

Summary of Product Characteristics

1 NAME OF THE MEDICINAL PRODUCT

Lemsip Max Cold and Flu Hot Lemon 1000mg Powder for Oral Solution

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Active Constituents mg/Sachet

Paracetamol 1000.0

Excipients with known effects:

Aspartame: 61.5 mg/sachet

Sodium: 127.57 mg (5.5 mmol) / sachet

Sucrose: 2.19 g/sachet

Lactose*: 9.72mg per sachet

* Present in curcumin powder

For the full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Powder for oral solution.

A pale yellow unit-dose powder for oral solution with the odour and flavour of lemons.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

For the relief of symptoms associated with the common cold or influenza, including fever, headache, sore throat, body aches and pains.

4.2 Posology and method of administration

Paracetamol should be used at the lowest effective dose for the shortest possible time. The maximum daily dose must not be exceeded.

Posology

Adults, the elderly and adolescents aged 16 years and over: The usual dose is 1 sachet up to 4 times daily. The dose may be repeated in 4 hours with a maximum of four doses in a 24 hour period.

Renal impairment

It is recommended when giving paracetamol to patients with renal impairment, to reduce the dose and to increase the minimum interval between each administration to at least 6 hours unless directed otherwise by a physician. See table below:

Adults:

<u>Glomerular filtration rate</u>	<u>Dose</u>
10-50 ml/min	500 mg every 6 hours
<10 ml/min	500 mg every 8 hours

This product is not suitable for patients with renal insufficiency when a reduced dose is required. More appropriate forms are available for that circumstance.

Hepatic impairment

In patients with hepatic impairment or Gilbert's Syndrome, the dose should be reduced or the dosing interval prolonged. The daily dose should not exceed 2 g/day unless directed by a physician.

Elderly Population:

Experience has indicated that normal adult dosage is usually appropriate. However, in frail, immobile elderly subjects or in elderly patients with renal or hepatic impairment, a reduction in the amount or frequency of dosing may be appropriate (see section 4.4).

The maximum daily dose should not exceed 60 mg/kg/day (up to a maximum of 2 g per day) in the following situations, unless directed by a physician:

- Weight less than 50 kg
- Chronic alcoholism
- Dehydration
- Chronic malnutrition

Paediatric population under 16 years:

Do not give to children under 16 years of age.

For children under 16 years, other formulations and dosage strengths are available which may be more appropriate.

Method of administration

For oral administration after dissolution in water. Contents of one sachet dissolved by stirring in hot, not boiling water, and sweetened to taste.

For instructions on reconstitution of the medicinal product before administration, see section 6.6.

4.3 Contraindications

Hypersensitivity to paracetamol or to any of the excipients listed in section 6.1.

4.4 Special warnings and precautions for use

Serious skin reactions, including Stevens-Johnson Syndrome, toxic epidermal necrolysis, and acute generalised exanthematous pustulosis, have been reported very rarely in association with paracetamol. These severe hypersensitivity reactions are potentially life threatening. The product should be discontinued at the first appearance of skin rash, mucosal lesions, or any other sign of hypersensitivity.

Patients with hepatitis, non-cirrhotic alcoholic liver disease, hepatic insufficiency or renal insufficiency are at an increased risk of adverse reactions associated with paracetamol use. These patients should seek the advice of a doctor before taking this product or other drugs that affect the liver.

Do not take with any other paracetamol containing product. Take only when necessary. Prolonged use except under medical supervision can be harmful. Do not exceed the stated dose. Immediate medical advice should be sought in the event of an overdose, even if you feel well (see section 4.9).

Cases of high anion gap metabolic acidosis (HAGMA) due to pyroglutamic acidosis have been reported in patients with severe illness such as severe renal impairment and sepsis, or in patients with malnutrition or other sources of glutathione deficiency (e.g. chronic alcoholism) who were treated with paracetamol at therapeutic dose for a prolonged period or a combination of paracetamol and flucloxacillin. If HAGMA due to pyroglutamic acidosis is suspected, prompt discontinuation of paracetamol and close monitoring is recommended. The measurement of urinary 5-oxoproline may be useful to identify pyroglutamic acidosis as underlying cause of HAGMA in patients with multiple risk factors.

Do not exceed the stated dose.

If symptoms persist, the physician should be consulted.

Paracetamol should be administered with caution under the following circumstances (see section 4.2 where relevant):

- Glucose-6-phosphate dehydrogenase deficiency

- Haemolytic anaemia
- Glutathione deficiency
- Dehydration
- Elderly Cases of paracetamol induced hepatotoxicity, including fatal cases, have been reported in patients taking paracetamol at doses within the therapeutic range. These cases were reported in patients with one or more risk factors for hepatotoxicity including low body weight (<50 kg), renal and hepatic impairment, chronic alcoholism, concomitant intake of hepatotoxic drugs, and in acute and chronic malnutrition (low reserves of hepatic glutathione). Paracetamol should be administered with caution to patients with these risk factors. Caution is also advised in patients on concomitant treatment with drugs that induce hepatic enzymes and in conditions which may predispose to glutathione deficiency (see sections 4.2 and 4.9). Doses of paracetamol should be reviewed at clinically appropriate intervals and patients should be monitored for emergence of new risk factors for hepatotoxicity which may warrant dosage adjustment. In general, medicinal products containing paracetamol should be taken for only a few days without the advice of a physician or dentist and not at high doses. If high fever or signs of secondary infection occur or if symptoms persist for longer than 3 days, a physician should be consulted. Prolonged or frequent use is discouraged. Patients should be advised not to take other paracetamol containing products concurrently. Taking multiple daily doses in one administration can severely damage the liver; in such case medical assistance should be sought immediately. This medicinal product contains 127.57 mg sodium per dose, equivalent to 6.4 % of the WHO recommended maximum daily intake for sodium. The maximum daily dose of this product is equivalent to 25.5 % of the WHO recommended maximum daily intake for sodium. Lemsip Max Cold & Flu Hot Lemon is considered high in sodium. This should be particularly taken into account for those on a low salt diet. This medicine contains 61.5 mg aspartame in each sachet. Aspartame is a source of phenylalanine. It may be harmful if you have phenylketonuria (PKU), a rare genetic disorder in which phenylalanine builds up because the body cannot remove it properly. Contains lactose. Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption should not take this medicine. Contains 2.19g of sucrose per sachet. This should be taken into account in patients with diabetes mellitus. Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.

4.5 Interaction with other medicinal products and other forms of interaction

Paracetamol may falsely elevate continuous blood glucose monitor (CGM) readings compared to finger stuck (BG meter) readings.

The speed of absorption of paracetamol may be increased by metoclopramide or domperidone and absorption reduced by cholestyramine.

The anticoagulant effect of warfarin and other coumarins may be enhanced by prolonged regular use of paracetamol with increased risk of bleeding; occasional doses have no significant effect.

CYP Inducers: Drugs inducing hepatic cytochrome P-450 isoenzyme 2E1 (CYP2E1) may increase the hepatotoxic potential of paracetamol, whilst also reducing plasma paracetamol levels. For example, anticonvulsants including phenytoin, barbiturates, carbamazepine and alcohol.

Isoniazid: The toxicity of paracetamol may be increased by isoniazid.

Guaifenesin: May increase the rate of absorption of paracetamol.

Flucloxacillin: Caution should be taken when paracetamol is used concomitantly with flucloxacillin as concurrent intake has been associated with high anion gap metabolic acidosis due to pyroglutamic acidosis, especially in patients with risk factors (see section 4.4).

4.6 Fertility, pregnancy and lactation

Pregnancy

A large amount of data on pregnant women indicate neither malformative, nor feto/neonatal toxicity. Epidemiological studies on neurodevelopment in children exposed to paracetamol in utero show inconclusive results. If clinically needed, Paracetamol can be used during pregnancy if clinically needed however it should be used at the lowest effective dose for the shortest possible time and at the lowest possible frequency.

Breast-feeding

Paracetamol is excreted in breast milk, but not in a clinically significant amount. Product use is compatible with breast-feeding.

Fertility

No known effects.

4.7 Effects on ability to drive and use machines

None.

4.8 Undesirable effects

Adverse effects of paracetamol are rare, but hypersensitivity including skin rash may occur. There have been reports of blood dyscrasias but these were not necessarily causally related to paracetamol.

Adverse events which have been associated with paracetamol are given below, tabulated by system organ class and frequency. Frequencies are defined as: Very common ($\geq 1/10$); Common ($\geq 1/100$ and $< 1/10$); Uncommon ($\geq 1/1000$ and $< 1/100$); Rare ($\geq 1/10,000$ and $< 1/1000$); Very rare ($< 1/10,000$); Not known (cannot be estimated from the available data). Within each frequency grouping, adverse events are presented in order of decreasing seriousness.

System Organ Class	Frequency	Adverse Events
Blood and Lymphatic System Disorders	Not known	Thrombocytopenia, agranulocytosis
Metabolism and Nutrition Disorders	Not known	High anion gap metabolic acidosis ²
Skin and Subcutaneous Tissue Disorders	Not known	Stevens-Johnson syndrome, toxic epidermal necrolysis, acute generalised exanthematous pustulosis ¹
		Skin rash

Description of Selected Adverse Reactions

¹ Very rare cases of serious skin reactions have been reported (see section 4.4).

² Cases of high anion gap metabolic acidosis due to pyroglutamic acidosis have been observed in patients with risk factors using paracetamol (see section 4.4). Pyroglutamic acidosis may occur as a consequence of low glutathione levels in these patients.

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 Ireland HPRA Pharmacovigilance, Website: www.hpra.ie

4.9 Overdose

Paracetamol overdose can result in liver damage which may be fatal.

Symptoms generally appear within the first 24 hours and may comprise: nausea, vomiting, anorexia, pallor, and abdominal pain, or patients may be asymptomatic.

Overdose of paracetamol can cause liver cell necrosis likely to induce complete and irreversible necrosis, resulting in hepatocellular insufficiency, metabolic acidosis and encephalopathy which may lead to coma and death. Simultaneously, increased levels of hepatic transaminases (AST, ALT), lactate dehydrogenase and bilirubin are observed together with increased prothrombin levels that may appear 12 to 48 hours after administration.

Liver damage is likely in patients who have taken more than the recommended amounts of paracetamol. It is considered that excess quantities of toxic metabolite become irreversibly bound to liver tissue.

Some patients may be at increased risk of liver damage from paracetamol toxicity:

Risk factors include;

- Patients with liver disease
- Elderly patients
- Young children
- Patients receiving long-term treatment with carbamazepine, phenobarbitone, phenytoin, primidone, rifampicin, St John's Wort or other drugs that induce liver enzymes.
- Patients who regularly consume ethanol in excess of recommended amounts
- Patients with glutathione depletion e.g. eating disorders, cystic fibrosis, HIV infection, starvation, cachexia
- Patients taking isoniazid

Acute renal failure with acute tubular necrosis may also develop.

Cardiac arrhythmias and pancreatitis have also been reported.

In severe poisoning, CNS stimulation and delirium may occur initially followed by CNS depression, stupor, hypothermia, rapid shallow breathing, hypotension and circulatory failure. Shock may also develop as well as seizures and coma.

Emergency Procedure:

Immediate transfer to hospital.

Blood sampling to determine initial paracetamol plasma concentration. In the case of a single acute overdose, paracetamol plasma concentration should be measured 4 hours post ingestion. Administration of activated charcoal should be considered if the overdose of paracetamol has been ingested within the previous hour.

The antidote N-acetylcysteine, should be administered as soon as possible in accordance with national treatment guidelines.

Symptomatic treatment should be implemented.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

ATC Code: N02BE01, other analgesics and antipyretics

Paracetamol has both analgesic and antipyretic activity which is believed to be mediated principally through its inhibition of prostaglandin synthesis within the central nervous system.

5.2 Pharmacokinetic properties

Paracetamol is absorbed rapidly and completely mainly from the small intestine producing peak plasma levels after 15-20 minutes following oral dosing. The systemic availability is subject to first-pass metabolism and distributed throughout the body and is eliminated from plasma with a T_{1/2} of approximately 2 hours. The major metabolites are glucuronide and sulphate conjugates (>80%) which are excreted in urine.

5.3 Preclinical safety data

Conventional studies using the currently accepted standards for the evaluation of toxicity to reproduction and development are not available.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Ascorbic acid
Sucrose
Citric acid anhydrous
Sodium citrate
Lemon flavour no. 1
Aspartame E951
Saccharin sodium
Curcumin
Lactose
Polysorbate 80
Silica

6.2 Incompatibilities

None.

6.3 Shelf life

Two years.

6.4 Special precautions for storage

Do not store above 25°C.

6.5 Nature and contents of container

Heat-sealed sachet of paper/polyethylene/aluminium foil/polyethylene laminate in an outer cardboard carton containing 5 or 10 sachets.

6.6 Special precautions for disposal of a used medicinal product or waste materials derived from such medicinal product and other handling of the product

Contents of one sachet dissolved by stirring in hot, not boiling water, and sweetened to taste.

7 MARKETING AUTHORISATION HOLDER

Reckitt Benckiser Ireland Ltd
7 Riverwalk
Citywest Business Campus
Dublin 24
Ireland

8 MARKETING AUTHORISATION NUMBER

PA0979/021/001

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 01 October 1999

Date of last renewal: 01 October 2009

10 DATE OF REVISION OF THE TEXT

February 2025