Summary of Product Characteristics

1 NAME OF THE MEDICINAL PRODUCT

Panadol Max Strength Cold and Flu Hot Lemon Powder for oral solution Paracetamol 1000mg

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each sachet contains 1000mg of Paracetamol

Excipients:
Each sachet contains 3.7 g of sucrose
Each sachet contains 120 mg of sodium
For a full list of excipients, see section 6.1

3 PHARMACEUTICAL FORM

Powder for Oral Solution

Pale yellow soluble powder with and odour and taste of lemon

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Short term symptomatic relief of influenza, feverishness, chills and colds including headache, sore throat pain, sinusitis, aches and pains.

4.2 Posology and method of administration

For oral administration, dissolved in hot water, as a hot lemon drink.

Adults (including the elderly) and children aged 16 years and over:
One sachet, dissolved in a cup or mug of hot water, up to four times daily as required, up to a maximum of four sachets in any 24 hours.

Do not exceed the stated dose.

The lowest dose necessary to achieve efficacy should be used.

The product should not be used continuously for more than seven days without seeking medical advice.

Not recommended for children under 16 years of age.

4.3 Contraindications

Known hypersensitivity to paracetamol or any of the excipients.

4.4 Special warnings and precautions for use

Contains paracetamol. Do not use with any other paracetamol-containing products. The concomitant use with other products containing paracetamol may lead to an overdose. Paracetamol overdose may cause liver failure which can lead to liver transplant or death.

Underlying liver disease increases the risk of paracetamol related liver damage. Patients who have been diagnosed with liver or kidney impairment must seek medical advice before taking this medication.

Cases of hepatic dysfunction/failure have been reported in patients with depleted glutathione levels, such as those who are severely malnourished, anorexic, have a low body mass index or are chronic heavy users of alcohol.

Caution is advised if paracetamol is administered concomitantly with flucloxacillin due to increased risk of high anion gap metabolic acidosis (HAGMA), particularly in patients with severe renal impairment, sepsis, malnutrition and other sources of glutathione deficiency (e.g. chronic alcoholism), as well as those using maximum daily doses of paracetamol. Close monitoring, including measurement of urinary 5-oxoproline, is recommended.

Caution in patients with glutathione depleted states such as sepsis; the use of paracetamol may increase the risk of metabolic acidosis.

If symptoms persist consult your doctor. Prolonged use except under medical supervision may be harmful.

Do not exceed the stated dose.

This product should only be used when clearly necessary. Keep out of the sight and reach of children.
Each sachet contains 3.7 g of sucrose. Patients with rare hereditary problems of fructose intolerance, glucose galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.

Each sachet contains 120 mg of sodium. To be taken into consideration by patients on a controlled sodium diet.

Pack Label Warnings:
Immediate medical advice should be sought in the event of an overdose, even if you feel well. Do not take with other 'flu' or cold products.
Do not take with any other paracetamol-containing products.

Patient Information Leaflet Warnings:
Immediate medical advice should be sought in the event of an overdose, even if you feel well, because of the risk of delayed, serious liver damage.

4.5 Interaction with other medicinal products and other forms of interaction

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. Caution should be taken when paracetamol is used concomitantly with flucloxacillin as concurrent intake has been associated with high anion gap metabolic acidosis, especially in patients with risks 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 however it should be used at the lowest effective dose for the shortest possible time and at the lowest possible frequency.

Lactation
Paracetamol is excreted in breast milk but not in a clinically significant amount. Available published data do not contraindicate breastfeeding.

4.7 Effects on ability to drive and use machines

Normal use of the product is not known to have any affects on ability to drive or use machines.

The drug substance is not known to cause sedation.

4.8 Undesirable effects

Adverse events from historical clinical trial data are both infrequent and from small patient exposure. Accordingly, events reported from extensive post-marketing experience at therapeutic/labelled dose and considered attributable are tabulated below by System Organ Class and frequency.

The following convention has been utilised for the classification of undesirable effects: very common (≥1/10), common (≥1/100, <1/10), uncommon (≥1/1,000, <1/100), rare (≥1/10,000, <1/1000), very rare (<1/10,000), not known (cannot be estimated from available data).

The frequencies of adverse events associated with paracetamol are tabulated below.

Frequency table:

Body System	**Undesirable Effect**	**Frequency**
Blood and lymphatic system disorders	Thrombocytopaenia	Very rare
Immune system disorders	Anaphylaxis, Cutaneous hypersensitivity reactions, including skin rashes, angiodema and Stevens Johnson syndrome and Toxic Epidermal Necrolysis. Very rare cases of serious skin reactions have been reported	Very rare
Respiratory, thoracic and mediastinal disorders	Bronchospasm in patients sensitive to aspirin and other NSAIDs	Very rare
Hepatobiliary disorders	Hepatic dysfunction	Very rare

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

Paracetamol overdose may cause liver failure which can lead to liver transplant or death. Acute pancreatitis has been observed, usually with hepatic dysfunction and liver toxicity.

There is a risk of poisoning with paracetamol particularly in elderly subjects, young children, patients with liver disease, cases of chronic alcoholism and in patients with chronic malnutrition. Overdosing may be fatal in these cases.
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 in a single administration in adults or in children 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 adults who have taken more than the recommended amounts of paracetamol. It is considered that excess quantities of toxic metabolite (usually adequately detoxified by glutathione when normal doses of paracetamol are ingested), become irreversibly bound to liver tissue.

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

Risk Factors include: If the patient;

- Is on long-term treatment with carbamazepine, phenobarbitone, phenytoin, primidone, rifampicin, St John's Wort or other drugs that induce liver enzymes.
- Regularly consumes ethanol in excess of recommended amounts

- Is likely to be glutathione depleted e.g. eating disorders, cystic fibrosis, HIV infection, starvation, cachexia

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 >150mg/kg paracetamol has been taken within 1 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

Pharmacotherapeutic group: Other analgesics and antipyretics.
ATC Code: N02B E01

Paracetamol is an analgesic, antipyretic drug substance.

The antipyretic activity of paracetamol is thought to be mediated by its ability to selectively inhibit prostaglandin synthesis in the central nervous system.
The precise mechanism for the analgesic properties of paracetamol remains to be established. Data suggest that central prostaglandin synthetase inhibition is likely to be of primary importance.
Paracetamol is a weak inhibitor of COX-1 and COX-2 leading to the suggestion that there may be another form of COX, which is more sensitive to inhibition by paracetamol.

Paracetamol does not appear to inhibit the peripheral generation of prostaglandins, e.g., it does not alter the gastric mucosal generation of prostaglandins and serious gastro-intestinal adverse events associated with paracetamol are rare. Paracetamol is, therefore, particularly suitable for patients with a history of disease or on concomitant medication where peripheral prostaglandin inhibition would be undesirable, e.g., with gastro-intestinal bleeding, cardiovascular disease or in the elderly.

5.2 Pharmacokinetic properties

Absorption and Distribution
Oral paracetamol is readily absorbed from the upper small intestine to give peak plasma concentrations of 15-20 mcg/ml in 30 to 120 minutes after oral administration of a 1000 mg dose in adults. The speed of gastric emptying modifies the rate of absorption. Plasma protein binding is minimal and there is distribution to all tissues.

Metabolism and Excretion
There is limited first-pass metabolism of paracetamol after oral administration and about 80% of a 1000 mg dose is bioavailable. Paracetamol is metabolised primarily in the liver. After a 1000 mg oral dose in adults, 50-60% is recovered in the urine as the glucuronide conjugate, 25-35% as the sulphate conjugate, up to 5% as unchanged paracetamol and 2-5% as the cysteine or mercapturate metabolites. The latter are formed from the combination ofglutathione with the oxidation metabolite of paracetamol, N-acetyl-p-benzoquinoneimine (NAPQI). Excretion via the urine is rapid and the plasma half-life after oral administration is 1-4 hours.

5.3 Preclinical safety data

The toxicity of paracetamol is well documented.

Effects of chronic toxicity in rats and mice include gastrointestinal lesions, blood count changes, degeneration and necrotic changes in testicular and lymphoid tissue in addition to hepatic and renal necrosis.

Long-term studies in rats and mice give no conclusive evidence of carcinogenic effects. There is no evidence of embryo- or foeto-toxicity from paracetamol in animal studies.

Paracetamol hepatotoxicity is directly dependent on the plasma concentration in relation to time. In man, plasma concentrations above 1.2 mmol/1 at 4 hours, 0.6 mmol/1 at 8 hours, and 0.3 mmol/1 at 12 hours are criteria for immediate antidose treatment to prevent irreversible damage.

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

List of excipients
Sucrose
Citric Acid, Anhydrous
Sodium Citrate
Maize Starch (dried)
Lemon flavour
Sodium Cyclamate
Saccharain Sodium
Ascorbic Acid
Colour – Curcumin (E100)
Silica, Colloidal Anhydrous

6.2 Incompatibilities

Not applicable

6.3 Shelf life

Three years.

6.4 Special precautions for storage

This medicinal product does not require any special storage conditions.

6.5 Nature and contents of container

The product is packed in laminate sachets and each pack contains 5 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

No special requirements.

7 MARKETING AUTHORISATION HOLDER

Haleon Ireland Limited
12 Riverwalk
Citywest Business Campus
Dublin 24
Ireland

8 MARKETING AUTHORISATION NUMBER

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 26th May 2006

Date of last renewal: 26th May 2011

10 DATE OF REVISION OF THE TEXT

May 2023