

Summary of Product Characteristics

1 NAME OF THE MEDICINAL PRODUCT

Paralief 500 mg Effervescent Tablets

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each effervescent tablet contains 500 mg of paracetamol.

Excipients with known effects:

Each effervescent tablet contains 439.46 mg of sodium

Each effervescent tablet contains 20 mg of aspartame.

For the full list of excipients see section 6.1.

3 PHARMACEUTICAL FORM

Effervescent tablet.

White to off-white, circular, flat-faced, bevelled edge tablets debossed with a ring on one side and plain on the other. Diameter: 25.2 mm.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Symptomatic treatment of mild to moderate pain and/or fever in adults and adolescents aged 12 years and above.

4.2 Posology and method of administration

Posology

Paediatric population

Dose depends on body weight and age. A single dose ranges from 10 to 15 mg/kg bodyweight. The maximum total daily dose is 60 mg/kg body weight for total daily dose.

- Children below 12 years of age: this product is not recommended in children aged less than 12 years.
- Adolescents of 12 to 15 years and weighing 41 to 50 kg: one tablet at a time, every 4-6 hours as needed, the maximum being 4 tablets per day (paracetamol 2000 mg per 24 hours).
- Adolescents of 16 to 18 years and weighing more than 50 kg: as adults.

Adults

For adults and adolescents (aged 16 years and older) weighing more than 50 kg the usual single dose is 1-2 tablets at a time, to be repeated every 6 hours as needed, the maximum being 8 tablets per day (paracetamol 4000 mg per 24 hours).

For adults and adolescents (aged 16 years and older) and weighing less than 50 kg the recommended single dose is 1 tablet. The daily effective dose of paracetamol should not exceed 60 mg/kg/day (up to maximum 2g/day).

Renal impairment

In patients with renal insufficiency, the dose should be reduced:

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

Hepatic impairment

In patients with impaired hepatic function or Gilbert's syndrome, the dose must be reduced or the dosing interval prolonged.

Method of administration

Oral use. Place the tablets in a full tumbler of water and allow to dissolve completely before swallowing.

After dissolving the tablets, a slightly opalescent solution will be produced.

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

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 unconsciousness does not occur. However, medical assistance should be sought immediately. Prolonged use except under medical supervision may be harmful. In adolescents treated with 60mg/kg daily of paracetamol, the combination with another antipyretic is not justified except in the case of ineffectiveness.

Renal and hepatic impairment

Caution is advised in the administration of paracetamol to patients with moderate and severe renal insufficiency, mild to moderate hepatic insufficiency (including Gilbert's syndrome), severe hepatic insufficiency (**child-pugh>9**), acute hepatitis, concomitant treatment with medicinal products affecting hepatic functions, glucose-6-phosphatedehydrogenase deficiency, haemolytic anemia, alcohol abuse dehydration and chronic malnutrition (see section 4.2).

Alcohol usage

The hazards of overdose are greater in those with non-cirrhotic alcoholic liver disease. Caution should be exercised in cases of chronic alcoholism. The daily dose should not exceed 2000 mg in such case. Alcohol should not be used during the treatment with paracetamol.

"Caution is advised in asthmatic patients sensitive to aspirin (acetylsalicylic acid), because light reaction bronchospasm with paracetamol (cross-reaction) has been reported in less than 5% of the patients tested."

Other medications and withdrawal

Abrupt discontinuation of long-term use of high-dosed analgesics, taken not as directed, may cause headache, tiredness, muscular pain, nervousness and vegetative symptoms. The withdrawal symptoms subside within a few days. Patients should be advised to consult their doctor if headaches become persistent.

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, sepsis and in acute and chronic malnutrition (low reserves of hepatic glutathione). Paracetamol should be administered with caution to patients with these risk factors.

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.

This medicinal product contains 439.46 mg sodium per effervescent tablet, equivalent to 21.97% of the WHO recommended maximum daily intake of 2 g sodium for an adult.

This product also contains aspartame, a source of phenylalanine. May be harmful for people with phenylketonuria.

Do not exceed the stated dose.

If symptoms persist consult a doctor.

Treatment with an antidote is advised if an overdose is suspected.

Immediate medical advice should be sought in the event of overdosage even if the patient feels well, because of the risk of delayed serious liver damage.

This product should not be used for more than 10 consecutive days without a prescription. Liver and kidney damage cannot be excluded with prolonged use or excessive doses (more than 2 gram per day).

4.5 Interaction with other medicinal products and other forms of interaction

Pharmacodynamic interactions

The anti-coagulant effect of warfarin and other coumarins may be enhanced by regular use of paracetamol with increased risk of bleeding. The effect may occur already at daily doses of 2000 mg after 3 days. Occasional doses have no significant effect on bleeding tendency. Increased monitoring of INR values should be done during the duration of the combination and after its discontinuation.

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 risks factors (see section 4.4).

Pharmacokinetic interactions

Use of substances that induce liver enzymes, such as carbamazepine, phenytoin, phenobarbital, rifampicin and St John's wort (*Hypericum perforatum*) can increase the hepatotoxicity of paracetamol due to increased and more rapid formation of toxic metabolites. Therefore, caution should be taken in case of concomitant use of enzyme inducing substances.

Probenecid nearly halves the clearance of paracetamol by inhibiting its conjugation with glucuronic acid. This probably means that the dose of paracetamol can be halved when being given at the same time as probenecid.

Concurrent intake of medicinal products that accelerate gastric emptying, such as metoclopramide or domperidone, accelerates the absorption and onset of effect of paracetamol.

The absorption of paracetamol is reduced by cholestyramine. Cholestyramine should not be given within one hour if maximum analgesic effect is to be obtained.

Isoniazid affects the pharmacokinetics of paracetamol with possible potentiation of liver toxicity.

Paracetamol may affect the pharmacokinetics of chloramphenicol. Therefore an analysis of chloramphenicol in plasma is recommended in the event of combination treatment with chloramphenicol for injection.

Interference with laboratory tests

Paracetamol may affect uric acid tests by wolframato phosphoric acid, and blood sugar tests by glucose-oxidase-peroxidase.

4.6 Fertility, pregnancy and lactation

Pregnancy

A large amount of data on pregnant women indicate neither malformative, nor foeto/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.

Breast-feeding

After oral administration, paracetamol is excreted into breast milk in small quantities. No undesirable effects on nursing infants have been reported. Consequently, paracetamol may be used in breast-feeding women.

4.7 Effects on ability to drive and use machines

Paracetamol has no influence on the ability to drive and use machines.

4.8 Undesirable effects

The frequency using the following convention should be: very common ($\geq 1/10$); common ($\geq 1/100$ to $< 1/10$); uncommon ($\geq 1/1,000$ to $< 1/100$); rare ($\geq 1/10,000$ to $< 1/1,000$); very rare ($< 1/10,000$), not known (cannot be estimated from the available data). Within each frequency grouping, undesirable effects are presented in order of decreasing seriousness.

Frequency	System	Symptoms	
Rare >1/10000 - < 1/1000	Blood and lymphatic system disorders	Platelet disorders, stem cell disorders, agranulocytosis, leucopenia, thrombocytopenia, haemolytic anaemia, pancytopenia, methaemoglobaemia	
	Immune system disorders	Allergies (excluding angioedema).	
	Psychiatric disorders	Depression NOS, confusion, hallucinations.	
	Nervous system disorders	Tremor NOS, headache NOS.	
	Eye disorders	Abnormal vision.	
	Cardiac disorders	Oedema.	
	Gastrointestinal disorders	Haemorrhage NOS, abdominal pain NOS, diarrhoea NOS, nausea, vomiting.	
	Hepato-biliary disorders	Abnormal Hepatic function, hepatic failure, hepatic necrosis, jaundice.	
	Skin and subcutaneous tissue disorders	Pruritus, rash, sweating, purpura, angioedema, urticaria	
	General disorders and administration site conditions	Dizziness (excluding vertigo), malaise, pyrexia, sedation, drug interaction NOS.	
	Injury, poisoning and procedural complications	Overdose and poisoning	
	Very Rare (< 10,000)	Respiratory, thoracic and mediastinal disorders	Bronchospasm
		Hepato-biliary disorders	Hepatotoxicity
General disorders and administration site conditions		Hypersensitivity reaction (requiring discontinuation of treatment)	
Metabolism and nutrition disorders		Hypoglycemia	
Renal and urinary disorders		Sterile pyuria (cloudy urine) and renal side effects	
Skin and subcutaneous disorders	Very rare cases of serious skin reactions		
Not Known (cannot be estimated from the	Metabolism and nutrition disorders	High anion gap	

Description of selected adverse reactions

High anion gap metabolic acidosis

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.

Interstitial nephritis has been reported incidentally after prolonged use of high doses. Some cases of epidermal necrolysis, Stevens Johnson syndrome, erythema multiforme, edema of the larynx, anaphylactic shock, anemia, liver alteration and hepatitis, renal alteration (severe renal impairment, haematuria, anuresis), gastrointestinal effects and vertigo have been reported.

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

There is a risk of poisoning, particularly in elderly subjects, in young adolescents, in patients with liver disease, in cases of chronic alcoholism, in patients with chronic malnutrition. Overdosing may be fatal.

Liver damage is possible in adults who have taken 10g or more of paracetamol. Ingestion of 5g or more of paracetamol may lead to liver damage if the patient has risk factors (see below).

Risk factors

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.
- Or Regularly consumes ethanol in excess of recommended amounts.
- Or Is likely to be glutathione deplete e.g. eating disorders, cystic fibrosis, HIV infection, starvation, cachexia.

Symptoms

Symptoms of paracetamol overdose in the first 24 hours are pallor, nausea, vomiting, anorexia and abdominal pain.

Liver damage may become apparent 12 to 48 hours after ingestion. Abnormalities of glucose metabolism and metabolic acidosis may occur. In severe poisoning, hepatic failure may progress to encephalopathy, haemorrhage, hypoglycaemia, cerebral oedema, and death. Acute renal failure with acute tubular necrosis, strongly suggested by loin pain, haematuria and proteinuria, may develop even in the absence of severe liver damage. Cardiac arrhythmias and pancreatitis have been reported. 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.

Management

Immediate treatment is essential in the management of paracetamol overdose. Despite a lack of significant early symptoms, patients should be referred to hospital urgently for immediate medical attention. Symptoms may be limited to nausea or vomiting and may not reflect the severity of overdose or the risk of organ damage. Management should be in accordance with established treatment guidelines.

Treatment with activated charcoal should be considered if the overdose has been taken within 1 hour. Plasma paracetamol concentration should be measured at 4 hours or later after ingestion (earlier concentrations are unreliable). Treatment with N-acetylcysteine may be used up to 24 hours after ingestion of paracetamol, however, the maximum protective effect is obtained up to 8 hours post-ingestion. The effectiveness of the antidote declines sharply after this time. If required the patient should be given intravenous N-acetylcysteine, in line with the established dosage schedule. If vomiting is not a problem, oral methionine may be a suitable alternative for remote areas, outside hospital.

High doses of sodium bicarbonate may be expected to induce gastrointestinal symptoms including belching and nausea. In addition, high doses of sodium bicarbonate may cause hypernatraemia; electrolytes should be monitored and patients managed accordingly.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: other analgesics and antipyretics; anilides

ATC code: N02BE01

5.2 Pharmacokinetic properties

Absorption

The absorption of paracetamol by the oral route is rapid and complete. Maximum plasma concentrations are reached 30 to 60 minutes following ingestion.

Distribution

Paracetamol is distributed rapidly throughout all tissues. Concentrations are comparable in blood, saliva and plasma. Protein binding is low.

Biotransformation

Paracetamol is metabolized mainly in the liver following two major metabolic pathways: glucuronic acid and sulphuric acid conjugates. The latter route is rapidly saturated at doses higher than the therapeutic dose. A minor route, catalyzed by the cytochrome P450, results in the formation of an intermediate reagent (N-acetyl-p-benzoquinoneimine) which under normal conditions of use is rapidly detoxified by glutathione and eliminated in the urine, after conjugation with cysteine and mercaptopuric acid. Conversely, when massive intoxication occurs, the quantity of this toxic metabolite is increased.

Elimination

Elimination is essentially through the urine. 90% of the ingested dose is eliminated via the kidneys within 24 hours, principally as glucuronide (60 to 80%) and sulphate conjugates (20 to 30%). Less than 5% is eliminated in unchanged form.

Elimination half life is about 2 hours.

Special patient groups

Renal impairment

In cases of severe renal insufficiency (creatinine clearance lower than 10 ml/min) the elimination of paracetamol and its metabolites is delayed.

Elderly

The capacity for conjugation is not modified.

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

Citric acid (anhydrous) (E330)

Povidone

Sodium bicarbonate (E500)

Sodium saccharin (E954)

Sodium carbonate (anhydrous) (E500)

Simeticone (E900)

Polysorbate 80 (E443)

Aspartame (E951)

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

3 years.

The solution is stable up to 8 hours below 25°C after dissolving the tablet.

6.4 Special precautions for storage

This medicinal product does not require any special temperature conditions.

Store in the original package to protect from light and moisture.

For storage conditions after reconstitution of the medicinal product, see section 6.3.

6.5 Nature and contents of container

4-ply laminate - PFP (glassine paper/polythene/aluminium foil/polythene) or 4-ply laminate- Surlyn (glassine paper/polythene/ aluminium foil/ Surlyn) strips packed into cardboard cartons.

Pack size(s) for strip pack: 8, 10, 12, 16, 20, 24, 32, 50, 60, 100 units.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

After dissolving the tablets, a slightly opalescent solution will be produced.

There are no special requirements for handling of product.

Any unused product or waste material should be disposed of in accordance with local requirements.

7 MARKETING AUTHORISATION HOLDER

Clonmel Healthcare Ltd
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8 MARKETING AUTHORISATION NUMBER

PA0126/020/004

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

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Date of last renewal: 26th June 2020

10 DATE OF REVISION OF THE TEXT

February 2025