

ZINC CHLORIDE

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| Trade Name | Zinc Chloride Injection (Mayne Pharma/ DBL) (Pfizer) |
| Class | Mineral Supplement |
| Mechanism of Action | <p>Zinc is a cofactor involved in several different enzyme reactions associated with protein and carbohydrate metabolism. Zinc helps to maintain normal growth and tissue repair, normal skin hydration, and the senses of taste and smell.</p> <p>Dietary zinc deficiency is known to inhibit growth in children.</p> <p>Zinc is also an antioxidant.</p> |
| Indications | <p>Indication 1: Supplement</p> <p>Indication 2: Treatment of deficiency</p> |
| Contraindications | <p>Family history of allergy to zinc.</p> <p>Avoid direct intramuscular or intravenous injection due to risk of tissue irritation.</p> |
| Supplied As | Clear solution containing 5.1mg elemental zinc /2mL |
| Dilution | IV: solution must be diluted prior to IV administration |
| Dosage | <p>Indication 1: 0.4mg/kg/day</p> <p>Indication 2: 1– 2mg/kg/day</p> <p>(doses of up to 5mgkg/day may be needed for management of acrodermatiis enteropathica)</p> |
| Interval | Usually given as a single dose once a day. |
| Administration | <p>IV: Either in TPN or as an intravenous infusion .</p> <p>Do not give as an iv bolus</p> <p>Oral: via nasogastric tube or oral syringe with or after a feed</p> |
| Compatible With | 0.9% sodium chloride, 5% dextrose |
| Incompatible With | See below |
| Interactions | <p>Oral zinc supplements reduce absorption of quinolone antibiotics eg ciprofloxacin, gatifloxacin etc</p> <p>Concomitant zinc and copper supplementation may decrease absorption of either or both of these metals. Space administration times as far apart as possible.</p> <p>Concomitant zinc and iron administration may decrease absorption of both of these metals. Space administration times by at least 2 hours.</p> <p>Foods containing bran/dairy may also reduce zinc absorption.</p> |

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| Monitoring | <p>Zinc and Copper levels especially if on long term TPN > 4 wks (Prolonged use of zinc may lead to copper deficiency)</p> <p>Consider checking a Zinc level in an ELBW infant with significant oedema as Zinc deficiency can be a cause.</p> <p>Check a level if there is severe nappy rash that could be consistent with acrodermatitis enteropathica.</p> <p>Consider checking the level of an Infant with unexpected poor growth, especially those with CLD and consider supplementation in those found to be deficient.</p> <p>Normal range for zinc levels are 10-17 micromol/L</p> |
| Stability | <p>IV: discard any unused solution immediately after use</p> <p>Oral: 7days</p> |
| Storage | <p>Oral: in fridge</p> |
| Adverse Reactions | <p>Incidence <1%</p> <p>Hypotension, indigestion, jaundice, leukopaenia, neutropaenia, nausea, diarrhoea, vomiting, pulmonary oedema, oliguria.</p> |
| Metabolism | <p>Bioavailability = 20-30%</p> <p>Elimination = faeces 67%; renal 2%</p> |
| References | <ol style="list-style-type: none"> 1. Martindale Extrapharmacopoeia 2004 2. Mayne Pharma Product Data Sheet for Zinc Chloride Inj 3. Micromedex 4. Tsang Consensus Recommendations 5. www.nzf.org.nz 6. Nutritional Care of Preterm Infants 2nd Edition Vol 122 World review of Nutrition & Dietetics |
| Updated By | <p>A Lynn, B Robertshawe October 2007, September 2008</p> <p>A Lynn Feb 2009</p> <p>A Lynn, B Robertshawe Dec 2012 (re-order profile), Feb 2020 (no routine levels)</p> <p>A Lynn, B Robertshawe, N Clark (Dietitian) March 2022 (routine update)</p> |