

## LOPERAMIDE

<b>Trade Name</b>	Loperamide Capsule (Diamide relief)
<b>Class</b>	Antimotility / Antidiarrhoeal
<b>Mechanism of Action</b>	Acts directly on circular and longitudinal intestinal muscles, through the opioid receptor, to inhibit peristalsis and prolong transit time.  It reduces faecal volume, increases viscosity, and diminishes fluid and electrolyte loss, as well as having anti-secretory activity.
<b>Indications</b>	<ol style="list-style-type: none"> <li>1. Short bowel syndrome</li> <li>2. High volume ileostomy losses</li> <li>3. Chronic diarrhoea</li> </ol>
<b>Contraindications</b>	Ileus, constipation, abdominal distension, colitis
<b>Supplied As</b>	2mg capsules
<b>Dilution</b>	Open one 2mg capsule and dilute contents with 4ml of water to make a <b>0.5mg/ml solution</b>  Use a new capsule for each dose.
<b>Dosage</b>	Start at 0.1mg/kg/ <b>dose</b> 12 hourly and titrate the dose depending on the effect.  Increase to a maximum of 1-2 mg/kg/ <b>day</b> <sup>3,5</sup>  Loperamide to be started only after consultation with Paediatric Gastroenterology
<b>Guardrail</b>	N/A
<b>Interval</b>	8-12 hourly
<b>Administration</b>	Oral / Nasogastric  Best absorbed if given 30 minutes before a feed
<b>Compatible With</b>	N/A
<b>Incompatible With</b>	N/A
<b>Interactions</b>	None known
<b>Monitoring</b>	Monitor for effect or constipation
<b>Stability</b>	Use a new capsule to make up the solution for each dose, then discard the remainder
<b>Storage</b>	Store capsules at room temperature

<b>Adverse Reactions</b>	Nausea, flatulence, headache, dizziness Rarely – paralytic ileus, urticaria, Steven Johnson Syndrome, Toxic Epidermal Necrolysis Syndrome
<b>Metabolism</b>	Loperamide undergoes hepatic metabolism where it is conjugated and excreted via the bile. Due to the very high first pass metabolism the plasma concentration of unchanged Loperamide remains extremely low. The plasma protein of Loperamide is 95%, mainly to albumin.  The half-life of Loperamide in adults is around 11 hours (9-14 hours). Time to peak concentration is 5 hours while onset of action is within 30 to 60 minutes.
<b>Comments</b>	Loperamide 1mg/5ml liquid (section 29) is available however this product is not funded in NZ and its low concentration means most children are unable to tolerate the volume of dose required. Note also that the liquid contains preservatives, flavouring, colouring and an unspecified amount of ethanol all of which may not be suitable for neonatal use. Therefore we have chosen to use the contents of a capsule diluted in water to provide an aliquot for each dose.
<b>References</b>	<ol style="list-style-type: none"> <li>1. NZFc <a href="http://www.nzf.org.nz">www.nzf.org.nz</a></li> <li>2. Uptodate Loperamide paediatric information October 2014</li> <li>3. Medicines for children RCPCH 2003</li> <li>4. Paediatric &amp; Neonatal Dosage Handbook 19<sup>th</sup> ed.</li> <li>5. Shann F RCH Melbourne, Drug Doses 2008.</li> </ol>
<b>Updated By</b>	S Qi, B Robertshawe, A Lynn October 2014 M Wallenstein, A Lynn, B Robertshawe September 2020 (update)