

Temporal lobectomy

The possible role the [insula](#) in some epilepsies may explain some failures of [temporal lobectomy](#)¹⁾.

✖ Danger points:

1. dominant hemisphere: Wernicke's speech area. Although variable, one can usually safely resect up to 4–5 cm from temporal tip without use of mapping techniques to localize speech
 2. non-dominant hemisphere: one can resect up to 6–7 cm before running the risk of injuring the optic radiation
 3. Sylvian fissure (middle cerebral artery): it is best to amputate the temporal lobe backward from the tip for the extent of the desired resection, and then work deep
 4. medially, the incisura should be identified to avoid injury to the brain stem which lies just medial to this
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Limits of resection (without significant neurologic deficit)

Note that these values are generally considered safe; however, variations occur from patient to patient and only intraoperative mapping can reliably determine the location of language centers. Most centers spare the superior temporal gyrus.

The following measurements are made along the middle temporal gyrus:

- dominant temporal lobe: up to 4–5 cm may be removed. Over-resection may injure speech centers, which cannot be reliably localized visually
- non-dominant temporal lobe: 6–7 cm may be resected. Slight over-resection may → partial contralateral upper quadrant homonymous hemianopsia; resection of 8–9 cm → complete quadrantanopsia

Alternatively, intraoperative electrocorticography may be used to guide the resection of electrically abnormal areas.

Resection should be performed in the [subpial](#) plane to prevent injury to vascular branches.

Indications

[Temporal Lobe Resection for Epilepsy](#)

Anterior temporal lobectomy

see [Anterior temporal lobectomy](#).

1)

Guenot M, Isnard J, Sindou M. Surgical anatomy of the insula. Adv Tech Stand Neurosurg. 2004;29:265-88. Review. PubMed PMID: 15035341.

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