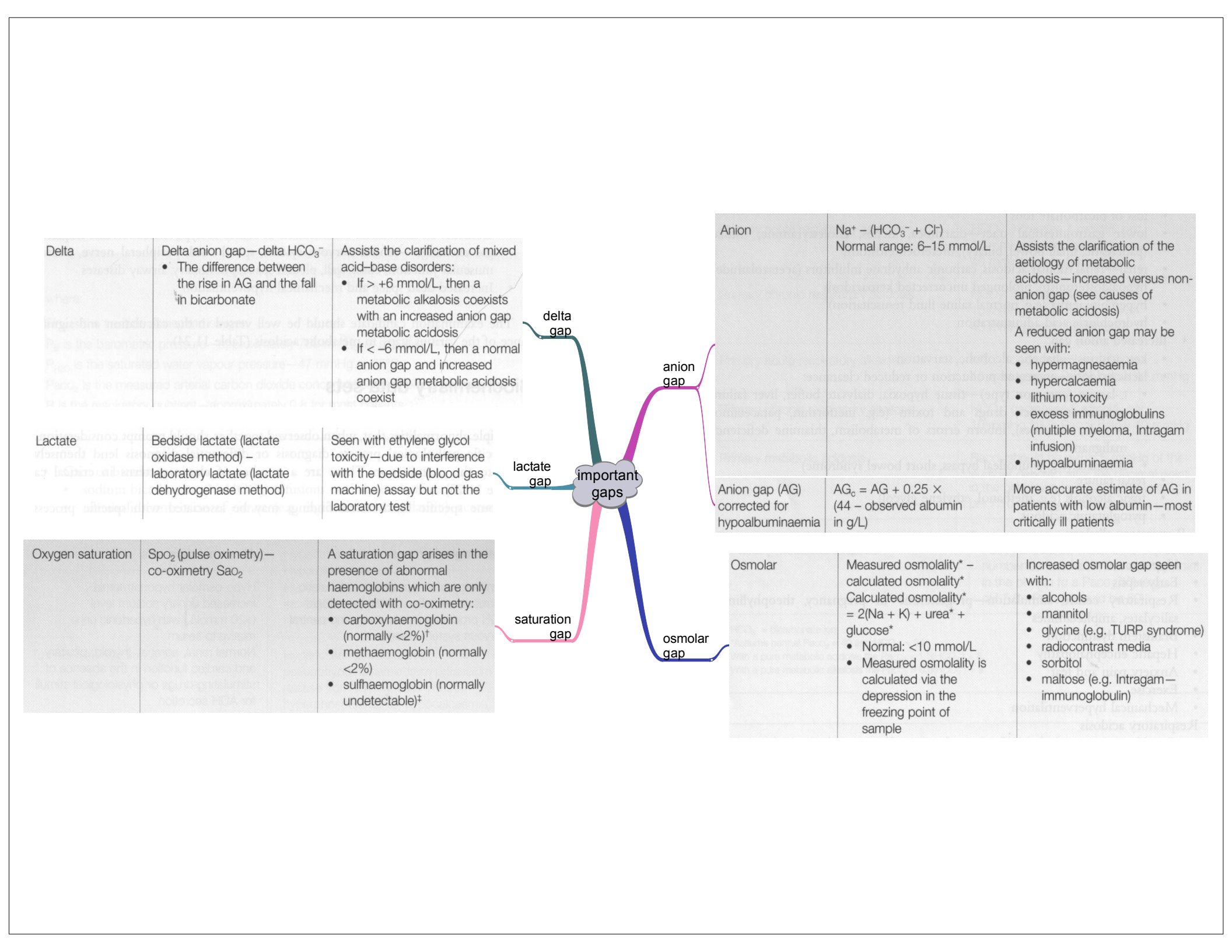

Delta	Delta anion gap—delta HCO_3^- • The difference between the rise in AG and the fall in bicarbonate	Assists the clarification of mixed acid–base disorders: • If > +6 mmol/L, then a metabolic alkalosis coexists with an increased anion gap metabolic acidosis • If < –6 mmol/L, then a normal anion gap and increased anion gap metabolic acidosis coexist

Anion	$Na^+ – (HCO_3^- + Cl^-)$ Normal range: 6–15 mmol/L	Assists the clarification of the aetiology of metabolic acidosis—increased versus non-anion gap (see causes of metabolic acidosis) A reduced anion gap may be seen with: • hypermagnesaemia • hypercalcaemia • lithium toxicity • excess immunoglobulins (multiple myeloma, Intragam infusion) • hypoalbuminaemia
Anion gap (AG) corrected for hypoalbuminaemia	AG_c = AG + 0.25 × (44 – observed albumin in g/L)	More accurate estimate of AG in patients with low albumin—most critically ill patients

Lactate	Bedside lactate (lactate oxidase method) – laboratory lactate (lactate dehydrogenase method)	Seen with ethylene glycol toxicity—due to interference with the bedside (blood gas machine) assay but not the laboratory test

Oxygen saturation	Spo_2 (pulse oximetry)—co-oximetry Sao_2	A saturation gap arises in the presence of abnormal haemoglobins which are only detected with co-oximetry: • carboxyhaemoglobin (normally <2%)† • methaemoglobin (normally <2%) • sulfhaemoglobin (normally undetectable)‡

Osmolar	Measured osmolality* – calculated osmolality* Calculated osmolality* = 2(Na + K) + urea* + glucose* • Normal: <10 mmol/L • Measured osmolality is calculated via the depression in the freezing point of sample	Increased osmolar gap seen with: • alcohols • mannitol • glycine (e.g. TURP syndrome) • radiocontrast media • sorbitol • maltose (e.g. Intragam—immunoglobulin)