**Can AEDs worsen epilepsy?**

Yes. See, for example,

- Perucca E, "Antiepileptic drugs as a cause of worsening seizures", Epilepsia 1998 Jan;39(1):5-17
- Somerville ER, "Some treatments cause seizure aggravation in idiopathic epilepsies (especially absence epilepsy)", Epilepsia. 2009 Sep;50 Suppl 8:31-6.

Likely there are 2 different mechanisms:

1. nonspecific effects of drug toxicity or encephalopathy
2. pharmacodynamic effects

Risk factors for this include: AED polytherapy, epileptic encephalopathy, cognitive impairment, high seizures frequency, and multifocal epileptiform activity in EEG.

Definitely implicated:

- CBZ may worsen absence, atonic and myoclonic seizures, in parallel with worsening of EEG features in generalized epilepsies such as absence and juvenile myoclonic epilepsy.
- PHT has been described as worsening seizures in generalized epilepsy.
- GBP may cause myoclonic jerks.
- LTG may worsen several type of epilepsies, especially myoclonus in idiopathic generalized epilepsies (See SANAD).
- VGB may cause atypical absence and tonic seizure in Lennox–Gastaut syndrome and myoclonic epilepsies.
- TGB can induce non convulsive status epilepticus in focal epilepsy, and absence status in idiopathic generalized epilepsy.
- OXC may worsen of preexisting seizures, new seizure types. EEGs may be dramatically different, characterized by new onset of generalized epileptiform activity not reported on the initial baseline EEG.
- BDZ occasionally precipitate tonic seizures, especially when given intravenously to control other seizure types in Lennox-Gastaut syndrome.