OSCAL

Oscar Clinical Guideline: Rebif (interferon beta-1a) (PG231, Ver. 3)

Rebif (interferon beta-1a)

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.

Summary

Multiple sclerosis (MS) is a chronic, inflammatory, demyelinating disease of the central nervous system. It typically presents in young adults (generally diagnosed before 50 years of age) with symptoms such as vision problems, muscle weakness, numbness, and difficulty with balance and coordination. The most common form is relapsing-remitting MS (occurring in about 85% of patients), characterized by acute attacks followed by periods of remission. Treatment goals include reducing relapses, slowing disability

progression, and managing symptoms. Disease-modifying therapies (DMTs) are the primary treatment approach and include injectable medications (e.g., interferons, glatiramer acetate), oral medications (e.g., dimethyl fumarate, fingolimod, teriflunomide, etc.), and infusion therapies (e.g., natalizumab, ocrelizumab).

MS is a progressive disease, meaning that symptoms tend to worsen over time, and it can be classified into several types, including relapsing-remitting MS (RRMS), primary progressive MS (PPMS), and secondary progressive MS (SPMS).

Currently, there is no cure for MS, but various treatment options are available to manage symptoms, slow the progression of the disease, and improve quality of life.
- Disease-modifying therapies (DMTs) are a class of medications that target the immune system to reduce inflammation and slow down the progression of the disease. The type of DMT prescribed will depend on the type and severity of MS, as well as the individual's medical history and preferences. Some common DMTs include interferon beta, glatiramer acetate, dimethyl fumarate, and fingolimod.
- High dose corticosteroids, such as high dose intravenous methylprednisolone or oral prednisone can be prescribed to reduce inflammation during acute MS relapses.

Symptomatic treatments are also available to manage specific symptoms of MS, such as muscle spasms, bladder problems, and depression. Physical therapy, occupational therapy, and speech therapy can help individuals with MS maintain mobility, independence, and communication skills.
Rebif (interferon beta-1a) is a first-generation DMT indicated for relapsing forms of MS, including clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive disease in adults. It is administered via subcutaneous injection three times per week. Rebif (interferon beta-1a) works by modulating the immune system and reducing inflammation in the central nervous system, though its exact mechanism of action in MS is not fully understood.

Definitions
"Clinically isolated syndrome" refers to a first episode of neurologic symptoms lasting at least 24 hours caused by inflammation or demyelination in the central nervous system.

"Compendia" are summaries of drug information and medical evidence to support decision-making about the appropriate use of drugs and medical procedures. Examples include, but are not limited to:
1. American Hospital Formulary Service Drug Information
2. Clinical pharmacology
3. National Comprehensive Cancer Network Drugs and Biologics Compendium
4. Thomson Micromedex DrugDex
5. United States Pharmacopeia-National Formulary (USP-NF)

"Disease-modifying therapy" is a medication that modifies the course of MS by reducing relapses and slowing disability progression.

"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.

"MRI" or "Magnetic Resonance Imaging" refers to a medical imaging technique that creates detailed three-dimensional (3D) images of the organs and tissues in your body. A brain MRI can reveal areas of active MS disease called lesions within the central nervous system.

"Multiple sclerosis" is a chronic autoimmune disease of the central nervous system characterized by inflammation, demyelination, and neurodegeneration.

"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.

"Primary progressive MS" refers to worsening neurologic function from the onset of symptoms, without early relapses or remissions.

"Relapse" is defined as the appearance of new symptoms or the worsening of existing symptoms lasting at least 24 hours in the absence of fever or infection.

"Relapsing-remitting MS" refers to a disease course characterized by clearly defined attacks of new or increasing neurologic symptoms followed by periods of partial or complete recovery.

"[s]" indicates state mandates may apply.

"Secondary progressive MS" is a disease course following relapsing-remitting MS that is characterized by a progressive worsening of neurologic function over time with or without relapses.

Initial Indication-Specific Criteria

<u>Multiple Sclerosis</u>

The Plan considers <u>Rebif (interferon beta-1a)</u> medically necessary when recent (within the last 3 months) clinical chart documentation provided indicates the member meets **ALL** of the following:

1. Prescribed by or in consultation with a neurologist or physician who specializes in the treatment of multiple sclerosis; *AND*
2. The member is 18 years of age or older; *AND*
3. The member has **ONE** (1) of the following forms of multiple sclerosis:
    a. Relapsing-remitting (RRMS)*; or*
    b. Active secondary progressive disease (SPMS)*; or*
    c. Clinically isolated syndrome (CIS); *AND*
4. Rebif (interferon beta-1a) will be used as monotherapy for multiple sclerosis (i.e., member is not using and will not use other disease-modifying MS therapies while on Rebif [interferon beta-1a]); *AND*
5. Rebif (interferon beta-1a) 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. The requested medication is being used within the Plan's Quantity Limit of:
    ○ *The recommended dose is 22 mcg or 44 mcg injected subcutaneously three times per week.*
        i. *Rebif 22 mcg/0.5 mL: 6 mL (12 syringes or autoinjectors per 28 days.)*
        ii. *Rebif 44 mcg/0.5 mL: 6 mL (12 syringes or autoinjectors per 28 days.)*

<u>If the above prior authorization criteria are met, the requested product will be authorized for up to 12-months.</u>[s]

Continued Care

Subsequent Indication-Specific Criteria

<u>Multiple Sclerosis</u>

The Plan considers <u>Rebif (interferon beta-1a)</u> medically necessary when recent (within the last 6-months) clinical chart documentation provided indicates the member meets **ALL** of the following:

1. The requested medication is prescribed by or in consultation with a neurologist or a physician who specializes in the treatment of multiple sclerosis; *AND*
2. The member has experienced at least **ONE** (1) of the following:

      a. Improvement in at least **ONE (1)** objective measure, such as:
          i. Reduced disease activity on MRI*; and/or*
          ii. Improved or stable disability scores*; and/or*
          iii. Reduced relapse rate*; and/or*
          iv. Improved fatigue or walking assessments; *AND/OR*
      b. The member has shown stabilization or improvement in at least **ONE (1)** MS symptom, such as:
          i. Motor function*; and/or*
          ii. Fatigue*; and/or*
          iii. Vision*; and/or*
          iv. Bowel/bladder function*; and/or*
          v. Spasticity*; and/or*
          vi. Walking/gait*; and/or*
          vii. Pain/numbness/tingling.

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]

Rebif (interferon beta-1a) for any other indication or use is considered not medically necessary by the Plan, as it is deemed to be experimental, investigational,unproven, or not medically necessary. Non-covered indications include, but are not limited to, the following:

- Use in combination with other disease-modifying therapies for multiple sclerosis. There is limited knowledge about the use of combining DMTs for MS.
- Treatment of non-relapsing forms of multiple sclerosis (e.g., primary progressive MS without active disease). The safety and efficacy of Rebif (interferon beta-1a) has not been established in those with PPMS.
- Use for the treatment of other neurological conditions not related to multiple sclerosis (e.g., Alzheimer's disease). There is not enough high quality evidence to support the safety and efficacy of Rebif (interferon beta-1a) for the management of neurological conditions not related to MS.
- Use as a treatment for cancer or as an adjunct to cancer therapies. At this time, the National Comprehensive Cancer Network (NCCN) does not support the use of interferon beta products for the management of any malignancies.
- Use for the treatment of viral infections, including chronic viral hepatitis. While literature supports the use of interferon products for the management of viral hepatitis (e.g., Hepatitis C), interferon beta products are not approved for management of these conditions.
- Use in pediatric members under 18 years of age.The safety and efficacy in pediatric populations has not been established.

- Use in the management of other autoimmune disorders not related to multiple sclerosis. There have been conflicting results regarding the efficacy of Rebif (interferon beta-1a) in those with Crohn's or ulcerative colitis. At this time, there are no high quality studies to support the safety and efficacy of interferon products for the management of autoimmune disorders.

References

1. Bainbridge JL, Miravalle A, Wong PS. Multiple Sclerosis. In DiPiro JT, Yee GC, Posey LM, et al, eds. Pharmacotherapy: A Pathophysiologic Approach. 11th ed. New York, NY: McGraw-Hill; 2019.
2. Benedict RH, Kappos L, Miller A, et al. Cognitive effects of ocrelizumab vs interferon β-1a in relapsing multiple sclerosis: A post hoc analysis of the OPERA I/II trials. Mult Scler Relat Disord. 2025 Mar;95:106310. doi: 10.1016/j.msard.2025.106310. Epub 2025 Feb 2.
3. Grimaldi LM, Zappalà G, Iemolo F, et al. A pilot study on the use of interferon beta-1a in early Alzheimer's disease subjects. J Neuroinflammation. 2014 Feb 13;11:30. doi: 10.1186/1742-2094-11-30.
4. Hauser SL, Cree BAC. Treatment of Multiple Sclerosis: A Review. Am J Med. 2020 Dec;133(12):1380-1390.e2. doi: 10.1016/j.amjmed.2020.05.049. Epub 2020 Jul 17.
5. He A, Merkel B, Brown JWL, et al. Timing of high-efficacy therapy for multiple sclerosis: a retrospective observational cohort study. Lancet Neurol. 2020 Apr;19(4):307-316. doi: 10.1016/S1474-4422(20)30067-3. Epub 2020 Mar 18.
6. Köhler M, Paul F, Janke K, et al. Comparative effectiveness of disease-modifying therapies for highly active relapsing-remitting multiple sclerosis despite previous treatment - a systematic review and network meta-analysis. BMC Neurol. 2025 Aug 9;25(1):328. doi: 10.1186/s12883-025-04338-7.
7. McGinley MP, Goldschmidt CH, Rae-Grant AD. Diagnosis and Treatment of Multiple Sclerosis: A Review. JAMA. 2021;325(8):765–779. doi:10.1001/jama.2020.26858
8. Montalban X, Gold R, Thompson AJ, et al. ECTRIMS/EAN guideline on the pharmacological treatment of people with multiple sclerosis [published correction appears in Eur J Neurol. 2018;25(3):605]. Eur J Neurol. 2018;25(2):215-237. doi:10.1111/ene.13536.
9. Montalban X, Lebrun-Frénay C, Oh J, et al. Diagnosis of multiple sclerosis: 2024 revisions of the McDonald criteria. Lancet Neurol. 2025 Oct;24(10):850-865. doi: 10.1016/S1474-4422(25)00270-4. Erratum in: Lancet Neurol. 2025 Nov;24(11):e13. doi: 10.1016/S1474-4422(25)00355-2.
10. Multiple Sclerosis Society of Canada. Disease-modifying therapies. https://mssociety.ca/managing-ms/treatments/medications/disease-modifying-therapies-dmts.
11. National Institute for Health and Care Excellence [NICE]. Multiple sclerosis in adults: management. NICE Guidelines [NG220]. 22 June 2022. Available at: https://www.nice.org.uk/guidance/ng220/chapter/Recommendations#ms-symptom-management-and-rehabilitation. Accessed 20 January 2026.
12. National MS Society. Disease-modifying therapies for MS (updated March 2022). Available from National MS Society website: https://nms2cdn.azureedge.net/cmssite/nationalmssociety/media/msnationalfiles/brochures/brochure-the-ms-disease-modifying-medications.pdf.
13. Panitch H, Goodin D, Francis G, et al,. Benefits of high-dose, high-frequency interferon beta-1a in relapsing-remitting multiple sclerosis are sustained to 16 months: final comparative results of the EVIDENCE trial. J Neurol Sci. 2005 Dec 15;239(1):67-74. doi: 10.1016/j.jns.2005.08.003. Epub 2005 Sep 19.
14. PRISMS Study Group and the University of British Columbia MS/MRI Analysis Group.. PRISMS-4: Long-term efficacy of interferon-beta-1a in relapsing MS. Neurology. 2001 Jun 26;56(12):1628-36. doi: 10.1212/wnl.56.12.1628. Erratum in: Neurology 2001 Sep 25;57(6):1146.

15. Rae-Grant A, Day GS, Marrie RA, et al. Practice guideline recommendations summary: Disease-modifying therapies for adults with multiple sclerosis: Report of the Guideline Development, Dissemination, and Implementation Subcommittee of the American Academy of Neurology. Neurology. 2018;90(17):777-788.
16. Randomised double-blind placebo-controlled study of interferon beta-1a in relapsing/remitting multiple sclerosis. PRISMS (Prevention of Relapses and Disability by Interferon beta-1a Subcutaneously in Multiple Sclerosis) Study Group. Lancet. 1998 Nov 7;352(9139):1498-504. Erratum in: Lancet 1999 Feb 20;353(9153):678.
17. Rashid W, Ciccarelli O, Leary SM, et al. Using disease-modifying treatments in multiple sclerosis: Association of British Neurologists (ABN) 2024 guidance. Pract Neurol. 2025 Jan 16;25(1):18-24. doi: 10.1136/pn-2024-004228.
18. Rebif (interferon beta-1a) [prescribing information]. Rockland, MA: EMD Serono Inc; July 2023.
19. Reich DS, Lucchinetti CF, Calabresi PA. 2018. Multiple sclerosis. New England Journal of Medicine 378(2):169-180
20. Schwid SR, Panitch HS. Full results of the Evidence of Interferon Dose-Response-European North American Comparative Efficacy (EVIDENCE) study: a multicenter, randomized, assessor-blinded comparison of low-dose weekly versus high-dose, high-frequency interferon beta-1a for relapsing multiple sclerosis. Clin Ther. 2007 Sep;29(9):2031-48. doi: 10.1016/j.clinthera.2007.09.025.
21. Simone M, Palumbi R, Achille M, et al. A multicentre, prospective, randomized, open-label pragmatic trial to compare the effectiveness and safety of interferon beta-1a and glatiramer-acetate in paediatric patients affected by Multiple Sclerosis. Neurol Sci. 2025 Oct;46(10):5391-5400. doi: 10.1007/s10072-025-08377-3. Epub 2025 Aug 8.
22. The use of disease-modifying therapies in multiple sclerosis: principles and current evidence summary. Multiple Sclerosis Coalition. Available from the National MS Society Website: https://www.nationalmssociety.org/.
23. Tramacere I, Del Giovane C, Salanti G, et al. Immunomodulators and immunosuppressants for relapsing-remitting multiple sclerosis: a network meta-analysis. Cochrane Database Syst Rev 2015;9:CD011381.
24. Yang, J., Rempe, T., Whitmire, N., Dunn-Pirio, A., & Graves, J. (2022). Therapeutic Advances in Multiple Sclerosis. Frontiers in Neurology, 13. https://doi.org/10.3389/fneur.2022.824926.

Clinical Guideline Revision / History Information

Original Date: 06/27/2024

Reviewed/Revised: 10/01/2025, 07/01/2026