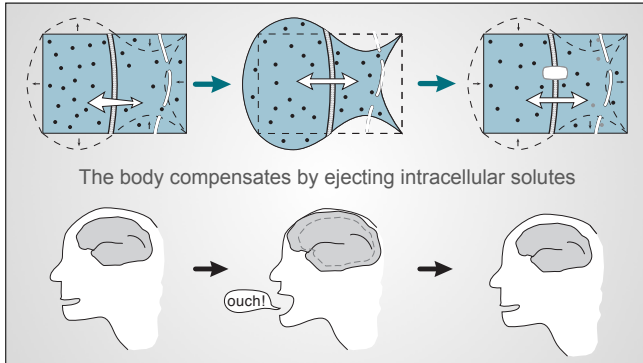


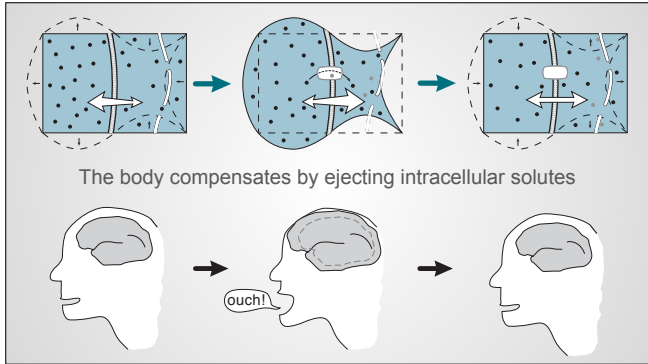


Sodium

Treatment of asymptomatic hyponatremia part 1



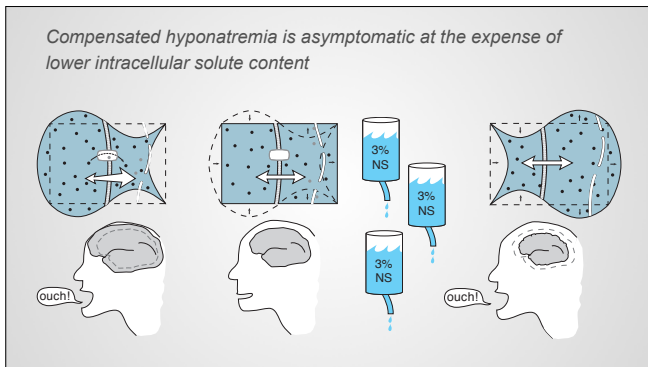




Compensated hyponatremia is largely asymptomatic

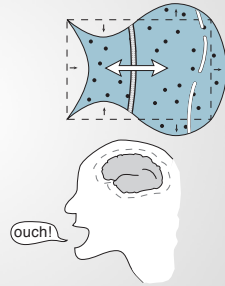
- ➔ Unsteady gait
- ➔ Slowed reaction time
- ➔ Increased falls
- ➔ Hiccups

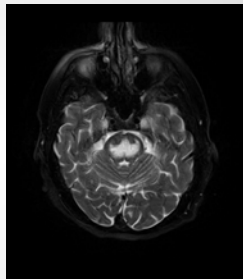
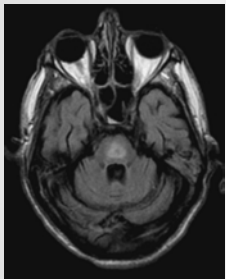
Clin J Am Soc Nephrol. 2010 Feb; 5(2): 275-280.



This cerebral collapse is called central pontine myelinolysis syndrome or osmotic demyelination syndrome

- ➔ flaccid quadriplegia
- ➔ respiratory failure
- ➔ pseudobulbar palsy
- ➔ coma
- ➔ death

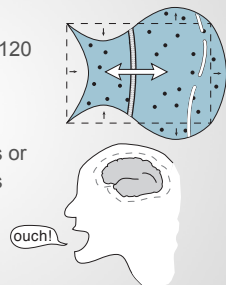




https://en.wikipedia.org/wiki/Central_pontine_myelinolysis#/media/File:CPM3.jpg

In a review of all the cases of CPM reported since 1997, there were 54 cases

- ➔ in 52 the initial sodium was below 120
- ➔ in 46 it was below 115
- ➔ in 47 the sodium increased
 - ≥ 12 mmol/L in the first 24 hours or
 - ≥ 20 mmol/L in the first 48 hours
- ➔ Alcoholism seems to be a risk factor



In a review of all the cases of CPM reported since 1997, there were 54 cases

- 30% of hospitalizations have hyponatremia
- 3% have severe hyponatremia (Na < 125)
- 36 million US hospital admissions a year

$$\frac{54 \text{ cases}}{3\% \times 36 \text{ million} \times 17 \text{ years}} = \frac{54 \text{ cases}}{18,360,000} = 0.0003\%$$



1 in 340,000 cases of sodium less than 125 mmol/L

Speed limit for the correction of compensated hyponatremia

- 6 or 10 mmol/L in the first 24 hours
- 8 mmol/L in subsequent days

