



## Clinical Review Criteria Electroconvulsive Therapy (ECT)

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### Criteria

#### For Medicare Members

Source	Policy
CMS Coverage Manuals	<a href="#">Medicare National Coverage Determinations Manual, Chapter 1, Part 2 (Section 160.25)</a>
National Coverage Determinations (NCD)	<a href="#">Multiple Electroconvulsive Therapy (MECT) 160.25</a>
Local Coverage Determinations (LCD)	None
Local Coverage Article	None

#### For Non-Medicare Members

Kaiser Permanente has elected to use the MCG\* Care Guideline: Electroconvulsive Therapy (B-802-T) for medical necessity determinations. For access to the MCG Clinical Guidelines criteria, please see the MCG Guideline Index through the provider portal under Quick Access.

**\*MCG are proprietary and cannot be published and/or distributed.** However, on an individual member basis, Kaiser Permanente can share a copy of the specific criteria document used to make a utilization management decision. If one of your patients is being reviewed using these criteria, you may request a copy of the criteria by calling the Kaiser Permanente Clinical Review staff at 1-800-289-1363 or access the MCG Guideline Index using the link provided above.

#### If requesting this service, please send the following documentation to support medical necessity:

- Last 6 months of clinical notes from requesting provider &/or specialist

The following information was used in the development of this document and is provided as background only. It is provided for historical purposes and does not necessarily reflect the most current published literature. When significant new articles are published that impact treatment option, Kaiser Permanente will review as needed. This information is not to be used as coverage criteria. Please only refer to the criteria listed above for coverage determinations.

### Background

Electroconvulsive therapy (ECT) is a procedure where electrodes are positioned on the patient's scalp, and a measured electrical current is passed through to the brain, inducing generalized seizure activity. ECT is typically administered by a psychiatrist, with the patient under general anesthesia (provided by an anesthesiologist or anesthetist). The treatments are performed in either an inpatient or outpatient setting, depending on a variety of factors.<sup>1</sup>

ECT is not typically considered the first-line of treatment. It is most often used to treat patients with treatment-resistant depression, after a failure of a number of adequate medication trials over time. However, it may result in therapeutic effect more rapidly than medications and should be considered as a possible first line treatment in life threatening catatonia (e.g. with risk of death due to severe malnutrition/starvation) or in someone who is at extremely high risk of suicide.<sup>2</sup> Patients with severe medical or psychiatric illness often start ECT on an inpatient basis, and as they improve, might switch to outpatient treatment. Continuation and maintenance ECT are usually provided on an outpatient basis.

The mechanism of action for ECT remains unknown. However, many studies have shown a variety of changes in the central nervous system that might play a significant role in its therapeutic effect, including ECT prompting the release of neurotransmitters, and ECT causing the hypothalamus or pituitary gland to release hormones such as thyroid stimulating hormone and endorphins.<sup>2</sup>

ECT has been found to be an effective and safe mode of treatment for a number of behavioral health disorders/conditions, and is practiced widely in the United States.<sup>1</sup> However, the treatment continues to have some stigma attached because of misperceptions about its use, a lack familiarity with the current treatment procedure and the current level of risk of adverse effects.<sup>2</sup>

There are few contra-indications or relative contra-indications to the treatment, so a pre-treatment medical review is required before initiating treatment.

Risks of ECT are primarily those associated with anesthesia. The mortality rate (about 2 to 4 deaths per 100,000 treatments) is mostly related to cardiopulmonary events, but the mortality rate is less than that reported for normal childbirth, and is associated with the anesthesia risks.<sup>3,4</sup>

Current ECT techniques use anesthesia and brief-pulse electrical stimuli that “virtually eliminate” the past risk of fractures and minimize the risk of developing transient cognitive dysfunction effects. Not all patients who receive ECT will obtain Cognitive dysfunction / memory loss from the treatment; however, when it occurs, it can present during or after the course of ECT. The memory effects from ECT can manifest as an acute confusional state, as anterograde amnesia or as retrograde amnesia.

The acute confusional state is considered a result of both the seizure and the anesthesia. It usually resolves 10-30 minutes after the procedure.<sup>5</sup>

Anterograde amnesia is a decreased ability to retain newly acquired information. It can occur during a course of ECT and usually resolves within 2 weeks after completing the course.<sup>6</sup>

Retrograde amnesia involves forgetting recent memories, forgetting events that occur during the course of ECT and for a period of weeks or months prior to the ECT. Patients tend to retain knowledge about themselves but might forget public knowledge or information about world events. This retrograde amnesia tends to recover more slowly.<sup>7,8</sup>

ECT is most commonly used to treat severe or treatment-resistant depression. ECT has also been shown to be effective for bipolar mood disorders (depression, mania or mixed states), schizoaffective disorder, schizophrenia and catatonia.<sup>2</sup>

ECT has been found to be particularly effective in treating patients with depression with prominent suicidal ideation or patients with psychotic depression. Response rates have been found to range from 50-80% for patients with treatment-resistant depression, and maintenance medication management or maintenance ECT may significantly decrease the relapse rate.<sup>9,10</sup>

For patients with bipolar disorder, ECT has been used for treatment of severe and psychotic depression, especially if refractory to medication management.<sup>11,12</sup>

For patients with schizophrenia or schizoaffective disorders, ECT may be considered when a rapid global improvement with reduction in symptoms is needed.<sup>13</sup> ECT might also be used in the treatment of catatonia.<sup>14</sup>

ECT may be warranted for patients who are in an acutely life-threatening situation (e.g. high risk for suicide attempt, unremitting self-injury, catatonia, starvation, intractable manic excitement, or neuroleptic malignant syndrome). ECT might also be indicated when patients have a coexisting medical condition, where ECT is considered a safer therapeutic alternative than behavioral medication management (e.g. pregnant or elderly patients), and for patients who have previously responded well to ECT or who are unwilling or unable to take medications.<sup>1,2,15,16,17</sup>

For patients who have obtained a positive therapeutic response with ECT, but who are unable to sustain the response with post-ECT behavioral health medication management, ECT as maintenance treatment may be considered, and is generally administered with decreased frequency (e.g. weekly, biweekly, monthly), and might be provided as long-term maintenance treatment, when discontinuation or further reduction in the treatments is likely to lead to a relapse.<sup>1,18</sup>

## Evidence and Source Documents

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15. Oral ET, et al. electroconvulsive therapy in psychiatric practice: a selective review of the evidence. Neuro Endocrinology Letters 2008;29 Suppl 1:11-32.
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17. Wilkins KM, Ostroff R, Tampi RR. Efficacy of electroconvulsive therapy in the treatment of nondepressed psychiatric illness in elderly patients: a review of the literature. Journal of Geriatric Psychiatry and Neurology 2008;21(1):3-11.
18. Rapinesi C, et al. Prevention of relapse with maintenance electroconvulsive therapy in elderly patients with major depressive episode. Journal of ECT 2013;29(1):61-4.

## Applicable Codes

**Considered Medically Necessary when criteria in the applicable policy statements listed above are met:**

CPT® Codes	Description
90870	Electroconvulsive therapy (includes necessary monitoring)

**\*Note:** Codes may not be all-inclusive. Deleted codes and codes not in effect at the time of service may not be covered.

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Date Created	Date Reviewed	Date Last Revised
12/01/2015	12/01/2015 <sup>MPC</sup> , 10/04/2016 <sup>MPC</sup> , 08/01/2017 <sup>MPC</sup> , 06/05/2018 <sup>MPC</sup> , 06/04/2019 <sup>MPC</sup> , 06/02/2020 <sup>MPC</sup> , 06/01/2021 <sup>MPC</sup> , 06/07/2022 <sup>MPC</sup> , 06/06/2023 <sup>MPC</sup>	12/21/2023

<sup>MPC</sup> Medical Policy Committee

Revision History	Description
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06/05/2018	MPC approved to adopt MCG* B-802-T for ECT
12/21/2023	Added NCD Multiple Electroconvulsive Therapy (MECT) 160.25