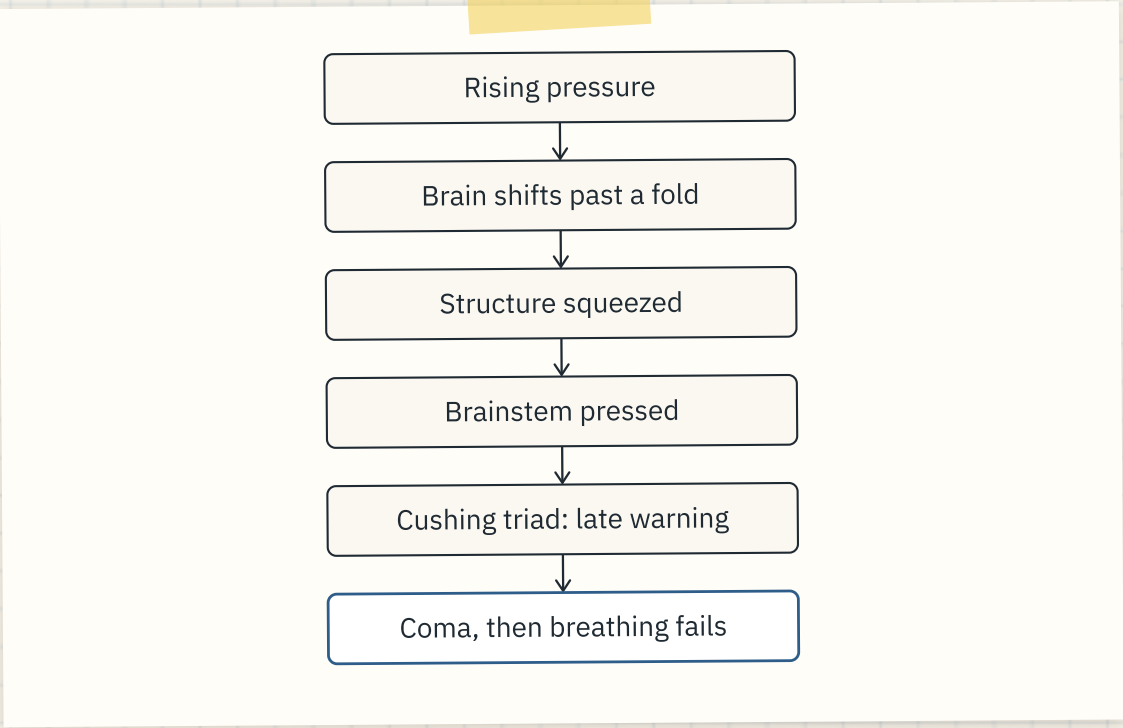
Brain herniation syndromes

Tell them apart by what is squeezed



Step by step

1. Ask what was squeezed, and where.
2. Name the fold or opening involved.
3. Match the structure to its sign.
4. Look for Cushing triad as the late warning.

Type	Squeezed	Signs
Subfalcine	Cingulate gyrus, ACA	Leg weakness, usually opposite
Uncal	Uncus; CN III, PCA, peduncle	Same-side dilated pupil, opposite weakness
Central	Diencephalon, midbrain	Coma, posturing, Duret bleeds
Tonsillar	Tonsils; medulla	Breathing stops
Upward	Cerebellum, midbrain up	Cause: posterior fossa mass

Type, structure squeezed, signs

Uncal rule

Dilated pupil on the side of the lesion
Weakness on the other side

Exam traps

- Kernohan notch: weakness on the same side as the lesion, a false localising sign.
- Subfalcine herniation can give leg weakness (ACA compression) but no pupil or eye signs.
- Tonsillar herniation compresses the medulla: breathing stops, no third nerve palsy.

Brain herniation syndromes: what is squeezed, and where

Video, written lesson, practice question and sources: medservatory.com/usmle-step-1/neuroanatomy-localisation/brain-herniation-syndromes

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