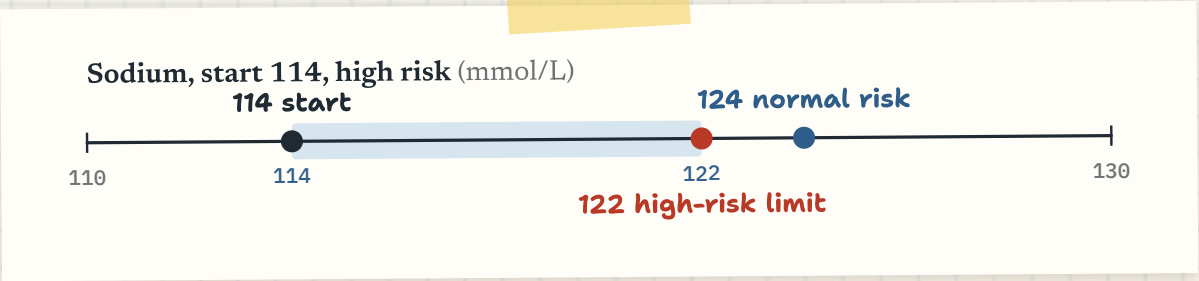
Safe sodium correction

Why slow, how slow, and what if too fast



Step by step

1. Chronic: the brain has adapted
2. Limit the rise: 10 in 24 h, 8 if high risk
3. Watch for a sudden water diuresis
4. Monitor sodium and urine output
5. If the limit is passed, relower

Situation	Rule
Normal risk	10 in 24 h, 18 in 48 h
High risk of ODS	8 in 24 h
Limit passed	Relower: desmopressin + 5% dextrose

Correction limits

Rule of thumb

Risk factors: Na 105 or lower, alcohol, low K^+, malnutrition, liver disease

Overshoot comes from a water diuresis, not too much saline

Worked case: Na 114, high risk, 114 + 8 = 122

Exam traps

- ODS appears days later, after an initial improvement; early MRI is often normal.
- Fixing the cause switches off ADH and can raise sodium more than 2 mmol/L per hour.
- Severe symptoms (seizure, coma) need a hypertonic saline bolus to raise sodium about 4–6 mmol/L fast; in chronic cases the 24 h limit still applies.

Hyponatremia correction rate and osmotic demyelination

Video, written lesson, practice question and sources: medservatory.com/usmle-step-2-ck/nephrology-electrolytes/safe-sodium-correction-osmotic-demyelination

For exam study only, not medical advice. Follow local guidelines and your lab's ranges.
© 2026 Medservatory, a project of ADMR Solutions Ltd.
Free to print and share for personal study.