

## Pharmacy Policy Bulletin

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**Title:** Insulin, Human U-500 (Humulin® R U-500)

**Policy #:** Rx.01.63

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***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 **insulin, human U-500 (Humulin® R U-500)** as provided under the member's prescription drug benefit.

**Description:**

Type 1 diabetes mellitus (T1DM) is characterized by absolute insulin deficiency due to autoimmune  $\beta$ cell destruction. Insulin is the mainstay of therapy for T1DM. Childhood type 1 diabetes mellitus can present with chronic polydipsia, polyuria, weight loss with hyperglycemia and ketonemia or ketonuria, diabetic ketoacidosis or asymptomatic incidental discovery.

Type 2 diabetes mellitus (T2DM) is characterized by insulin resistance and usually relative (rather than absolute) insulin deficiency. Patients with T2DM may have insulin levels that appear normal or elevated. However, the higher blood glucose levels in these patients would be expected to result in even higher insulin values with normally functioning beta cells. Hence, insulin secretion is defective and insufficient to compensate for insulin resistance. Adults with type 2 diabetes are at risk for obesity, hypertension, dyslipidemia, fatty liver disease, sleep apnea, as well as periodontal disease.

**Insulin, human U-500 is a concentrated human insulin indicated to improve glycemic control in adults and children with diabetes mellitus requiring more than 200 units of insulin per day. Insulin** and its analogs lower blood glucose levels by stimulating peripheral glucose uptake, especially by skeletal muscle and fat, and by inhibiting hepatic glucose production. Insulin inhibits lipolysis and proteolysis and enhances protein synthesis. Insulin, secreted by the beta cells of the pancreas, is the principal hormone required for proper glucose use in normal metabolic processes.

**Policy:**

**INITIAL CRITERIA:** Humulin® R U-500 is approved when ALL of the following are met:

1. Diagnosis of diabetes mellitus, and
2. Prescribed by or in consultation with an endocrinologist; and
3. Insulin requirements exceed 200 units/day

Initial Authorization duration: 2 years

**REAUTHORIZATION CRITERIA:** Humulin® R U-500 is reapproved when there is documentation of positive clinical response to therapy

Reauthorization duration: 2 years

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

None

**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:**

American Diabetes Association. Classification and diagnosis of diabetes. Diabetes Care. 2018; 41 (suppl 1): S13-S27. DOI: 10.2337/dc18-S002.

American Diabetes Association. Pharmacologic approaches to glycemic treatment. Diabetes Care. 2018;41 (suppl 1): S73-S85. DOI: 10.2337/dc18-S008.

Garber AJ, et al. Consensus statement by the American Association of Clinical Endocrinologists and the American College of Endocrinology on the comprehensive type 2 diabetes management algorithm- 2018 executive summary. Endocr Pract. 2018. DOI: 10.4158/CS-2017-0153. Available from: <http://journals.aace.com/doi/pdf/10.4158/CS-2017-0153>. Accessed September 30, 2021.

Humulin® R U-500 (insulin human) [product information]. Indianapolis, IN. Lilly USA. October 2016. Available from: <https://dailymed.nlm.nih.gov/dailymed/fda/fdaDrugXsl.cfm?setid=b60e8dd0-1d48-4dc9-87fd-e14675255e8c&type=display>. Accessed September 30, 2021.

Levitsky LL, Misra M. Epidemiology, presentation, and diagnosis of type 1 diabetes mellitus in children and adolescents. UpToDate website. Last updated September 2020. Available at: <http://www.uptodate.com/>. Accessed September 30, 2021.

McCulloch DK. Overview of medical care in adults with diabetes mellitus. UpToDate website. Last updated March 21, 2019. Available at: <http://www.uptodate.com/>. Accessed September 30, 2021.

**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**

Humulin® (R U-500)

**Generic**

Insulin human

**Cross References:**

Off-Label Use Rx.01.33

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<b>Policy Version Number:</b>	12.00
<b>P&amp;T Approval Date:</b>	September 23, 2021
<b>Policy Effective Date:</b>	January 01, 2022
<b>Next Required Review Date:</b>	September 23, 2022

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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.

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