



Each 5ml contain

Paracetamol 250mg /125mg

Each ml contain

Paracetamol 100mg

Pharmacokinetic properties:

Paracetamol is readily absorbed from the gastrointestinal tract with peak plasma concentrations occurring about 10 to 60 minutes after oral doses. Paracetamol is distributed into most body tissues. It crosses the placenta and is present in breast milk. Plasma-protein binding is negligible at usual therapeutic concentrations but increases with increasing concentrations. The elimination half-life of paracetamol varies from about 1 to 3 hours. Paracetamol is metabolised mainly in the liver and excreted in the urine mainly as the glucuronide and sulfate conjugates. Less than 5% is excreted as unchanged paracetamol. A minor hydroxylated metabolite (Nacetyl-p-benzoquinoneimine), is usually produced in very small amounts by cytochrome P450 isoenzymes (mainly CYP2E1 and CYP3A4) in the liver and kidney. It is usually detoxified by conjugation with glutathione but may accumulate after paracetamol over dosage and cause tissue damage.

Mechanism of Action

Paracetamol act primarily in the CNS, increasing the pain threshold by inhibiting both isoforms of cyclooxygenase, COX-1, COX-2, and COX-3 enzymes involved in prostaglandin (PG) synthesis. The antipyretic properties of acetaminophen are likely due to direct effects on the heat-regulating centres of the hypothalamus resulting in peripheral vasodilation, sweating and hence heat dissipation.

Other pharmacodynamic properties:

Paracetamol is a widely used analgesic and antipyretic drug that is used for the relief of fever, headaches, and other minor aches and pains. It is a major ingredient in numerous cold and flu medications and many prescription analgesics. It is extremely safe in standard doses, but because of its wide availability, deliberate or accidental overdoses are not uncommon. Paracetamol, unlike other common analgesics such as aspirin and ibuprofen, has no anti-inflammatory properties or effects on platelet function, and it is not a member of the class of drugs known as non-steroidal anti-inflammatory drugs or NSAIDs. At therapeutic doses Paracetamol does not irritate the lining of the stomach nor affect blood coagulation, kidney function, or the fetal ductus arteriosus (as NSAIDs can). Like NSAIDs and unlike opioid analgesics, Paracetamol does not cause euphoria or alter mood



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in any way. Paracetamol and NSAIDs have the benefit of being completely free of problems with addiction, dependence, tolerance and withdrawal. Paracetamol is used on its own or in combination with pseudoephedrine, dextromethorphan, chlorpheniramine, diphenhydramine, doxylamine, codeine, hydrocodone, or oxycodone.

Indication:

Centamol is indicated for:

- Temporary relief of mild to moderate pain, including headache, migraine, neuralgia, toothache, sore throat, menstrual cramps and bodyache.
- Reduction of fever and may be used as an adjunct in the treatment of cold and flu, and for post immunization pyrexia.

Contraindication:

The use of Centamol is contraindicated in patients with:

- Hypersensitivity to any of the ingredients of the formulation.
- Patients with severe hepatic dysfunction

Drug Interaction:

- Anticoagulant drugs (warfarin) - dosage may require reduction if paracetamol and anticoagulants are taken for a prolonged period of time
- Paracetamol absorption is increased by substances that increase gastric emptying, e.g. metoclopramide
- Paracetamol absorption is decreased by substances that decrease gastric emptying, e.g. propantheline, antidepressants with anticholinergic properties, and narcotic analgesics
- Paracetamol may increase chloramphenicol concentrations
- The risk of paracetamol toxicity may be increased in patients receiving other potentially hepatotoxic drugs or drugs that induce liver microsomal enzymes such as alcohol and anticonvulsant agents
- Paracetamol excretion may be affected and plasma concentrations altered when given with probenecid
- Colestyramine reduces the absorption of paracetamol if given within 1 hour.
- Antivirals: Regular use of paracetamol possibly reduces metabolism of Zidovudine (increased risk of neutropenia).

Adverse effects:

There have been reports of blood dyscrasias including thrombocytopenia and agranulocytosis, but these were not necessarily related to paracetamol. Paracetamol has been widely used and reports of adverse reactions are rare, and are generally associated with over dosage. Allergic reactions occur occasionally. Nephrotoxic effects are uncommon and have not been reported in association with therapeutic doses, except after prolonged administration.



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Warnings and Precautions:

- In case a hypersensitivity reaction occurs which is rare, Centamol should be discontinued.
- Centamol contains Paracetamol and therefore should not be used in conjunction with other Paracetamol containing products.
- Centamol should be used with caution in patients with renal or hepatic dysfunction, diabetes mellitus, hyperthyroidism, cardiovascular problems, epilepsy and closed angle glaucoma.
- Chronic heavy alcohol abusers may be at increased risk of liver toxicity from excessive paracetamol use, although reports of this event are rare. These reports usually involve cases of severe chronic alcoholics and dosages of paracetamol that most often exceed recommended doses. Chronic alcoholics should not exceed 2 g/day of paracetamol.

Use in special population:

1. **Pediatric:** Centamol should be used with caution in children less than 2 years of age.
2. **Geriatric:** Elderly population may be at greater risk for the side-effects.
3. **Liver impairment:** Use with caution.
4. **Renal failure:** Use with caution.
5. **Pregnancy and lactation:** Pregnancy: Category A: Paracetamol has been used for over 40 years and available data indicate that paracetamol in therapeutic doses does not adversely affect the pregnant mother or the fetus. Maternal ingestion of paracetamol in recommended analgesic doses does not present a risk to the nursing infant. Amounts in milk range from 0.1% to 1.85% of the ingested maternal dose. Accordingly, breast feeding need not be interrupted.

Dosage:

Recommended dose for children:

Age	Dose
<3 months	10 mg/kg body weight [reduce to 5mg per kg if jaundiced]
3months–1year	1.25ml-2.5ml
1 - 5 years	2.5-5ml (125-250mg)
6-12 years	5-10ml (250-500 mg)
>12 years	10ml [500mg]
Children 2-3 months(For post immunization pyrexia)	60mg has been recommended. A second dose may be given after 4-6 hours

These doses may be given 3-4 times daily as required

Adults: 10-20ml (500-1000mg) every 4 - 6 hours up to a maximum of 4g daily. It has been recommended that if paracetamol is used for long-term therapy then the daily dose should not exceed 2.6gm unless the patient is monitored.

Presentation:

Centamol is available bottle of 60ml with a measuring cup.



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Storage and handling:

Store below 25°C. Protect from light



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