Compartmentalization (in neuroanatomy and surgical anatomy) Compartmentalization refers to the organization of anatomical regions into distinct, bounded spaces—or compartments—separated by natural or artificial barriers, such as bone, dura mater, fascial planes, or fibrous structures.

[] Key Characteristics: Purpose:

To organize and isolate structures (e.g., vessels, nerves, glands)

To limit the spread of infection, hemorrhage, or tumor

To facilitate surgical navigation and dissection

Barriers That Create Compartments:

Bone (e.g., sella turcica)

Dura mater and its reflections (e.g., falx cerebri, tentorium cerebelli)

Fibrous bands or ligaments (e.g., diaphragma sellae, petroclinoid ligaments)

Fascial planes (e.g., within the neck or limbs)

□ In the Skull Base / Parasellar Region: The cavernous sinus is a classic example of compartmentalization, with:

A medial wall, lateral wall, superior compartment, etc.

Fibrous structures like the so-called parasellar ligaments sometimes cited as contributing to microcompartments

Understanding these compartments is critical in neurosurgery, especially for:

Pituitary adenoma resection

Skull base tumor approaches

Minimizing neurovascular injury

From: https://neurosurgerywiki.com/wiki/ - **Neurosurgery Wiki**

Permanent link: https://neurosurgerywiki.com/wiki/doku.php?id=compartmentalization



Last update: 2025/06/20 05:55