# Generalized seizure

Primarily generalized seizures can be sub-classified into a number of categories, depending on their behavioural effects:

Absence seizure

Myoclonic seizure

Clonic seizure

Tonic clonic seizure

Atonic seizure.

---

Simultaneous bilateral onset and bi-synchrony epileptiform discharges in electroencephalogram (EEG) remain hallmarks for generalized seizures. However, the possibility of an epileptogenic focus triggering rapidly generalized epileptiform discharges has been documented in several studies. Previously, a new multi-stage surgical procedure using bilateral intracranial EEG (iEEG) prior to and post complete corpus callosotomy (CC) was developed to uncover seizure focus in non-lateralizing focal epilepsy. Five patients with drug-resistant generalized epilepsy who underwent this procedure were included in the study. Their bilateral iEEG findings prior to complete CC showed generalized epileptiform discharges with no clear lateralization. Nonetheless, the bilateral ictal iEEG findings post complete CC indicated lateralized or localized seizure onset. This study hypothesized that brain functional connectivity analysis, applied to the pre CC bilateral iEEG recordings, could help identify focal epileptogenic networks in generalized epilepsy. The results indicated that despite diffuse epileptiform discharges, focal features can still be observed in apparent generalized seizures through brain connectivity analysis. The seizure onset localization/lateralization from connectivity analysis demonstrated a good agreement with the bilateral iEEG findings post complete CC and final surgical outcomes. The study supports the role of focal epileptic networks in generalized seizures [1)]

## Surgical treatment

A 2-stage corpus callosotomy is accepted as a palliative procedure for patients older than 16 years with, in particular, medically intractable generalized seizures

1)
Chen PC, Castillo EM, Baumgartner J, Seo JH, Korostenskaja M, Lee KH. Identification of Focal Epileptogenic Networks in Generalized Epilepsy Using Brain Functional Connectivity Analysis of Bilateral Intracranial EEG Signals. Brain Topogr. 2016 May 3. [Epub ahead of print] PubMed PMID: 27142358.