

**Pediatrics • Educational evidence summary**

Anticholinergic exposure in children with epilepsy

This pediatric review addresses anticholinergic exposure in children with epilepsy.

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A cognitive concern in epilepsy has more than one possible pathway

A child with epilepsy may have concerns about attention, learning, memory, or participation. An anticholinergic source lookup can contribute information about some medicines in the regimen, but it cannot separate the effects of seizures, the underlying condition, treatment, and the circumstances of assessment. The clinical question needs to be broader than the category shown beside an ingredient.

This explainer focuses on interpreting evidence. It does not recommend changing antiseizure treatment, provide a seizure-management plan, or assign a class-wide anticholinergic rating to antiseizure medicines.

Name the concern and its setting

Describe whether the difficulty involves a formal test, learning at school, alertness, memory in daily activities, or another outcome. These are related but not identical measures. NICE's epilepsy guidance identifies concerns about cognition and educational performance as topics for information and support. [NICE NG217: information and support](#)

The observation should include its timing and who reported it. A difficulty seen only under one set of demands may ask a different question from a persistent change across settings. The source table cannot infer that context and should not replace the child's clinical assessment.

Preserve the epilepsy and treatment timeline

Record clinically relevant changes in seizure history and medication use during the period being considered. Distinguish the regular regimen from rescue or occasional medicines. An available rescue prescription is not automatically daily administration, and an electronic medication list may not establish what was actually used before an assessment.



If several treatments changed together, retain that information. A later change in cognition or function cannot be uniquely attributed to an anticholinergic category from the medication list alone. The sequence can guide clinical inquiry without proving one mechanism.

Do not treat a drug class as a scale observation

An antiseizure medicine's class membership does not supply a burden value. Each source observation belongs to the named ingredient or product and version. If a medicine is absent from the selected scale, report the absence. Do not assign a value based on another drug in the class or on a nonspecific adverse-effect description.

The converse also matters: a low or missing anticholinergic classification does not establish that a medicine has no cognitive or other clinically important effects. Anticholinergic evidence is one measurement layer, not a complete account of antiseizure treatment tolerability.

Include the medicines used for other needs

Children with epilepsy may also receive medicines for other conditions or symptoms. A review should identify those actual products rather than focus only on the antiseizure regimen. Their purpose and benefit should remain in the record, along with any concern being assessed.

Evidence from children with severe neurological impairment, including the study by Feinstein and colleagues, concerns a selected population and symptom assessment. It should not be generalized to every child with epilepsy. [Feinstein et al., 2023](#) The diagnosis of epilepsy alone does not establish that the child resembles the population in that study.

Formulation and route remain important

The exact preparation, concentration, route, and administration pattern should be reconciled. An ingredient match in UnifiedACB does not provide administration instructions or establish equivalence across formulations. If a source lacks route information, the lookup should preserve that limit.

For research, these fields help determine whether the exposure record is compatible with the outcome window. For clinical care, they help prevent an outdated or ambiguous product description from being treated as a complete explanation of exposure.

Read pediatric cognitive evidence at its actual scope

Pediatric cognitive research includes selected medicines, populations, designs, and durations. A pooled finding cannot answer every epilepsy-specific question, particularly for combinations or longer treatment histories not represented by the evidence. A lack of demonstrated harm in one analysis is not a guarantee for an unstudied regimen.

Likewise, an adult association does not supply a pediatric threshold or predict a child's long-term outcome. The appropriate conclusion may be that a relevant medication classification exists while the outcome evidence for the present context remains limited.



A useful clinical conversation

Bring a clear description of the concern, the current products and actual use, and the timeline of relevant changes. Ask which possible contributors need assessment and what outcome would be followed. The treating epilepsy team must consider seizure control and the child's wider clinical needs alongside any medication concern.

The review should distinguish an event record from a general impression. A family's account of when a difficulty occurred, the surrounding clinical circumstances, and the medicines actually administered can help the epilepsy team decide what requires further assessment. The burden category cannot determine whether the event was related to the epilepsy, treatment, disrupted sleep, or another factor. It also cannot authorize changes to antiseizure treatment. The useful contribution is a clearer, source-linked medication history within the broader epilepsy assessment.

Limits

An anticholinergic burden category cannot diagnose the cause of cognitive difficulty or determine an antiseizure medication change. Its useful role is to make one set of source evidence traceable within a broader, child-specific assessment.

References

1. Feinstein JA, et al. Anticholinergic Medications and Parent-Reported Anticholinergic Symptoms in Neurologically Impaired Children. *J Pain Symptom Manage*. 2023;65(2):e109-e114. [Source](#)
2. Vennard O, Stewart C, Tolia M, Soiza RL, Myint PK. Anticholinergic Medication Burden Scales: A Systematic Review. *J Am Geriatr Soc*. 2026;74(6):1771-1784. [Source](#)
3. Hong IS, Bishop JR. Anticholinergic use in children and adolescents after initiation of antipsychotic therapy. *Ann Pharmacother*. 2010;44(7-8):1171-1180. [Source](#)
4. Ghezzi E, Chan M, Kalisch Ellett LM, et al. The effects of anticholinergic medications on cognition in children: a systematic review and meta-analysis. *Sci Rep*. 2021;11:219. [Source](#)
5. National Institute for Health and Care Excellence. Epilepsies in children, young people and adults. NG217. Information and support. [Source](#)

Explore the evidence

[Ask UnifiedACB](#) about a medication or source, browse the [Medication Library](#), or read the [methodology](#).

Disclosure

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Educational evidence summary. This content does not provide patient-specific medical advice and does not replace clinical judgment, medication reconciliation, or prescribing guidance.