracetamol (+/- low-dose weak opioid) for pain, or ibuprofen if preferred and suitable. Offer antibiotic. Review antibiotic treatment after 14 days and either stop antibiotics or continue for a further 14 days if needed (based on assessment of history, symptoms, clinical examination, urine and blood tests). *For detailed information click on the visual summary.*	**First choice**: ciprofloxacin (consider safety issues) **OR**	500mg BD	-	14 days then review	
		trimethoprim (if fluoroquinolone not appropriate; seek specialist advice)	200mg BD	-		
Acute pyelonephritis (upper urinary tract)	Advise paracetamol (+/- low-dose weak opioid) for pain for people over 12. Offer an antibiotic. Refer patients with signs of more serious illness e.g. sepsis. Consider referral or seeking specialist advice in patients who are pregnant, significantly dehydrated or have a higher risk of developing complications (for example, people with known or suspected structural or functional abnormality of the genitourinary tract or underlying disease [such as diabetes or immunosuppression]). Culture urine before prescribing antibiotics. When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data. Avoid antibiotics that don't achieve adequate levels in renal tissue, such as nitrofurantoin.	**Non-pregnant women and men first choice**: cefalexin **OR**	500mg-1g 8 hourly	-	7 to 10 days	
		trimethoprim (only if culture results available and susceptible) **OR**	200mg BD	-	14 days	
		Pregnant women first choice: cefalexin	500mg-1g 8 hourly	-	7 to 10 days	
		Children and young people (3 months and over) first choice: cefalexin **OR**	-		-	
		co-amoxiclav (only if culture results available and susceptible)	-			
		For detailed information click on the visual summary. See also the NICE guideline on urinary tract infection in under 16s: diagnosis and management and the Public Health England urinary tract infection: diagnostic tools for primary care.				

Epididymo-orchitis	Send a urine culture for all patients Refer to urology Refer patients under 35 years to GUM as high risk of sexual transmission	**<35 years** Ceftriaxone **plus** Doxycycline	500mg IM once only 100mg PO 12 hourly for 14 days	-	-	CKS
		>35 years Ciprofloxacin	500mg PO 12 hourly	-	14 days (may require longer in some cases based on clinical review)	

Catheter-associated urinary tract infection	Antibiotic treatment is not routinely needed for asymptomatic bacteriuria in people with a urinary catheter. Consider removing or, if not possible, changing the catheter if it has been in place for more than 7 days. But do not delay antibiotic treatment. Advise paracetamol for pain. Advise drinking enough fluids to avoid dehydration. Offer an antibiotic for a symptomatic infection. When prescribing antibiotics, take account of severity of symptoms, risk of complications, previous urine culture and susceptibility results, previous antibiotic use which may have led to resistant bacteria and local antimicrobial resistance data. Do not routinely offer antibiotic prophylaxis to people with a short-term or long-term catheter. *For detailed information click on the visual summary. See also the Public Health England urinary tract infection: diagnostic tools for primary care.*	**Non-pregnant women and men first choice if no upper UTI symptoms:** nitrofurantoin (if eGFR ≥45 ml/minute) **OR**	100mg m/r BD (or if unavailable 50mg QDS)	-	7 days	
		trimethoprim (if low risk of resistance) **OR**	200mg BD	-		
		amoxicillin (only if culture results available and susceptible)	500mg TDS	-		
		Non-pregnant women and men second choice if no upper UTI symptoms: Choice should be guided by culture, sensitives and patient factors. It may include cephalexin or pivmeciilinam or based on sensitivity results.				
		Non-pregnant women and men first choice if upper UTI symptoms: cefalexin **OR**	500mg-1g 8 hourly	-	7 to 10 days	
		trimethoprim (only if culture results available and susceptible)	200mg BD	-	14 days	
		Pregnant women first choice: Nitrofurantoin unless at term or greater than 37 weeks.	500mg-1g 8 hourly	-	7 to 10 days	

▼ Abbreviations

BD, twice a day; eGFR, estimated glomerular filtration rate; IM, intramuscular; IV, intravenous; m/r, modified release; OD, once daily; TDS, 3 times a day; QDS, 4 times a day.