

Preservation of the [basal ganglia](#) isolates the abnormal side with $\approx$ an 80% seizure control rate (similar to [anatomic hemispherectomy](#), but with a lower complication rate).

[Functional hemispherectomy/hemispherotomy](#) is a [disconnection procedure](#) for [severe medically refractory epilepsy](#) where the seizure foci diffusely localize to one [hemisphere](#). It is an improvement on anatomical [hemispherectomy](#) and was first performed by Rasmussen in 1974. Less invasive surgical approaches and refinements have been made to improve seizure freedom and minimize surgical [morbidity](#) and [complications](#). Key anatomical structures that are disconnected include the 1) [internal capsule](#) and [corona radiata](#), 2) [mesial temporal](#) structures, 3) [insula](#), 4) [corpus callosum](#), 5) [parietooccipital connection](#), and 6) frontobasal connection. A stepwise approach is indicated to ensure adequate [disconnection](#) and prevent seizure persistence or recurrence. In young pediatric patients, careful patient selection and modern surgical techniques have resulted in > 80% seizure freedom and very good functional outcome. Young et al. summarized the history of [hemispherectomy](#) and its development and present a graphical guide for this anatomically challenging procedure. The use of the [osteoplastic](#) flap to improve outcome and the management of [hydrocephalus](#) are discussed ¹⁾.

¹⁾

Young CC, Williams JR, Feroze AH, McGrath M, Ravanpay AC, Ellenbogen RG, Ojemann JG, Hauptman JS. Pediatric functional hemispherectomy: operative techniques and complication avoidance. Neurosurg Focus. 2020 Apr 1;48(4):E9. doi: 10.3171/2020.1.FOCUS19889. PubMed PMID: 32234987.

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