

Pharmacy Policy Bulletin

Title: L-glutamine (Endari®)

Policy #: Rx.01.206

Application of pharmacy policy is determined by benefits and contracts. Benefits may vary based on product line, group, or contract. Some medications may be subject to precertification, age, quantity, or formulary restrictions (ie limits on non-preferred drugs). Individual member benefits must be verified.

This pharmacy policy document describes the status of pharmaceutical information and/or technology at the time the document was developed. Since that time, new information relating to drug efficacy, interactions, contraindications, dosage, administration routes, safety, or FDA approval may have changed. This Pharmacy Policy will be regularly updated as scientific and medical literature becomes available. This information may include new FDA-approved indications, withdrawals, or other FDA alerts. This type of information is relevant not only when considering whether this policy should be updated, but also when applying it to current requests for coverage.

Members are advised to use participating pharmacies in order to receive the highest level of benefits.

▾ Intent:

The intent of this policy is to communicate the medical necessity criteria for L-glutamine (Endari®) as provided under the member's prescription drug benefit.

▾ Description:

Sickle cell disease (SCD) is caused by a point mutation in the beta-globin gene, resulting in defective hemoglobin, which is less soluble than normal fetal or adult hemoglobin. The red blood cells become sickled in shape causing hemolytic anemia and vaso-occlusion, which can lead to acute and chronic pain, and tissue ischemia. SCD refers to any of the syndromes in which the sickle mutation is co-inherited with a mutation at the other beta globin allele that reduces normal beta globin production. It includes sickle cell anemia, sickle beta thalassemia, and hemoglobin sickle cell disease.

Endari® is an amino acid indicated to reduce the acute complications of sickle cell disease in adults and pediatric patients 5 years of age and older.

The mechanism of action of the amino acid L-glutamine in treating sickle cell disease (SCD) is not fully understood. Oxidative stress phenomena are involved in the pathophysiology of SCD. Sickled red blood cells (RBCs) are more susceptible to oxidative damage than normal RBCs, which may contribute to the chronic hemolysis and vaso-occlusive events associated with SCD. The pyridine nucleotides, NAD⁺ and its reduced form NADH, play roles in regulating and preventing oxidative damage in RBCs. L-glutamine may improve the NAD redox potential in sickle RBCs through increasing the availability of reduced glutathione.

▾ Policy:

L-glutamine (Endari®) is approved when ALL of the following are met:

1. Diagnosis of sickle cell disease; and
2. Member is 5 years of age or older; and
3. Member has had 2 or more painful sickle cell crises within the past 12 months; and

4. Prescribed by or in consultation with a hematologist/oncologist; and
5. Documentation of ONE of the following:
 - a. Concurrent hydroxyurea therapy; or
 - b. Inadequate response or inability to tolerate hydroxyurea

➤ **Black Box Warning as shown in the drug Prescribing Information:**

N/A

➤ **Guidelines:**

Refer to the specific manufacturer's prescribing information for administration and dosage details and any applicable Black Box warnings.

BENEFIT APPLICATION

Subject to the terms and conditions of the applicable benefit contract, the applicable drug(s) identified in this policy is (are) covered under the prescription drug benefits of the Company's products when the medical necessity criteria listed in this pharmacy policy are met. Any services that are experimental/investigational or cosmetic are benefit contract exclusions for all products of the Company.

➤ **References:**

Endari® (L-glutamine oral powder) [prescribing information]. Torrance, CA: Emmaus Medical, Inc.; July 2017. Available at: https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/208587s000lbl.pdf. Accessed January 16, 2019.

Vichinsky Elliott P. Overview of the clinical manifestations of sickle cell disease. UpToDate. Accessed January 23, 2019.

➤ **Applicable Drugs:**

-  Inclusion of a drug in this table does not imply coverage. Eligibility, benefits, limitations, exclusions, precertification/referral requirements, provider contracts, and Company policies apply.

Brand Name	Generic Name
Endari®	L-glutamine

➤ **Cross References:**

N/A

Policy Version Number:	2.00
P&T Approval Date:	January 10, 2019
Policy Effective Date:	April 01, 2019
Next Required Review Date:	January 10, 2020

The Policy Bulletins on this web site were developed to assist the Company in administering the provisions of the respective benefit programs, and do not constitute a contract. If you have coverage through the Company, please refer to your specific benefit program for the terms, conditions, limitations and exclusions of your coverage. Company does not provide health care

services, medical advice or treatment, or guarantee the outcome or results of any medical services/treatments. The facility and professional providers are responsible for providing medical advice and treatment. Facility and professional providers are independent contractors and are not employees or agents of the Company. If you have a specific medical condition, please consult with your doctor. The Company reserves the right at any time to change or update its Policy Bulletins.