

Monographs for Commonly Administered Intravenous Medications in Home and Community Care

Cefazolin			
Drug Class¹	Antibiotic - Cephalosporin (1 st generation)		
Spectrum^{1,2}	Refer to product monograph for complete spectrum <i>Streptococcal species, β-hemolytic streptococcus, Staphylococcus aureus and epidermis, Klebsiella pneumonia, Haemophilus influenza, Escherichia coli, Proteus mirabilis.</i> Most Enterococci and Enterobacter species are resistant.		
Cross Sensitivities / Allergies¹	Other cephalosporin or beta-lactam antibiotics (e.g., penicillins)		
Indications^{1,3}	<table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top; width: 50%;"> <ul style="list-style-type: none"> • Respiratory tract • Urinary tract • Skin and soft tissue • Biliary tract </td> <td style="vertical-align: top; width: 50%;"> <ul style="list-style-type: none"> • Bone and joint • Septicemia • Endocarditis • Other conditions based on culture and sensitivity results </td> </tr> </table>	<ul style="list-style-type: none"> • Respiratory tract • Urinary tract • Skin and soft tissue • Biliary tract 	<ul style="list-style-type: none"> • Bone and joint • Septicemia • Endocarditis • Other conditions based on culture and sensitivity results
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Outpatient Considerations	<ul style="list-style-type: none"> • For patients with a documented allergy to penicillin or other cephalosporin, the first dose should be administered in a hospital or clinic setting. • Oral cephalexin (1st generation oral cephalosporin) is an option and should be considered after 3-5 days of intravenous therapy, depending on indication, gastrointestinal absorption and clinical status. 		
Prescribing Considerations and Dosage in Adults¹⁻³	<p>At time of ordering please provide the following to the pharmacist:</p> <ul style="list-style-type: none"> • Height, weight • Most recent serum creatinine with date obtained • Indication (infection being treated) <p>Typical dosing regimen is 500 mg to 1 gram IV every 6 to 8 hours, depending on indication.</p> <p>Maximum dose is 6 grams per day, for serious infections such as endocarditis, but can be increased to 12 grams per day for life threatening infections</p> <p><i>Dose and administration interval require adjustment for renal impairment</i></p> <ul style="list-style-type: none"> • When treating <i>β-hemolytic streptococcus</i>, treatment should be for continued at least 10 days 		
Administration³	<ul style="list-style-type: none"> • Dispensed in an ambulatory cassette/multi-dose bag intended for an infusion pump, programmed to deliver total daily dose via preprogrammed boluses over 24 hours. • Prior to connecting the patient to therapy, double check pump programming versus the order. Recheck after each order change. • Each dose usually administered IV over 10-60 minutes • Contact pharmacy infusion provider for specific questions pertaining to administration. 		

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Stability / Compatibilities³	<i>Compatible with:</i> <ul style="list-style-type: none"> • 0.9% Sodium Chloride (NS) • Dextrose 5% in Water (D5W) • Ringer’s Lactate (RL) 	Follow the stability as specified by the infusion provider (as it is based on the dilution). Ensure appropriate storage conditions as specified are being met.
Monitoring parameters¹	Laboratory: <ul style="list-style-type: none"> • Complete blood count^{2,3} • BUN, serum creatinine^{2,3} • Liver function tests^{2,3} • If on warfarin, monitor International Normalized Ratio (INR) more frequently during treatment and after the course finishes until stabilized. 	Clinical by Nurse: <ul style="list-style-type: none"> • Validate that patient does not have a penicillin or cephalosporin allergy. • Ask daily about any onset of severe diarrhea. Contact prescriber to reassess therapy and possibly order stool cultures to rule out <i>C. difficile</i> and implement treatment, if necessary. • Signs of bleeding, if taking warfarin. • Review home medications and compare against the selected drug interactions listed below. Report to prescriber if patient is using an interacting drug and obtain further orders. For more comprehensive drug interaction screening, contact the patient’s community pharmacist(s).
Selected Clinically Significant Drug interactions	<p>Warfarin or low molecular weight heparin^{4,5} (e.g., enoxaparin) – monitor closely for signs of bleeding as cefazolin may increase effects.</p> <p>Phenytoin⁶ – the protein binding of phenytoin can be decreased when combined with cefazolin, potentially increasing free phenytoin levels and resulting in symptoms of phenytoin toxicity. Watch for clinical signs of phenytoin toxicity such as slurred speech, excessive drowsiness, confusion and gait problems.</p>	
Patient Education	<p><i>Advise patient to report to their doctor or nurse if they have:</i></p> <ul style="list-style-type: none"> • New onset watery, foul smelling diarrhea and abdominal cramping. Cefazolin can cause <i>C. difficile</i> diarrhea • Any signs of bleeding (if taking an anticoagulant) 	
Other	For information on pregnancy and nursing please contact the Motherisk Helpline found at http://www.motherisk.org/women/contactUs.jsp	



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References:

1. Cefazolin product monograph. Toronto (ON): Teva Canada Ltd; 2013 Apr 12 [cited 2016 Mar 30]. Obtained through Health Canada Drug Product Database; search term “cefazolin” as active ingredient, available from: <http://webprod5.hc-sc.gc.ca/dpd-bdpp/index-eng.jsp>
2. Cefazolin monograph. Pittsburgh (PA): Antimicrobe.org [cited 2016 Mar 27]. Available at: <http://antimicrobe.org/new/drugpopup/Cefazolin.pdf>
3. Cefazolin [monograph]. In: Bedard M, Gergoure N, Massicotte A, Editors. Parenteral Drug Therapy Manual. Ottawa (ON); 2015.
4. Clark NP, Delate T, Riggs CS, Witt DM, Hylek EM, Garcia DA et al. Warfarin Interactions with antibiotics in the ambulatory care setting. JAMA Intern Med. 2014;174(3):409-416.
5. Cefazolin (Rx). New York (NY): Medscape. 2016 [cited 2016 Mar 30]. Available from: <http://reference.medscape.com/drug/kefzol-cefazolin-342492#3>
6. Adamolekun B. Drug treatment of seizures. In: R. S. Porter & J. L. Kaplan (Eds.), The Merck Manual Online Medical Library database, Professional version (2013) [cited 2016 Mar 30]. Available from: <http://www.merckmanuals.com/professional/neurologic-disorders/seizure-disorders/drug-treatment-of-seizures>

Disclaimer: This monograph is intended to be used as a reference to support healthcare professionals in the home and community setting. It supplements, but does not replace: clinical judgement, the information provided by the product manufacturers, and the need to consult with the prescriber.

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