

# Use of Electroconvulsive Therapy on an Adolescent Inpatient Psychiatric Unit

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## Key Points

- ECT is a safe and effective treatment option for children and adolescents.
- Exact mechanism of action is unknown.
- Catatonia and treatment-resistant mood disorder/psychosis are the most common indications for its use.
- It is important to educate patients and parents about the procedure to obtain consent and dispel misconceptions.
- More randomized controlled trials are needed in this population to further determine efficacy and safety and explore new indications.

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## Introduction

- Electroconvulsive therapy (ECT) is an established and safe treatment of various psychiatric disorders.
- No age restrictions
- Data is mostly derived from adult populations
- The efficacy and safety of pediatric ECT are largely established from retrospective studies, case series, and reviews.



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### History of Electroconvulsive Therapy

- Origins:**
  - Convulsive therapy for catatonic schizophrenia (pentylenetetrazol), ECT pioneered by Cerletti & Bini.
- Early Pediatric Use:**
  - 1943: – Effective for melancholia in children, inconsistent for mania, not helpful for schizophrenia.
  - 1947: Lauretta Bender treated 98 children with "childhood schizophrenia" using ECT—showed behavioral improvements.
- Decline & Resurgence:**
  - Decline due to neuroleptics and stigma (Hollywood's negative portrayal).
  - Renewed interest in the 1990s—modern studies show safety and efficacy in adolescents.

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### Legal Aspects

- FDA Reclassification:**
  - ECT devices reclassified from **Class III** (highest risk) to **Class II** (moderate risk) for ages **13+**.
  - Approved for **severe major depression, bipolar depression, and catatonia**.
- State Regulations:**
  - Vary widely by state.

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### Ethical Considerations

- ECT is safe and ethical to use in adolescence
- Although most states allow for the treatment with consent from parents of a minor, it is extremely important to involve patient in discussion and obtain their assent.

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### Indications

- Treatment-resistant depression
- Schizophrenia Spectrum Disorders
- Catatonia
- Refractory Self-injurious behavior
- Neuroleptic malignant syndrome
- Severe suicidality

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### Severity of Symptoms

-  The refusal to eat or drink
-  severe suicidality
-  uncontrollable mania
-  florid psychosis minimal standards

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### Lack of Treatment Response

- CT may be considered earlier in cases in which:
  - (1) adequate medication trials are not possible because of the patient's inability to tolerate psychopharmacological treatment
  - (2) the adolescent is grossly incapacitated and thus cannot take medication
  - (3) waiting for a response to a psychopharmacological treatment may endanger the life of the adolescent [MS]

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### Contraindications

- CNS tumors
- Active chest infection
- Recent myocardial infarction (MI)

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### Electrode Placement

- Varies depending on the clinical presentation and treatment goals.
- Bilateral electrode placement
- Right unilateral treatment
- Changing from unilateral to bilateral treatment

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### Side effects

Headache	Confusion	Subjective memory loss
Agitation	Nausea or vomiting	Muscle Aches

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