

caTOPRil

Indication	<ul style="list-style-type: none"> Moderate to severe hypertension¹ Heart failure¹
ORAL	Presentation <ul style="list-style-type: none"> Oral solution: 5 mg in 1 mL
	Dosage <ul style="list-style-type: none"> 0.1 mg/kg every 8 to 12 hours^{2,3} <ul style="list-style-type: none"> Titrate according to response up to maximum of 2 mg/kg every 8 hours³ Shake bottle well If further dilution required
	Preparation <ul style="list-style-type: none"> Draw up 0.5 mg (0.1 mL) of 5 mg/mL solution Add to 4.9 mL water for injection in enteral syringe <i>Concentration now equal to 0.1 mg/mL (100 microgram/mL)</i>
	Administration <ul style="list-style-type: none"> Draw up prescribed dose in oral/enteral syringe Oral/OGT/NGT with feeds (less hypotension if mixed with continuous feeds³)
Special considerations	<ul style="list-style-type: none"> Clinically significant reduction in BP may occur 60–90 minutes after administration Monitor for angioedema and anaphylactoid reactions^{4,5} If renal impairment, monitor as may need dosage adjustment
Monitoring	<ul style="list-style-type: none"> BP: 60 minutes before and 90 minutes after dose If mean BP less than 40 mmHg (or systolic limit as specified by consultant) <ul style="list-style-type: none"> Withhold dose and notify MO/NNP Renal function¹ Electrolytes particularly serum potassium¹ Monitoring may be reduced when parameters stable on prescribed dose (consultant discretion)
Compatibility	<ul style="list-style-type: none"> Nil known
Incompatibility	<ul style="list-style-type: none"> Nil known
Interactions	<ul style="list-style-type: none"> Potassium supplements or potassium-sparing diuretics: additive hyperkalaemic effect⁵ Loop diuretics (e.g. furosemide (frusemide)): increase the risk of severe hypotension⁵ NSAIDs (e.g. indomethacin, ibuprofen): can reduce antihypertensive effect of captopril and may increase the risk of renal impairment and hyperkalaemia⁵
Stability	<ul style="list-style-type: none"> Store at 2–8 °C⁴ Discard 28 days after opening⁴
Side effects	<ul style="list-style-type: none"> Blood pathology: hyperkalaemia⁶, thrombocytopenia⁶, neutropenia⁶, aplastic anaemia⁶, agranulocytosis⁴, haemolytic anaemia⁶, eosinophilia⁶, elevated hepatic aminotransferases and bilirubin⁵ Cardiovascular: hypotension⁶, tachycardia, arrhythmias⁶, cardiac arrest⁶ Nervous: fever⁶, seizures¹, paraesthesia⁶ Dermatologic: Anaphylactoid reactions⁶ including rashes⁴, visceral angioedema⁶, photosensitivity⁶, psoriasis⁴, pemphigus⁵ Digestive: vomiting⁶, diarrhoea⁶, constipation⁶, oral irritation⁶, ulceration⁶, dry mouth⁶, hepatitis⁶, hepatic cholestasis⁶, pancreatitis⁶ Muscular-skeletal: myalgia⁶, arthralgia⁶ Respiratory: dyspnoea⁶, cough⁶—if dry cough severe or causing distress, consider discontinuing therapy⁵ Urinary: proteinuria⁶, renal insufficiency⁴, acute renal failure⁴, polyuria⁴, oliguria¹, urinary frequency⁴, nephrotic syndrome⁴, glomerulopathy⁴, hyponatraemia⁵
Actions	<ul style="list-style-type: none"> A competitive inhibitor of angiotensin I converting enzyme (ACE), the enzyme responsible for the conversion of angiotensin I to angiotensin II, a potent vasoconstrictor⁴ Decreases levels of angiotensin II and aldosterone and increases renin activity⁴ Antihypertensive properties caused by a combination of afterload reduction and long-term inhibition of salt and water retention¹



Abbreviations	<ul style="list-style-type: none"> MO: medical officer, NNP: neonatal nurse practitioner, NSAIDs: non-steroidal anti-inflammatory drugs, OGT orogastric tube, NGT: nasogastric tube
Keywords	<ul style="list-style-type: none"> Captopril, Capoten, hypertension, ACE inhibitor

The Queensland Clinical Guideline *Neonatal Medicines* is integral to and should be read in conjunction with this monograph. Refer to the disclaimer. Destroy all printed copies of this monograph after use.

References

1. IBM Micromedex® Neofax®. Captopril. In: IBM Micromedex® NeoFax®/Pediatrics (electronic version). IBM Watson Health, Greenwood Village, Colorado, USA. April 2019 [cited 2019 May 15]. Available from: <http://neofax.micromedexsolutions.com/neofax>.
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Document history

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