

Sodium oxybate (Xyrem)

Disclaimer

Clinical guidelines are developed and adopted to establish evidence-based clinical criteria for utilization management decisions. Clinical guidelines are applicable according to policy and plan type. The Plan may delegate utilization management decisions of certain services to third parties who may develop and adopt their own clinical criteria.

Coverage of services is subject to the terms, conditions, and limitations of a member's policy, as well as applicable state and federal law. Clinical guidelines are also subject to in-force criteria such as the Centers for Medicare & Medicaid Services (CMS) national coverage determination (NCD) or local coverage determination (LCD) for Medicare Advantage plans. Please refer to the member's policy documents (e.g., Certificate/Evidence of Coverage, Schedule of Benefits, Plan Formulary) or contact the Plan to confirm coverage.

Sodium oxybate (Xyrem)	1
Summary	1
Definitions	2
Medical Necessity Criteria for Initial Clinical Review	3
Initial Indication-Specific Criteria	3
Narcolepsy	3
Medical Necessity Criteria for Subsequent Clinical Review	5
Subsequent Indication-Specific Criteria	5
Narcolepsy	5
Experimental or Investigational / Not Medically Necessary	5
References	6
Clinical Guideline Revision / History Information	7

Summary

Narcolepsy is a chronic neurological disorder characterized by excessive daytime sleepiness (EDS) and abnormal rapid eye movement (REM) sleep manifestations. It is classified into two types: narcolepsy type 1 (NT1), which includes cataplexy, and narcolepsy type 2 (NT2), without cataplexy. The disorder affects

approximately 1 in 2,000 people and is caused by the loss of hypothalamic neurons that produce hypocretin (orexin), a neuropeptide that regulates wakefulness and REM sleep.

The goal of narcolepsy management is to improve the sleep-wake cycle by reducing EDS, improving wakefulness, and maximizing sleep during the nighttime. Treatment options for narcolepsy include central nervous system stimulants (e.g., modafinil, armodafinil, methylphenidate, amphetamines), Z-drugs (e.g., zolpidem, zopiclone), sodium oxybate, Wakix (pitolisant), or Sunosi (solriamfetol) to improve EDS and/or cataplexy. Behavioral modifications, such as scheduled naps and sleep hygiene, are also important components of management.

Xyrem (sodium oxybate) is an oral salt form of gamma-hydroxybutyrate (GHB), approved by the FDA for the treatment of cataplexy or excessive daytime sleepiness in those 7 years of age and older with narcolepsy. It is classified as a central nervous system depressant and is believed to act through GABA-B receptors, although its exact mechanism of action in narcolepsy is not fully understood. Xyrem (sodium oxybate) is typically administered in two equally divided doses: the first dose at bedtime and the second dose 2.5 to 4 hours later.

Sodium oxybate products have a boxed warning for the risk of central nervous system depression and abuse and misuse. Because sodium oxybate is a sodium salt of GBH, it can have similar serious and life-threatening adverse reactions including: seizures, respiratory depression, decreased consciousness, coma and death. Because of this, sodium oxybate products are only available through a restricted program - for Xyrem (sodium oxybate) this is called the XYREM REMS.

Definitions

"Cataplexy" refers to a sudden, transient episode of muscle weakness accompanied by full conscious awareness, typically triggered by emotions such as laughing, crying, or terror.

"Documentation" refers to written information, including but not limited to:

- Up-to-date chart notes, relevant test results, and/or relevant imaging reports to support diagnoses; or
- Prescription claims records, and/or prescription receipts to support prior trials of formulary alternatives.

"Excessive daytime sleepiness (EDS)" is the inability to stay awake and alert during the day, resulting in unintended lapses into drowsiness or sleep.

"Hypocretin-1" is a natural chemical in the brain that helps regulate wakefulness.

"Idiopathic hypersomnia (IH)" is a neurological disorder characterized by excessive daytime sleepiness that is not caused by disturbed sleep at night, other medical conditions, or medications.

"Multiple Sleep Latency Test (MSLT)" is a sleep study that measures how quickly a person falls asleep during the day and whether they enter rapid eye movement (REM) sleep.

"Narcolepsy" is a chronic neurological disorder that affects the brain's ability to control sleep-wake cycles.

"No evidence of" indicates that the reviewer has not identified any records of the specified item or condition within the submitted materials or claims history. In the absence of such evidence, the member is considered eligible. If any evidence of the item or condition is present upon review of the request, the member does not qualify.

"Polysomnography (PSG)" is a sleep study used to diagnose sleep disorders by measuring certain components such as brain activity, oxygen levels, heart rate, breathing, eye movements, and leg movements.

"[s]" indicates state mandates may apply.

"Sleep latency" is the amount of time it takes to fall asleep.

"Sleep-onset REM periods (SOREMPs)" are periods of rapid eye movement sleep that occur within 15 minutes of falling asleep, which are characteristic of narcolepsy.

Medical Necessity Criteria for Initial Clinical Review

Initial Indication-Specific Criteria

Narcolepsy

The Plan considers sodium oxybate (Xyrem) medically necessary when ALL of the following criteria are met:

1. The medication is prescribed by or in consultation with a sleep medicine specialist, neurologist, psychiatrist, or pulmonologist with expertise in treating sleep disorders; **AND**
2. The member is 7 years of age or older; **AND**
3. The member has a diagnosis of narcolepsy that has been confirmed by sleep lab testing or documented clinical symptoms including excessive daytime sleepiness (EDS) persisting for at least 3 months **AND** at least ONE (1) of the following:
 - a. Cataplexy episodes (for narcolepsy type 1); **or**
 - b. Hypocretin-1 (orexin A) deficiency (≤ 110 pg/mL or $< 1/3$ (one-third) of mean values of healthy individuals tested using the same standardized assay); **or**
 - c. Nocturnal sleep polysomnography showing rapid eye movement (REM) sleep latency \leq 15 minutes (also known as sleep-onset REM periods [SOREMP]), **OR** a Multiple Sleep

Latency Test (MSLT) showing a mean sleep latency ≤ 8 minutes and ≥ 2 sleep-onset REM periods (SOREMPs). A SOREMP within 15 minutes of sleep onset on the preceding nocturnal polysomnography may replace one of the SOREMPs on the MSLT; *AND*

4. The member is unable to use, or has tried and failed prior treatments as follows^[s]:
 - a. IF the member is 18 years of age and older with narcolepsy, the member is unable to use, or has tried and failed, *ALL* of the following^[s]:
 - i. Sunosi (solriamfetol); *and*
 - ii. Lumryz (sodium oxybate); *and*
 - iii. Wakix (pitolisant); *or*
 - b. IF the member is 18 years of age and older with narcolepsy and cataplexy, the member is unable to use or has tried and failed *ALL* of the following^[s]:
 - i. Lumryz (sodium oxybate); *and*
 - ii. Wakix (pitolisant); *or*
 - c. *IF the* member is 7 to 17 years of age with narcolepsy and excessive daytime sleepiness (EDS), the member is unable to use, or has tried and failed *ALL* of the following^[s]:
 - i. Wakix (pitolisant); *and*
 - ii. Lumryz (sodium oxybate); *or*
 - d. IF the member is 7 to 17 years of age with narcolepsy *AND* cataplexy, the member is unable to use, or has tried and failed Lumryz (sodium oxybate)^[s]; *AND*
5. The member meets *ALL* of the following:
 - a. No evidence of succinic semialdehyde dehydrogenase (SSADH) deficiency; *or*
 - b. No evidence of documentation indicating concomitant use with, or inability to abstain from, any of the following while taking Xyrem:
 - i. Alcohol (e.g., beer, wine, whisky); *or*
 - ii. Sedative hypnotics (e.g., alprazolam, diazepam, lorazepam, zolpidem); *or*
 - iii. Lumryz (sodium oxybate), Xywav (calcium, magnesium, potassium, and sodium oxybates), or other sodium oxybate products; *or*
6. Sodium oxybate (Xyrem) is being prescribed at a dose and frequency that is within FDA approved labeling *OR* is supported by compendia or evidence-based published dosing guidelines for the requested indication.

If the above prior authorization criteria are met, sodium oxybate (Xyrem) will be approved for up to 12-months.^[s]

Continued Care

Medical Necessity Criteria for Subsequent Clinical Review

Subsequent Indication-Specific Criteria

Narcolepsy

The Plan considers sodium oxybate (Xyrem) medically necessary when ALL of the following criteria are met:

1. The member has experienced a positive clinical response to sodium oxybate (Xyrem) therapy as demonstrated by a reduction in symptoms of cataplexy and/or EDS; *AND*
2. The member continues to abstain from alcohol and sedative hypnotics; *AND*
3. Sodium oxybate (Xyrem) will not be used in combination with Lumryz (sodium oxybate), Xywav (calcium, magnesium, potassium and sodium oxybates), Wakix (pitolisant), or other sodium oxybate products; *AND*
4. Sodium oxybate (Xyrem) continues to be prescribed at a dose and frequency that is within FDA approved labeling OR is supported by compendia or evidence-based published dosing guidelines for the requested indication.

If the above reauthorization criteria are met, the requested product will be authorized for up to 12-months.^[s]

Experimental or Investigational / Not Medically Necessary^[s]

Sodium oxybate (Xyrem) for any other indication is considered not medically necessary by the Plan, as it is deemed to be experimental, investigational, or unproven. Sodium oxybate (Xyrem) has been studied for various indications beyond its approved uses. However, the current evidence is limited and inconclusive for these non-supported indications:

- Alcohol Dependence/Alcohol Use Disorders (AUD).
- Alcohol Withdrawal Syndrome.
- Alternating Hemiplegia of Childhood.
- Anxiety, Post Traumatic/Post Traumatic Stress Disorder (PTSD).
- Binge Eating Disorder (BED).
- Chronic Fatigue Syndrome/Myalgic Encephalitis (CFS/ME).
- Cluster Headache.
- Essential Tremor.
- Fibromyalgia.
- Hypersomnia.
- Idiopathic Hypersomnia.
- Insomnia Related to Schizophrenia/Schizophrenia.
- Laryngeal Tremor/Spasmodic Dysphonia.
- Obstructive Sleep Apnea (OSA).
- Parkinson's Disease (PD)/Rapid Eye Movement Sleep Behavior Disorder.

- Sedative Abuse Prevention.
- Sleep Initiation and Maintenance Disorders.
- Traumatic Brain Injury (TBI).
- When used in combination with alcohol, sedative hypnotics, or other medications containing sodium oxybate, gamma-hydroxybutyrate (GHB), or GHB precursors.
- When used in members with succinic semialdehyde dehydrogenase deficiency, a rare inborn error of metabolism.
- For members under 7 years of age, safety and efficacy have not been established in this pediatric population.

References

1. American Academy of Sleep Medicine. International Classification of Sleep Disorders: Diagnostic and Coding Manual. 3rd ed. Darien, IL: American Academy of Sleep Medicine; 2014.
2. Aran A, Einen M, Lin L, Plazzi G, Nishino S, Mignot E. Clinical and therapeutic aspects of childhood narcolepsy-cataplexy: a retrospective study of 51 children. *Sleep*. 2010;33(11):1457-1464.
3. Bassetti CLA, Kallweit U, Vignatelli L, et al. European guideline and expert statements on the management of narcolepsy in adults and children. *J Sleep Res*. 2021 Dec;30(6):e13387. doi: 10.1111/jsr.13387. Epub 2021 Jun 25.
4. Dauvilliers Y, Lammers GJ, Lecendreux M, et al. Effect of sodium oxybate on body mass index in pediatric patients with narcolepsy. *J Clin Sleep Med*. 2024 Mar 1;20(3):445-454. doi: 10.5664/jcsm.10912.
5. Donjacour, CE, Aziz, NA, Roelfsema, F, Frolich, M, Overeem, S, Lammers, GJ, Pijl, H. Effect of sodium oxybate on growth hormone secretion in narcolepsy patients and healthy controls. *Am J Physiol Endocrinol Metab*. 2011 Jun;300(6):E1069-75. doi: 10.1152/ajpendo.00623.2010. Epub 2011 Mar 29.
6. Hartley S, Quera-Salva MA, Machou M. Sodium oxybate and sleep apnea: a clinical case. *J Clin Sleep Med*. 2011;7(6):667-668. doi:10.5664/jcsm.1480
7. Huang, YS, Guilleminault, C. Narcolepsy: action of two gamma-aminobutyric acid type B agonists, baclofen and sodium oxybate. *Pediatr Neurol*. 2009 Jul;41(1):9-16. doi: 10.1016/j.pediatrneurol.2009.02.008.
8. Lecendreux M, Plazzi G, Dauvilliers Y, et al. Long-term safety and maintenance of efficacy of sodium oxybate in the treatment of narcolepsy with cataplexy in pediatric patients. *J Clin Sleep Med*. 2022 Sep 1;18(9):2217-2227. doi: 10.5664/jcsm.10090.
9. Lumryz (sodium oxybate) [prescribing information]. Chesterfield, MO: Avadel CNS Pharmaceuticals, LLC; October 2024.
10. Mannucci, C, Pichini, S, Spagnolo, EV, Calapai, F, Gangemi, S, Navarra, M, Calapai, G. Sodium Oxybate Therapy for Alcohol Withdrawal Syndrome and Keeping of Alcohol Abstinence. *Curr Drug Metab*. 2018;19(13):1056-1064. doi: 10.2174/1389200219666171207122227.
11. Maski K, Trotti LM, Kotagal S, et al. Treatment of central disorders of hypersomnolence: an American Academy of Sleep Medicine clinical practice guideline. *J Clin Sleep Med*. 2021 Sep 1;17(9):1881-1893. doi: 10.5664/jcsm.9328.
12. Moresco M, Pizza F, Antelmi E, Plazzi G. Sodium oxybate treatment in pediatric type 1 narcolepsy. *Curr Drug Metab*. 2018;19(13):1073-1079.
13. Morgenthaler TI, Kapur VK, Brown T, et al. Practice parameters for the treatment of narcolepsy and other hypersomnias of central origin. *Sleep*. 2007;30(12):1705-1771
14. Plazzi G, Ruoff C, Lecendreux M, et al. Treatment of paediatric narcolepsy with sodium oxybate: a double-blind, placebo-controlled, randomised-withdrawal multicentre study and open-label

- investigation. *Lancet Child Adolesc Health*. 2018 Jul;2(7):483-494. doi: 10.1016/S2352-4642(18)30133-0. Epub 2018 May 21.
15. Robinson, DM, Keating, GM. Sodium oxybate: a review of its use in the management of narcolepsy. *CNS Drugs*. 2007;21(4):337-54. doi: 10.2165/00023210-200721040-00007.
 16. Sunosi (solriamfetol) [prescribing information]. New York, NY: Axsome Therapeutics, Inc. June 2023.
 17. van den Brink W, Addolorato G, Aubin HJ, et al. Efficacy and safety of sodium oxybate in alcohol-dependent patients with a very high drinking risk level. *Addict Biol*. 2018 Jul;23(4):969-986. doi: 10.1111/adb.12645.
 18. Wakix (pitolisant) [prescribing information]. Plymouth Meeting, PA: Harmony Biosciences LLC; May 2025.
 19. Wallace DM, Maze T, Shafazand S. Sodium oxybate-induced sleep driving and sleep-related eating disorder. *J Clin Sleep Med*. 2011;7(3):310-311. doi:10.5664/JCSM.1082
 20. Wise MS, Arand DL, Auger RR, et al. Treatment of narcolepsy and other hypersomnias of central origin. *Sleep*. 2007;30(12):1712-27.
 21. Xyrem (sodium oxybate) [prescribing information]. Palo Alto, CA: Jazz Pharmaceuticals Inc; April 2023.
 22. Xywav (calcium, magnesium, potassium, and sodium oxybates) [prescribing information]. Palo Alto, Ca: Jazz Pharmaceuticals Inc. April 2023.

Clinical Guideline Revision / History Information

Original Date: 08/06/2020

Reviewed/Revised: 06/24/2021, 10/14/2021, 12/01/2021, 06/23/2022, 06/29/2023,
09/18/2024, 07/01/2025, 03/02/2026