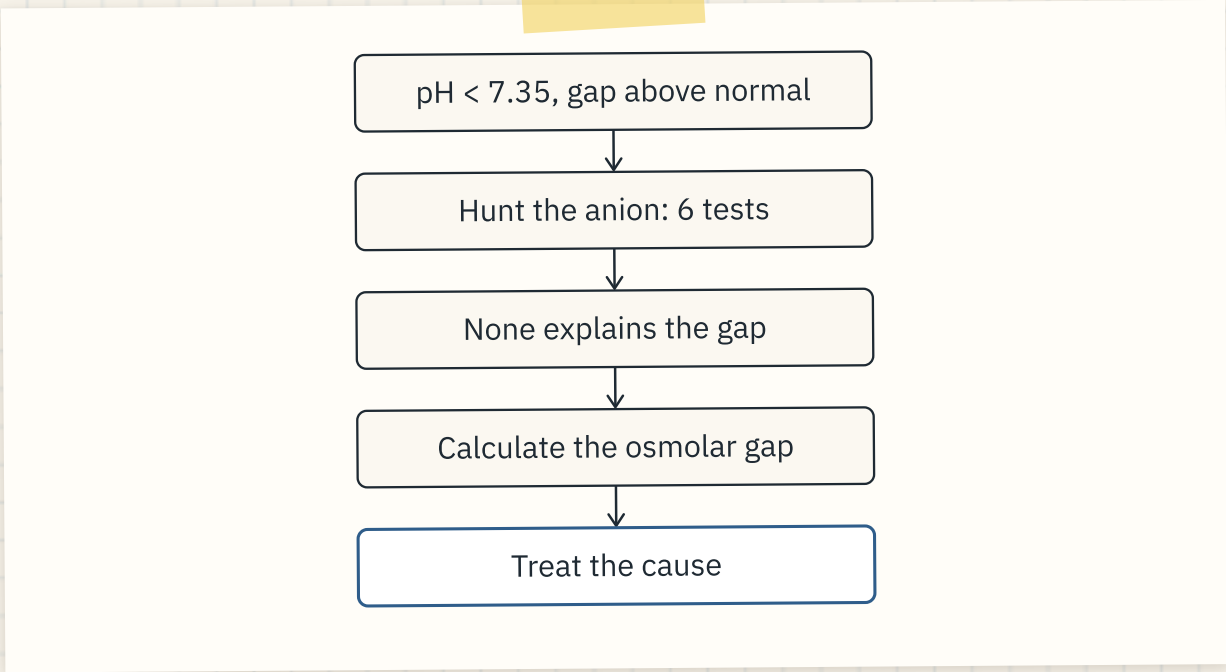
High anion gap acidosis: path

Find the cause, choose the next step



Step by step

1. Confirm: pH below 7.35, gap above normal
2. Glucose, ketones, lactate, creatinine, urea, salicylate
3. Gap unexplained: osmolar gap
4. Treat the cause

ANION GAP

$$AG = Na^+ - (Cl^- + HCO_3^-)$$

Normal about 8–12 mEq/L; osmolar gap above 10 is abnormal.

Cause	First move
Toxic alcohol	Fomepizole; dialysis if organ damage or severe acidosis
Lactic acidosis	Treat shock or sepsis
Kidney failure	Haemodialysis if severe
Ketoacidosis	Fluids, potassium; insulin once K^+ above 3.5

First move by cause

Rule of thumb

Osmolar gap above 10 plus high gap: methanol or ethylene glycol

Potassium before insulin

Opening case: calculated 290, measured 322, osmolar gap 32

Exam traps

- Naming the anion is only half the question.
- Insulin waits until potassium is above 3.5 mEq/L.
- Bicarbonate is not routine; consider it for pH below 7.0.

For exam study only, not medical advice. Follow local guidelines and your lab's ranges.
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