Introduction

Corticotropin is a hormone made in certain cells in the pituitary gland. (Corticotropin may also be known as ACTH or adrenocorticotropic hormone.) When corticotropin is produced in a lab and used as a treatment, it’s believed that it helps the body create its own natural steroid hormones. Corticotropin injections may be approved to treat a rare seizure disorder that affects infants, known as West syndrome. Corticotropin injections have also been tried for several other conditions known to respond to steroid treatments. When medical studies compared corticotropin treatment with intravenous steroids, the studies did not show that the corticotropin treatments worked better. For this reason, corticotropin treatment is considered not medically necessary for conditions where steroids are a proven treatment. Corticotropin has also been tried for many other conditions including gout and childhood epilepsy. There isn’t enough high-quality medical evidence to show whether it works. For this reason, corticotropin treatment is considered investigational (unproven) for many conditions.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.
### Policy Coverage Criteria

<table>
<thead>
<tr>
<th>Drug</th>
<th>Medical Necessity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Repository corticotropin injection</strong></td>
<td><strong>Repository corticotropin</strong> injection may be considered medically necessary for treatment of infantile spasms (West syndrome).</td>
</tr>
</tbody>
</table>

**Repository corticotropin injection is considered not medically necessary as a treatment of corticosteroid-responsive conditions, including, but not limited to, ANY of the following:**

- Allergic states such as serum sickness
- Collagen diseases such as systemic lupus erythematosus (SLE), systemic dermatomyositis (polymyositis)
- Dermatologic diseases such as erythema multiforme, Stevens-Johnson syndrome
- Multiple sclerosis, acute exacerbation in adults
- Nephrotic syndrome – without uremia of the idiopathic type or due to lupus erythematosus
- Ophthalmic diseases such as allergic and inflammatory processes of the eye: optic neuritis, keratitis, iritis, iridocyclitis, diffuse posterior uveitis and choroiditis, chorioretinitis, anterior segment inflammation
- Respiratory diseases such as symptomatic sarcoidosis
- Rheumatic disorders such as: psoriatic arthritis, rheumatoid arthritis, juvenile rheumatoid arthritis, ankylosing spondylitis

**Repository corticotropin injection is considered not medically necessary for use in diagnostic testing of adrenocortical function**

**Note:** *The brand name for repository corticotropin is H.P. Acthar Gel®*
**Repository corticotropin injection**

Repository corticotropin injection is considered investigational for conditions that are not responsive to corticosteroid therapy including, but not limited to:

- Acute gout
- Childhood epilepsy
- Use in tobacco cessation

Repository corticotropin injection is considered investigational for all other indications

**Documentation Requirements**

The individual’s medical records submitted for review should document that medical necessity criteria are met. The record should include clinical documentation of:

- Diagnosis/condition

**Coding**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPT</td>
<td>Therapeutic, prophylactic or diagnostic injection (specify substance or drug); subcutaneous or intramuscular</td>
</tr>
<tr>
<td>96372</td>
<td></td>
</tr>
<tr>
<td>HCPCS</td>
<td>Injection, corticotropin, up to 40 units</td>
</tr>
<tr>
<td>J0800</td>
<td></td>
</tr>
<tr>
<td>J0801</td>
<td>Injection, corticotropin (acthar gel), up to 40 units (new code effective 10/1/2023)</td>
</tr>
<tr>
<td>J0802</td>
<td>Injection, corticotropin (ani), up to 40 units (new code effective 10/1/2023)</td>
</tr>
</tbody>
</table>

**Note:** CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). HCPCS codes, descriptions and materials are copyrighted by Centers for Medicare Services (CMS).
H.P. Acthar® gel and Purified Cortrophin™ Gel are used for intramuscular or subcutaneous injection and should never be used intravenously.

Product information provides the following on dosage of H.P. Acthar® Gel for treatment of infantile spasms:

- In the treatment of infantile spasms, the recommended dose is 150 U/m² divided into twice daily intramuscular injections of 75 U/m². After 2 weeks of treatment, dosing should be gradually tapered and discontinued over a 2-week period.

According to the manufacturer's website, beginning in 2007, H.P. Acthar® Gel is only available through specialized pharmacy distribution (i.e., it is no longer available from traditional pharmaceutical wholesalers or retail pharmacies).

Diagnostic testing of adrenocortical function, known as the ACTH test, is typically done with synthetic ACTH. Synthetic ACTH products have been approved by the U.S. Food and Drug Administration (FDA) for this purpose.

**Adverse Events**

Contraindications for the use of this agent include scleroderma, osteoporosis, systemic fungal infections, ocular herpes simplex, recent surgery, history of or the presence of a peptic ulcer, congestive heart failure, uncontrolled hypertension, primary adrenocortical insufficiency, adrenocortical hyperfunction, suspected congenital infection in infants, or sensitivity to proteins of porcine origin.

Repository corticotropin injection has potential adverse events similar to those that occur with other steroid medications such as an elevated blood pressure, a decrease in bone density, new infections (or activation of a previous infection), and overproduction of cortisol, which can cause symptoms of Cushing syndrome.

**Consideration of Age**

Any ages listed in the policy statements are based on FDA labeling.
Description
Repository corticotropin injection is a preparation of the natural form of adrenocorticotropic hormone (ACTH). The injection is used to treat corticosteroid-responsive conditions and as a diagnostic tool to test adrenal function.

Background
Repository Corticotropin Injection
Repository corticotropin injection (H.P. Acthar® Gel, Purified Cortrophin™ Gel) is a purified, sterile preparation of the natural form of adrenocorticotropic hormone (ACTH) in gelatin to provide a prolonged release after intramuscular or subcutaneous injection. ACTH is produced and secreted by the pituitary gland; H.P. Acthar® Gel and Purified Cortrophin™ Gel uses ACTH obtained from porcine pituitaries. ACTH works by stimulating the adrenal cortex to produce cortisol, corticosterone, and a number of other hormones.

Summary of Evidence
For individuals who have infantile spasms who receive repository corticotropin injection, the evidence includes systematic reviews/meta-analyses and a prospective study. Relevant outcomes are symptoms and change in disease status. A 2013 systematic review judged the overall quality of all included studies involving various medication for infantile spasms to be poor, with fewer than half reporting method of randomization and most assessing relatively few individuals. There was heterogeneity across studies and either vigabatrin or prednisolone was used as comparators; however, the authors concluded that limited evidence from RCTs suggested that ACTH and prednisolone resolved infantile spasms more rapidly than vigabatrin. More recent meta-analyses also concluded that ACTH treatment was non-inferior to corticosteroid treatment with a similar adverse event profile and may be considered a safe and effective alternative treatment. A 2021 systematic review including six trials indirectly compared natural ACTH with synthetic ACTH therapies. Based on the limited evidence included, investigators suggested that repository corticotropin injection may be a better treatment option over synthetic ACTH therapies for improving cessation of spasms and other relevant symptoms. Multivariate analysis of a prospective cohort study found that children with infantile spasms who were treated with ACTH were more likely to respond than other children. However, the analysis might have been subject to residual confounding on unmeasured characteristics; further, the
study did not differentiate between synthetic and natural ACTH. The evidence is insufficient to
determine that the technology results in an improvement in the net health outcome.

For individuals who have corticosteroid-responsive conditions (e.g., rheumatoid arthritis,
dermatomyositis, sarcoidosis, nephrotic syndrome, multiple sclerosis, serum sickness, SLE) who
receive repository corticotropin injection, the evidence includes RCTs and case series. The
relevant outcomes are symptoms and change in disease status. One placebo-controlled trial
supports the efficacy of repository corticotropin injection in individuals with rheumatoid arthritis
and an inadequate response to corticosteroids and disease-modifying therapies. Overall, more
recent studies evaluating multiple sclerosis have demonstrated that intravenous corticosteroids
are at least as effective, or more effective, than repository corticotropin injection. A recent RCT in
individuals with SLE found no difference in SLE Responder Index-4 responders in the repository
corticotropin group compared to placebo. Most studies assessing nephrotic syndrome have
been small retrospective case studies and the one RCT identified stopped early due to lack of
efficacy of ACTH. Ongoing studies are being conducted. The evidence is insufficient to
determine that the technology results in an improvement in the net health outcome.

For individuals who have conditions not generally known to be responsive to corticosteroids
(non-corticosteroid-responsive) such as tobacco cessation, childhood epilepsy, and acute gout
who receive repository corticotropin injection, the evidence includes three head-to-head trials
identified for use in gout. The relevant outcomes are symptoms and change in disease status.
The quality of these studies was deemed very low to moderate because there were no direct
placebo-controlled trials and no clinically relevant differences were detected between drugs
studied. The evidence is insufficient to determine that the technology results in an improvement
in the net health outcome.

For individuals who need diagnostic testing of adrenal function who receive repository
corticotropin injection, the evidence does not include studies that compare the diagnostic
accuracy of repository corticotropin injection with ACTH. The relevant outcomes are test validity
and other test performance measures. The lack of published evidence precludes conclusions on
the validity of using repository corticotropin as a diagnostic test for adrenal function. The
evidence is insufficient to determine that the technology results in an improvement in the net
health outcome.

Ongoing and Unpublished Clinical Trials

Some currently ongoing and unpublished trials that might influence this policy are listed in
Table 1.
Table 1. Summary of Key Trials

<table>
<thead>
<tr>
<th>NCT No.</th>
<th>Trial Name</th>
<th>Planned Enrollment</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ongoing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCT02030028</td>
<td>Open Label Study to Evaluate Efficacy and Safety of Short-Term, Adjunctive Adrenocorticotropic Hormone (ACTH) Gel in Rheumatoid Arthritis</td>
<td>20</td>
<td>June 2022</td>
</tr>
<tr>
<td>NCT02541955</td>
<td>Use of Acthar in Rheumatoid Arthritis Related Flares</td>
<td>40</td>
<td>Dec 2022</td>
</tr>
<tr>
<td>NCT03644771</td>
<td>Experience With H.P. Acthar Gel Treatment of Patients With Nephrotic Syndrome/Proteinuria Due to Various Etiologies and Its Effect on Podocyte Function</td>
<td>40</td>
<td>Dec 2021</td>
</tr>
<tr>
<td>NCT03414086</td>
<td>Predictor of Clinical Response to Acthar in Myositis: Phase II of Acthar Clinical Trial</td>
<td>20</td>
<td>Jul 2022</td>
</tr>
<tr>
<td>NCT01950234a</td>
<td>Treatment of Progressive Forms of Multiple Sclerosis With Pulsed ACTH (Acthar Gel)</td>
<td>100</td>
<td>Dec 2022</td>
</tr>
<tr>
<td>NCT03511625</td>
<td>The Effects of Acthar on Synovial Inflammation in Rheumatoid Arthritis</td>
<td>6</td>
<td>Dec 2022</td>
</tr>
<tr>
<td><strong>Unpublished</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCT02245841</td>
<td>Efficacy and Safety of H.P. Acthar Gel for the Treatment of Refractory Cutaneous Manifestations of Dermatomyositis</td>
<td>15</td>
<td>July 2021 (completed)</td>
</tr>
<tr>
<td>NCT03320070a</td>
<td>A Phase 4, Multicenter, Randomized, Double Blind, Placebo Controlled Pilot Study to Assess the Efficacy and Safety of Acthar Gel in Subjects With Pulmonary Sarcoidosis</td>
<td>55</td>
<td>Nov 2021 (completed)</td>
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<tr>
<td>NCT02725177</td>
<td>Ocular Sarcoidosis Open-Label Trial of ACTHAR Gel</td>
<td>9</td>
<td>Mar 2022 (completed)</td>
</tr>
<tr>
<td>NCT02298491</td>
<td>Clinical Biomarkers of Disease Activity and Treatment Responses in Patients With CNS Sarcoidosis Treated With H.P. Acthar Gel</td>
<td>4</td>
<td>Nov 2020 (completed)</td>
</tr>
<tr>
<td>NCT02315872a</td>
<td>The Effect of ACTH (Acthar) on Measures of Chronic Fatigue in Patients With Relapsing Multiple Sclerosis</td>
<td>8</td>
<td>Dec 2018 (completed)</td>
</tr>
<tr>
<td>NCT No.</td>
<td>Trial Name</td>
<td>Planned Enrollment</td>
<td>Completion Date</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>NCT01367964</td>
<td>Prevention of West Syndrome With Low-dose Adrenocorticotropic Hormone (ACTH) (PREVENT-WS)</td>
<td>28</td>
<td>Dec 2018</td>
</tr>
<tr>
<td>NCT01386554</td>
<td>a Randomized, Placebo-Controlled, Parallel-Group, Double-Blind Study of H.P. Acthar Gel (Acthar) in Treatment-Resistant Subjects With Persistent Proteinuria and Nephrotic Syndrome Due to Idiopathic Membranous Nephropathy (iMN)</td>
<td>60</td>
<td>May 2017 (completed)</td>
</tr>
</tbody>
</table>

NCT: national clinical trial

a Denotes industry-sponsored or cosponsored trial

Clinical Input from Physician Specialty Societies and Academic Medical Centers

While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted.

In response to requests, input was received from three physician specialty societies and one academic medical center while this policy was under review in 2010. In addition, unsolicited input was received from one foundation and three physicians. There was strong support for the use of repository corticotropin injection in the treatment of infantile spasms (West syndrome).

Practice Guidelines and Position Statements

Guidelines or position statements will be considered for inclusion if they were issued by, or jointly by, a U.S. professional society, an international society with U.S. representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.
American Academy of Neurology and Child Neurology Society

The American Academy of Neurology and the Child Neurology Society (2012) updated their evidence-based guidelines on the treatment of infantile spasms, which was reaffirmed in January 2018 and May 2021. The guidelines included the following recommendations on the use of adrenocorticotropic hormone (ACTH):

- “ACTH (Level B) or VGB [vigabatrin] (Level C) may be offered for short-term treatment of infantile spasms.”

- “Hormonal therapy (ACTH or prednisolone) may be considered for use in preference to VGB in infants with cryptogenic infantile spasms…”

Infantile Spasms Working Group

An industry-sponsored Infantile Spasms Working Group (2010) published a consensus report on the diagnosis and treatment of infantile spasms. Regarding treatment, the report concluded: “At this time, ACTH and VGB (vigabatrin) are the only drugs with proven efficacy to suppress clinical spasms and abolish the hypsarrhythmic EEG [electroencephalogram] in a randomized clinical trial setting (Mackay et al., 2004) and thus remain first-line treatment.”

International League Against Epilepsy

The International League Against Epilepsy Commission of Pediatrics (2015) recommendations on management of infantile seizures states that ACTH (either low or high doses) is a preferred treatment for short-term control of infantile spasms (evidence level B [probably effective]). The recommendations for the management of infantile seizures were based on an international survey due to the lack of evidence-based data.

National Institute for Health and Care Excellence

The NICE (2022) published a guideline on epilepsies in children, young people, and adults that addresses infantile spasm. For first-line treatment, NICE recommends combining steroids with vigabatrin which has been shown to be more effective than either steroids or vigabatrin alone in stopping spasms. Based on NICE committee consensus opinion, the committee agreed that "steroids may not be suitable for all children under 2 years and that vigabatrin alone should be
considered for those at high risk from the side effects of steroid treatment, such as those with neurological impairments and other comorbidities. There was no specific mention of repository corticotropin injection or ACTH.

**American College of Rheumatology**

The American College of Rheumatology (2020) published a guideline on the management of gout. The guideline recommends that other agents be used first line for the treatment of a gout flare rather than ACTH. For individuals who are unable to take oral medications, parenteral corticosteroids are preferred over ACTH.

**American College of Physicians**

A practice guideline on acute and recurrent gout from the American College of Physicians (2017) does not provide a formal recommendation about use of ACTH. However, the guideline authors state that ACTH may reduce pain in patients with acute gout (based on moderate quality evidence). Comparative evidence suggests greater efficacy compared to corticosteroids and nonsteroidal anti-inflammatory drugs, with a potential for harm similar to corticosteroids.

**Medicare National Coverage**

There is no national coverage determination.

**Regulatory Status**

In 1952, H.P. Acthar® Gel (Questcor Pharmaceuticals/Mallinckrodt Pharmaceuticals) was approved by the FDA. The original product label included at least 19 separate conditions, including infantile spasms. At one time, this product was indicated as an injection for diagnostic testing of adrenocortical function. In 2010, this indication was removed with an update to the product label.

In 2021, Purified Cortrophin™Gel (ANI Pharmaceuticals, Inc.) was relaunched and received approval of supplemental New Drug Application (sNDA) by the FDA for certain autoimmune disorders. It includes similar indications much like the Acthar® Gel noted above; however, it is
not currently approved for the treatment of infantile spasms. ANI acquired the NDA from Merck & Co. in 2016. This product initially received FDA approval in 1954 but has not been in the market since the 1980s.

References


### History

<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/09/16</td>
<td>New policy. Policy created to include plan specific medically necessary indications; replaces policy 5.01.17. Repository corticotropin injection may be considered medically necessary when criteria are met.</td>
</tr>
<tr>
<td>06/01/16</td>
<td>Interim Update, approved May 10, 2016. Language clarified regarding use the drug for steroid responsive conditions. FDA labeled conditions approved in 1952 were prior to the commercial availability of corticosteroid agents and not based on studies showing efficacy. Corticosteroid agents are available at lower cost and have stronger scientific evidence regarding their efficacy for most conditions, thus making this product not medically necessary based on contract language.</td>
</tr>
<tr>
<td>12/01/17</td>
<td>Annual Review, approved November 9, 2017. Policy updated with literature review through August 2017; no references added. Policy statements for corticosteroid-responsive conditions reorganized for clarity, including adding ophthalmic diseases.</td>
</tr>
<tr>
<td>09/21/18</td>
<td>Minor update. Added Consideration of Age statement.</td>
</tr>
<tr>
<td>Date</td>
<td>Comments</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>01/01/20</td>
<td>Annual Review, approved December 10, 2019. Policy updated with literature review through August 2019; no references added. Policy statements unchanged.</td>
</tr>
<tr>
<td>01/01/21</td>
<td>Annual Review, approved December 1, 2020. Policy updated with literature review through August 26, 2020; references added. Policy statements unchanged.</td>
</tr>
<tr>
<td>01/01/22</td>
<td>Annual Review, approved December 2, 2021. Policy updated with literature review through August 30, 2021; references added. Minor edits made for clarification to list of corticosteroid responsive conditions; intent unchanged; otherwise, policy statements unchanged.</td>
</tr>
<tr>
<td>12/01/22</td>
<td>Annual Review, approved November 21, 2022. Policy updated with literature review through September 02, 2022; references added. Policy statements unchanged.  Changed the wording from “patient” to “individual” throughout the policy for standardization.</td>
</tr>
<tr>
<td>10/01/23</td>
<td>Coding update. Added new HCPCS codes J0801 and J0802.</td>
</tr>
</tbody>
</table>

**Disclaimer:** This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2023 Premera All Rights Reserved.

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Alaska residents: Contact the Alaska Division of Insurance via email at insurance@alaska.gov or by phone at 907-269-7900 or 1-800-INSURAK (in-state, outside Anchorage).

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MO LOU SILAFIA: Afa, 1e tautala Gagan a fa Sâmoa, 1o lioi 1a auanauna fesoasoan, e fai fua e leai se tootog, mo oe, Telefoni mai: 800-722-1471 (TTY: 711).

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