

# THIAMINE HCL

## PHARMACOLOGY & MECHANISM OF ACTIONS:

- ❑ Vitamin B<sub>1</sub>
- ❑ Com bines 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:

	ADULT	PEDIATRIC	
PARAMEDIC	<ul style="list-style-type: none"><li>❑ 100 mg slow IV/IO/IM</li></ul>	<ul style="list-style-type: none"><li>❑ 10 – 25 mg IV/IO/IM</li></ul>	PARAMEDIC

## 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 Wernike 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