

<b>Vitamin B1 (Thiamine)</b>	
<b>Description</b>	Thiamine diphosphate (TDP) is the physiologically active form of thiamine, a water soluble vitamin involved in many cellular processes.
<b>Indication</b>	Suspected thiamine deficiency
<b>Additional Info</b>	<p>As TDP, thiamine is involved in numerous body functions including: a coenzyme for the oxidative carboxylation of 2-oxo acids involved in energy metabolism , a coenzyme for aldehyde- and ketotransferases and it is involved in the pentose phosphate pathway . In the CNS it plays a role in the biosynthesis of lipids and acetylcholine. Thiamine is synthesised by a variety of plants and micro-organisms but not humans. Because there is very little thiamine stored in the body, depletion can occur as quickly as within 14 days.</p> <p>The classical thiamine deficiency disease is beri-beri , the primary symptoms of which are neurological and cardiovascular disturbances such as myocardial damage, cardiac failure and neuritis and neural paralysis accompanied by metabolic dysfunction with lactic acidosis and branched-chain ketoaciduria.</p> <p>Dietary deficiency in the undernourished such as aged, pregnant, alcoholic or critical care patients can lead to Wernicke's encephalopathy, Korsakov's syndrome or the Wernicke-Korsakov psychosis and forms of Landry's paralysis.</p>
<b>Concurrent Tests</b>	N/A
<b>Dietary Requirements</b>	N/A
<b>Interpretation</b>	Values below the reference range are consistent with thiamine deficiency. If clinical signs are present (neurological), thiamine should be given parenterally. If no symptoms are present, oral supplementation should suffice. Values above the reference range are usually seen in patients receiving thiamine supplementation. There is no known pathology associated with raised blood thiamine concentrations.
<b>Collection Conditions</b>	No special requirements.
<b>Frequency of testing</b>	As required