

<h1>Vitamin A</h1>	
Description	Vitamin A is a fat soluble vitamin measured using reversed phase HPLC with UV detection.
Indication	Fat malabsorption e.g. cystic fibrosis, nutritional support, night blindness, vitamin A toxicity.
Additional Info	Vitamin A has general roles in vision, gene transcription, immune function, embryonic development and reproduction, bone metabolism, haematopoiesis, skin health and has antioxidant activity.
Concurrent Tests	Vitamin E is measured in the same assay.
Dietary Requirements	Fasting samples are preferable.
Interpretation	<p>MALNOURISHMENT: primary vitamin A deficiency occurs when intake of yellow and green vegetables, fruits and liver is inadequate.</p> <p>MALABSORPTION: all fat soluble vitamins may be low e.g. patients with cystic fibrosis and those on TPN with incomplete absorption and supplementation.</p> <p>NIGHT BLINDNESS: associated with low Vitamin A.</p> <p>ANAEMIA: low Vitamin A can lead to anaemia.</p> <p>TOXICITY: levels $>5\mu\text{mol/L}$ can be associated with bone and joint pain, hair loss, nausea, jaundice, irritability, vomiting, blurry vision, drowsiness, hypercalcaemia and altered mental status.</p> <p>FOETAL ORGANOGENESIS: the foetus is particularly sensitive to toxic levels of Vitamin A during organogenesis.</p> <p>Zinc deficiency can impair absorption, transport and metabolism of vitamin A because it is essential for the synthesis of the vitamin A transport proteins and the oxidation of retinol to retinal.</p>
Collection Conditions	N/A
Frequency of testing	As required