### Alert
The use of macrogol (polyethylene glycol) 3350 with or without electrolytes is based on expert opinion with minimal studies assessing the safety and efficacy in the neonatal population. The electrolyte containing formulations should be dissolved in recommended amount of water to prepare an iso-osmolar solution.

### Indication
To soften stool and assist with antegrade passage of stool through the bowel. (To be prescribed in consultation with Paediatric Surgeon/Paediatric Gastroenterologist).

### Action
Polyethylene glycol (PEG) is an osmotic agent causing retention of water in the stool resulting in a softer stool with more frequent bowel motions. An initial response is usually seen within 2–4 days. Macrogol is not significantly absorbed from the GIT.

### Drug Type
Large polymer with osmotic activity.

### Trade Name
1. **Macrogol (PEG) 3350 without electrolytes**
   - Herron ClearLax 17 g sachet
   - VivaLAX 17 g sachet

2. **Macrogol (PEG) 3350 with electrolytes**
   - Movicol Lemon-Lime 13.125 g sachet
   - Movicol Junior 6.9 g sachet

### Maximum Dose
1.5 g/kg/day

### Presentation
- **Macrogol (PEG) 3350 without electrolytes**
  - Herron ClearLax 17 g sachet contains **macrogol 3350**: 17 g
  - VivaLAX 17 g sachet contains **macrogol 3350**: 17 g

- **Macrogol (PEG) 3350 with electrolytes**
  - Movicol Junior 6.9 g sachet contains **macrogol 3350**: 6.563 g, sodium chloride 175.4 mg, potassium chloride 23.3 9 mg, sodium bicarbonate 89.3 mg.
  - Movicol Lemon-Lime 13.125 g contains **macrogol 3350**: 13.125 g, sodium chloride 350.7 mg, potassium chloride 46.6 mg, sodium bicarbonate 178.5 mg per sachet

### Dosage/Interval
Dose can vary based on indication and response.

- **Faecal impaction**: PEG with or without electrolytes orally 1–1.5 g/kg/day for 3–6 days (maximum of 6 consecutive days).\(^1\)

- **Maintenance**: PEG with or without electrolytes starting dose: 0.4 g/kg/day, (dose range 0.2–0.8 g/kg/day).\(^1\)

### Route
Oral or via stoma

### Preparation/Dilution
**As per individual sachet guidelines:**
- Herron ClearLax: dissolve 17 g sachet in 20 mL unchilled water.
- Movicol Lemon-Lime (13.125 g): Dissolve in 125 mL of unchilled water.
- Movicol Junior (6.9 g): dissolve 6.9 g sachet in 62.5 ml of unchilled water.

### Administration
**Macrogol (PEG) 3350 – oral**
Administer orally. Can be instilled into stoma directly if advised by Paediatric Gastroenterologist or Paediatric Surgeon.

### Monitoring
May need electrolytes and fluid balance monitoring if prolonged or frequent use.

### Contraindications
Hypersensitivity to any component, such as polyethylene glycol.
Bowel obstruction, known or suspected.

### Precautions
Can cause electrolyte imbalance with prolonged, frequent or excessive use.
Oral medications taken within an hour of administration may be flushed from the GIT without absorption.

### Drug Interactions
Nil
### Macrogol (PEG) 3350 with or without electrolytes – ENTERAL

**Newborn Use Only**

| **Adverse Reactions** | Diarrhoea, especially at high doses.  
Abdominal cramping, nausea, vomiting, abdominal distension.  
Urticaria, suggestive of an allergic reaction, has been reported. |
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<tr>
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<tbody>
<tr>
<td><strong>Compatibility</strong></td>
<td>Not available</td>
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<tr>
<td><strong>Incompatibility</strong></td>
<td>Not available</td>
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<tr>
<td><strong>Stability</strong></td>
<td>Oral solution: Discard remaining after use.</td>
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<td><strong>Storage</strong></td>
<td>Room temperature.</td>
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<tr>
<td><strong>Special Comments</strong></td>
<td>Macrogol 3350 should not routinely be used in infants &lt;6 months unless recommended by a Paediatric Gastroenterologist or Paediatric Surgeon.</td>
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### Evidence summary

**Efficacy**

The combination of PEG 3350 with electrolytes (PEG+E) has been shown to be effective for treating chronic constipation and faecal impaction in adults and children.¹⁻³

**Safety**

When the powder is dissolved in the correct volume of water, the resulting solution is iso-osmolar with respect to colonic extracellular fluid and therefore does not draw fluid into the colon from the body. In randomised, controlled trials in children, adverse event rate was similar to placebo and most commonly involved mild abdominal discomfort.³

### References


