

<b>Adjusted Calcium</b>	
<b>Description</b>	<p>Calcium is a divalent cation with multiple roles. These can be broadly divided into structural and metabolic. Its structural role is in the skeleton where calcium deficiency leads to mechanical failure, either in the form of osteoporosis or osteomalacia. Its metabolic roles are numerous.</p> <p>In plasma 40% of Calcium is protein bound, 10% is inorganic complexes and 50% is free (ionized) calcium. Calcium levels are regulated by PTH.</p>
<b>Indication</b>	<p><b>HYPERCALCAEMIA:</b> May be clinically associated with fatigue, anorexia, weight loss, bone pain, nausea, polyuria, mental changes. Renal stones (hyperparathyroidism) and acute pancreatitis may also occur. Causes - most common cause in hospitalised patients is malignancy whereas in outpatients it is primary hyperparathyroidism. Other causes include vitamin D excess, thyrotoxicosis, sarcoidosis, tertiary hyperparathyroidism, PTHrP, lithium treatment, milk alkali syndrome, thiazide diuretics, immobilisation, Pagets, Addisons (rarely), acromegaly (occasionally) or familial hypocalciuric hypercalcaemia (FHH).</p> <p><b>HYPOCALCAEMIA:</b> May be asymptomatic or cause tetany, cataracts, depression (or other psychiatric problems). Causes include hypoalbuminaemia and chronic renal disease (no symptoms as the ionised levels are normal). Vitamin D deficiency (malabsorption or lack sunlight), renal failure and hypoparathyroidism (usually surgical). Also magnesium deficiency, acute pancreatitis, blood transfusions and during conditions resulting in shock.</p>
<b>Additional Info</b>	Part of bone profile. Reported as adjusted calcium as calcium is adjusted for changes in albumin concentration.
<b>Concurrent Tests</b>	Phosphate, albumin 25-hydroxy vitamin D, magnesium and PTH
<b>Dietary Requirements</b>	N/A
<b>Interpretation</b>	See algorithm
<b>Collection Conditions</b>	Ensure blood tubes are collected in the correct order to avoid contamination
<b>Frequency of testing</b>	As required