THIAMINE HCL

PHARMACOLOGY & MECHANISM OF ACTIONS:

- Vitamin B₁
- Combines with ATP to form thiamine pyrophosphate coenzyme
- Thiamine plays a vital role in metabolism of carbohydrates
- Thiamine is a cofactor for several essential enzymes in the Krebs cycle

INDICATIONS:

- Thiamine should be given prior to the administration of Dextrose in suspected alcoholics or the chronically malnourished that are at risk of Wernicke’s or Korsakoff’s syndrome.
- Altered level of consciousness

CONTRAINDICATIONS:

- None noted

ADMINISTRATION:

<table>
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<tr>
<th>ADULT</th>
<th>PEDIATRIC</th>
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<td>100 mg slow IV/IO/IM</td>
<td>10 – 25 mg IV/IO/IM</td>
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PRECAUTIONS & SIDE EFFECTS:

- Rapid IV administration has been associated with hypotension

SPECIAL NOTES:

- Of more serious concern is Korsakoff’s psychosis, which may be irreversible once it becomes established. For this reason, treatment with thiamine is indicated because Wernicke’s or Korsakoff’s syndrome may be precipitated in an alcoholic. Since thiamine is utilized in carbohydrate metabolism, the syndromes may be precipitated by the administration of dextrose in the alcoholic or chronically malnourished that often has depleted thiamine stores.
- Thiamine deficiency may propagate brain tissue injury by inhibiting metabolism in brain regions with higher metabolic demands and high thiamine turnover.
- Thiamine deficiency can result in Wernicke encephalopathy. Consideration for Wernike encephalopathy should be given to patients with any evidence of long-term alcohol abuse or malnutrition with any of the following:
  - Acute confusion
  - Ataxia
  - Memory disturbance
  - Hypotension
  - Delirium tremens