

# The epilepsy-movement disorder phenotypic spectrum and phenytoin-induced dyskinesia associated with *GABRB3* pathogenic variants

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- This manuscript sheds light on the broad spectrum of epilepsy-movement disorder phenotypes and provides evidence that genes encoding GABA A receptor subunits, such as *GABRB3*, *GABRA2*, *GABRG2*, and *GABRB2* are implicated in pathogenesis.
- 10 previously reported patients found to have pathogenic variants in the *GABRB3* gene had a movement disorder in addition to epilepsy.
- These patients presented with various movement disorders including choreoathetosis, dystonia, dyskinesia, hand stereotypies, tremors, myoclonus, and hypotonia.

- Children with epileptic encephalopathy and patients with pre-existing dyskinesias are more susceptible to develop phenytoin-induced dyskinesia.
- This suggests that genetic factors, such as *GABRB3* pathogenic variants, may represent a susceptibility to phenytoin-induced dyskinesia.
- We provide a video of a patient, known to have a *de novo* pathogenic *GABRB3* variant, who developed dyskinesias of the mouth, head and hands soon after receiving a phenytoin load.