Summary of Product Characteristics

1 NAME OF THE MEDICINAL PRODUCT

Movicol Paediatric Plain 6.9 g sachet powder for oral solution

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each sachet of Movicol Paediatric Plain contains the following active substances:

Macrogol 3350	6.563 g
Sodium Chloride	0.1754 g
Sodium Hydrogen Carbonate	0.0893 g
Potassium Chloride	0.0251 g

The content of electrolyte ions per sachet when made up to 62.5 ml of solution is as follows:

Sodium	65 mmol/l
Chloride	53 mmol/l
Potassium	5.4 mmol/l
Bicarbonate	17 mmol/l

3 PHARMACEUTICAL FORM

Powder for oral solution.
Free flowing white powder.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

For the treatment of chronic constipation in children 1 to 11 years of age.

For the treatment of faecal impaction in children from the age of 5 years, defined as refractory constipation with faecal loading of the rectum and/or colon.

4.2 Posology and method of administration

Posology
Chronic constipation
The usual starting dose is 1 sachet daily for children aged 1 to 6 years, and 2 sachets daily for children aged 7 to 11 years. The dose should be adjusted up or down as required to produce regular soft stools. If the dose needs increasing this is best done every second day. For children below 2 years of age, the maximum recommended dose should not exceed 2 sachets a day. For children aged 2 to 11 years, the maximum recommended dose needed does not normally exceed 4 sachets a day.
Treatment of children with chronic constipation needs to be for a prolonged period (at least 6 – 12 months). However, safety and efficacy of Movicol Paediatric Plain has only been proved for a period of up to three months. Treatment should be stopped gradually and resumed if constipation recurs.

Faecal impaction
A course of treatment for faecal impaction with Movicol Paediatric Plain is for up to 7 days as follows:

Daily dosage regimen:

Number of MOVICOL Paediatric Plain sachets							
Age (years)	**Day 1**	**Day 2**	**Day 3**	**Day 4**	**Day 5**	**Day 6**	**Day 7**
5 - 11	**4**	**6**	**8**	**10**	**12**	**12**	**12**

The daily number of sachets should be taken in divided doses, all consumed within a 12 hour period. The above dosage regimen should be stopped once disimpaction has occurred. An indicator of disimpaction is the passage of a large volume of stools. After disimpaction it is recommended that the child follows an appropriate bowel management program to prevent reimpaction (dosing for prevention of re-impaction should be as for patients with chronic constipation; see above).
Movicol Paediatric Plain is not recommended for children below 5 years of age for the treatment of faecal impaction, or in children below 1 year of age for the treatment of chronic constipation. For patients of 12 years and older it is recommended to use Movicol.

Patients with impaired cardiovascular function:
There are no clinical data for this group of patients. Therefore Movicol Paediatric Plain is not recommended for treating faecal impaction in children with impaired cardiovascular function.

Patients with renal insufficiency:
There are no clinical data for this group of patients. Therefore Movicol Paediatric Plain is not recommended for treating faecal impaction in children with impaired renal function.

Method of administration
Each sachet should be dissolved in 62.5 ml (quarter of a glass) of water. The correct number of sachets may be reconstituted in advance and kept covered and refrigerated for up to 24 hours. For example, for use in faecal impaction, 12 sachets can be made up into 750 ml of water.

4.3 Contraindications

Intestinal perforation or obstruction due to structural or functional disorder of the gut wall, ileus, severe inflammatory conditions of the intestinal tract, such as Crohn's disease and ulcerative colitis and toxic megacolon.
Hypersensitivity to the active substances.

4.4 Special warnings and precautions for use

The fluid content of Movicol Paediatric Plain when re-constituted with water does not replace regular fluid intake and adequate fluid intake must be maintained.
Diagnosis of faecal impaction/faecal loading of the rectum should be confirmed by the physical or radiological examination of the abdomen and rectum.
Rarely symptoms indicating shifts of fluid/electrolytes e.g. oedema, shortness of breath, increasing fatigue, dehydration and cardiac failure have been reported in adults when using preparations containing macrogol. If this occurs Movicol Paediatric Plain should be stopped immediately, electrolytes measured, and any abnormality should be treated appropriately.
When used in high doses to treat faecal impaction this medicinal product should be administered with caution to patients with impaired gag reflex, reflux oesophagitis or diminished levels of consciousness.
Movicol Paediatric Plain solution when reconstituted has no calorific value.

The absorption of other medicinal products could transiently be reduced due to an increase in gastro-intestinal transit rate induced by Movicol Paediatric Plain (see section 4.5).

Movicol Paediatric Plain contains 93.4 mg (4.062 mmol) sodium (main component of cooking/table salt) per sachet. This is equivalent to 4.6% of the recommended maximum daily dietary intake of sodium for an adult.

In patients with swallowing problems, who need the addition of a thickener to solutions to enhance an appropriate intake, interactions should be considered, see section 4.5.

4.5 Interaction with other medicinal products and other forms of interaction

Medicinal productsin solid dose form taken within one hour of administration of large volumes of macrogol preparations (as used when treating faecal impaction) may be flushed from the gastrointestinal tract and not absorbed.
Macrogol raises the solubility of medicinal productsthat are soluble in alcohol and relatively insoluble in water.
There is a possibility that the absorption of other medicinal products could be transiently reduced during use with Movicol Paediatric Plain (see section 4.4). There have been isolated reports of decreased efficacy with some concomitantly administered medicinal products, e.g. anti-epileptics. Therefore, other medicines should not be taken orally for one hour before, during and for one hour after taking Movicol Paediatric Plain.

Movicol Paediatric Plain may result in a potential interactive effect if used with starch-based food thickeners. Macrogol ingredient counteracts the thickening effect of starch, effectively liquefying preparations that need to remain thick for people with swallowing problems.

4.6 Fertility, pregnancy and lactation

Pregnancy
There are limited amount of data from the use of Movicol in pregnant women. Studies in animals have shown indirect reproductive toxicity (see section 5.3). Clinically, no effects during pregnancy are anticipated, since systemic exposure to macrogol 3350 is negligible.

Movicol can be used during pregnancy.

Breastfeeding
No effects on the breastfed newborn/infant are anticipated since the systemic exposure of the breast-feeding woman to Macrogol 3350 is negligible.

Movicol can be used during breast-feeding.

Fertility
There are no data on the effects of Movicol on fertility in humans. There were no effects on fertility in studies in male and female rats (see section 5.3).

4.7 Effects on ability to drive and use machines

Movicol Paediatric Plain has no influence on theability to drive and use machines.

4.8 Undesirable effects

Reactions related to the gastrointestinal tract occur most commonly.
These reactions may occur as a consequence of expansion of the contents of the gastrointestinal tract, and an increase in motility due to the pharmacologic effects of Movicol Paediatric Plain.
In the treatment of chronic constipation, diarrhoea or loose stools normally respond to a reduction in dose.
Diarrhoea, abdominal distension, anorectal discomfort and mild vomiting are more often observed during the treatment for faecal impaction. Vomiting may be resolved if the dose is reduced or delayed.

The frequency of the adverse reactions listed below is defined using the following convention: very common (≥1/10); common (≥1/100, <1/10); uncommon (≥1/1,000, <1/100); rare (≥1/10,000, <1/1000); and very rare (<1/10,000); not known (cannot be estimated from the available data).

System Organ Class	**Frequency**	***Adverse event***
Immune system disorders	Rare	Allergic reactions including anaphylactic reaction.
	Not known	Dyspnoea and skin reaction (see below)
Skin and subcutaneous tissue disorders	Not Known	Allergic skin reactions including angioedema, urticaria, pruritus, rash, erythema
Metabolism and nutrition disorders	Not known	Electrolyte disturbances, particularly hyperkalaemia and hypokalaemia.
Nervous system disorders	Not known	Headache.
Gastrointestinal disorders	Very common	Abdominal pain, borborygmi.
	Common	Diarrhoea, vomiting, nausea and anorectal discomfort.
	Uncommon	Abdominal distension, flatulence.
	Not known	Dyspepsia and peri-anal inflammation.
General disorders and administration site conditions	Not known	Peripheral oedema.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via HPRA Pharmacovigilance Website: www.hpra.ie.

4.9 Overdose

Severe abdominal pain or distension can be treated by nasogastric aspiration. Extensive fluid loss by diarrhoea or vomiting may require correction of electrolyte disturbances.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Osmotically acting laxatives.
ATC code: A06A D65

Macrogol 3350 acts by virtue of its osmotic action in the gut, which induces a laxative effect. Macrogol 3350 increases the stool volume, which triggers colon motility via neuromuscular pathways. The physiological consequence is an improved propulsive colonic transportation of the softened stools and a facilitation of the defaecation. Electrolytes combined with macrogol 3350 are exchanged across the intestinal barrier (mucosa) with serum electrolytes and excreted in faecal water without net gain or loss of sodium, potassium and water.

In an open study of Movicol in chronic constipation, weekly defaecation frequency was increased from 1.3 at baseline to 6.7, 7.2 and 7.1 at weeks 2, 4 and 12 respectively. In a study comparing Movicol and lactulose as maintenance therapy after disimpaction, weekly stool frequency at the last visit was 9.4 (SD 4.46) in the Movicol group compared with 5.9 (SD 4.29). In the lactulose group 7 children re-impacted (23%) compared with no children in the Movicol group.

In one retrospective-prospective study, 35 patients <24 months' age were treated with MOVICOL for functional constipation for a mean duration of 4.6 ± 3.67 months (from 3 weeks to 18 months). Mean stool frequency before treatment was 2.34 ± 0.98 per week. Following treatment, the frequency of bowel movements was 7.31 ± 1.60 per week, which was a significant difference from baseline ($p < 0.001$). There was also a significant difference in improvement from baseline in the stool consistency score after treatment (1.57 ± 0.54 vs. 3.34 ± 0.58; $p < 0.001$).

In an observational, prospective, longitudinal, parallel group study 62 children aged 1-17 years were treated for chronic constipation with Macrogol / MOVICOL for 12 weeks. Of these 62 patients 30 were aged 1 - 3 years. The number of bowel movements per week was similar in both groups at weeks 6 and 12: mean (SD) 6.1 (2.5) and 6.0 (2.7) at 6 weeks, and 4.6 (2.2) and 5.4 (1.8) at 12 weeks for Macrogol and MOVICOL. Similar improved efficacy results were observed in 2 further trials where patients 6 months – 15 years were treated with Macrogol plus electrolytes.

For the indication of faecal impaction comparative studies have not been performed with other treatments (e.g. enemas). In a non-comparative study in 63 children, Movicol (Paediatric) cleared the faecal impaction in the majority of patients within 3 - 7 days of treatment. For the 5 - 11 years' age group the average total number of sachets of Movicol Paediatric required was 47.2.

5.2 Pharmacokinetic properties

Macrogol 3350 is unchanged along the gut. It is virtually unabsorbed from the gastrointestinal tract. Any macrogol 3350 that is absorbed is excreted via the urine.

5.3 Preclinical safety data

Preclinical studies provide evidence that macrogol 3350 has no significant systemic toxicity potential, based on conventional studies of pharmacology, repeated dose toxicity and genotoxicity.

There were no direct embryotoxic or teratogenic effects in rats even at maternally toxic levels that are a multiple of 66 x the maximum recommended dose in humans for chronic constipation and 25 x for faecal impaction. Indirect embryofoetal effects, including reduction in foetal and placental weights, reduced foetal viability, increased limb and paw hyperflexion and abortions, were noted in the rabbit at a maternally toxic dose that was 3.3 x the maximum recommended dose in humans for treatment of chronic constipation and 1.3 x for faecal impaction. Rabbits are a sensitive animal test species to the effects of GI-acting substances and the studies were conducted under exaggerated conditions with high dose volumes administered, which are not

clinically relevant. The findings may have been a consequence of an indirect effect of Movicol related to poor maternal condition as the result of an exaggerated pharmacodynamic response in the rabbit. There was no indication of a teratogenic effect.

There are long-term animal toxicity and carcinogenicity studies involving macrogol 3350. Results from these and other toxicity studies using high levels of orally administered high molecular weight macrogols provide evidence of safety at the recommended therapeutic dose.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

None.

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

3 years
Reconstituted solution: 24 hours

6.4 Special precautions for storage

Sachet: This medicinal product does not require any special storage conditions.
Reconstituted solution: Store in a refrigerator (2°C – 8°C) and covered.

6.5 Nature and contents of container

This product is available in rectangular sachets and tubular (stick-pack) sachets.Sachet: laminate consisting of four layers: low density polyethylene (LDPE), aluminium, LDPE and paper.
Pack sizes: boxes of 6, 8, 10, 20, 30, 40, 50, 60 or 100 sachets.
Not all sachets and pack sizes may be marketed.

6.6 Special precautions for disposal

Any unused solution should be discarded within 24 hours.
Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7 MARKETING AUTHORISATION HOLDER

Norgine Healthcare B.V.
Antonio Vivaldistraat 150
Amsterdam
1083HP
Netherlands

8 MARKETING AUTHORISATION NUMBER

PA23265/001/003

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 27th January 2006

Date of last renewal: 23rd September 2008

10 DATE OF REVISION OF THE TEXT

April 2023