

# An FDA-approved ACTH treatment

# Consider Cortrophin Gel for those suffering with specific chronic autoimmune and inflammatory conditions

Both patients and healthcare professionals now have another ACTH therapy for treating appropriate patients, including those with:

- · Acute exacerbations of multiple sclerosis
- An acute episode or exacerbation in rheumatoid arthritis, including juvenile rheumatoid arthritis; psoriatic arthritis; ankylosing spondylitis; and acute gouty arthritis, as an adjunctive therapy for short-term administration
- Proteinuria due to nephrotic syndrome, by inducing a diuresis or remission, without uremia of the idiopathic type or that due to lupus erythematosus

## Important Safety Information

#### Contraindications

- Cortrophin Gel is contraindicated for intravenous administration.
- Cortrophin Gel is contraindicated in patients who have any of the following conditions: scleroderma; osteoporosis; systemic fungal infections; ocular herpes simplex; recent surgery; history of or the presence of a peptic ulcer; congestive heart failure; hypertension; primary adrenocortical insufficiency; adrenocortical hyperfunction; or sensitivity to proteins derived from porcine sources.



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Cortrophin Gel is a naturally sourced, purified corticotropin (ACTH) that is made up of a complex mixture of ACTH, ACTH-related peptides, and other natural pituitary-derived peptides.



Cortrophin Gel is a repository corticotropin injection in the ACTH drug class.<sup>1</sup>

Cortrophin Gel is compliant with the United States Pharmacopeia (USP) monograph for Repository Corticotropin Injection.<sup>2</sup>

ACTH=adrenocorticotropic hormone.

## Important Safety Information (continued)

#### **Warnings and Precautions**

- **Infections:** Corticotropin therapy may increase susceptibility to infections and may mask the symptoms of infections.
- Adrenal insufficiency: Prolonged corticotropin therapy can increase the potential for adrenal insufficiency after withdrawal of the medication. Adrenal insufficiency may be minimized by gradually reducing the corticotropin dosage. Hormone therapy should be reinstituted if stressful situations arise during discontinuation.
- Elevated blood pressure, salt and water retention, and hypokalemia: Corticotropin can cause elevation of blood pressure, salt and water retention, and increased excretion of potassium or calcium.
- **Masking symptoms of other diseases:** Corticotropin may only suppress signs and symptoms of chronic disease without altering the natural course of disease.



# ACTH may work through the melanocortin pathway, possessing both anti-inflammatory and immunomodulatory properties<sup>3-6</sup>

ACTH is a melanocortin peptide that stimulates one or more melanocortin receptors (MCRs).<sup>5-8</sup>

MCRs are receptors on immune and other cells throughout the body that may play a role in regulating inflammation among other functions.<sup>3,5,6,9</sup>

Preclinical data suggest leveraging the melanocortin signaling pathway may represent an important therapeutic strategy for various chronic autoimmune disorders.<sup>3,5,6,9</sup>

ACTH binds to all 5 MCRs *in vitro* with varying affinities, and therefore may have both steroid-dependent and steroid-independent activity.<sup>8,10-12</sup>

#### Anti-inflammatory effects STEROID-······> DEPENDENT MC2R Reduces cytokines, **ACTIONS**7,13,14 Adrenal Cortisol chemokines, and inducible Cortex nitric oxide sunthase Increases phagocytosis of apoptotic immune cells PROPOSED **MOA FOR ACTH** Immunomodulatory effects MC1R 00 Decreases leukocyte infiltration STEROID-MC3R $\mathbf{0}$ .....> INDEPENDENT > MC4R Inhibits cytokine production ACTIONS Immunocytes 6.8.9.12.14-17 MC5R Inflammatory response Affects the immune system

## Important Safety Information (continued)

#### Warnings and Precautions

- **Psychiatric reactions:** Psychic derangements may appear when corticotropin is used, ranging from euphoria, insomnia, mood swings, personality changes, and depression to psychosis. Existing conditions may be aggravated.
- **Ophthalmic reactions:** Prolonged use of corticotropin may produce posterior subcapsular cataracts and glaucoma with possible damage to the optic nerves.
- **Immunogenicity potential:** Prolonged administration of Cortrophin Gel may increase the risk of hypersensitivity reactions. Neutralizing antibodies with chronic administration may lead to loss of endogenous ACTH and Cortrophin Gel activity.
- **Vaccination:** Patients should not be vaccinated against smallpox while on corticotropin therapy. Other immunizations should be undertaken with caution due to possible neurologic complications and lack of antibody response.



• Inhibits the proinflammatory effects of lymphocytes

# Indications and types of patients for ACTH use

Cortrophin Gel is indicated for the following chronic autoimmune and inflammatory conditions.

## Ophthalmic diseases (uveitis, optic neuritis, etc)

Indicated for severe acute and chronic allergic and inflammatory conditions affecting the eye and its adnexa, such as allergic conjunctivitis; keratitis; iritis and iridocyclitis; diffuse posterior uveitis and choroiditis; optic neuritis; chorioretinitis; and anterior segment inflammation.

## Nephrotic syndrome

Indicated for inducing a diuresis or a remission of proteinuria due to nephrotic syndrome without uremia of the idiopathic type or that due to lupus erythematosus.

 Per the evidence-based consensus for the treatment of primary focal segmental glomerulosclerosis (FSGS), ACTH has been considered for patients who may require another treatment option after glucocorticoids or calcineurin inhibitors.<sup>18\*</sup>

\*Based on the Kidney Disease Improving Global Outcomes (KDIGO) 2021 Clinical Practice Guideline for the Management of Glomerular Diseases.

<sup>†</sup>Based on the European Respiratory Society (ERS) 2021 clinical practice guidelines on the treatment of sarcoidosis.

## Important Safety Information (continued)

#### Warnings and Precautions (continued)

• Use in patients with hypothyroidism and cirrhosis: There is an enhanced effect in patients with hypothyroidism and in those with cirrhosis.

### Multiple sclerosis exacerbations

Indicated for people with acute exacerbations of multiple sclerosis.

 Per evidence-based drug compendia (Wolters Kluwer Lexi-Drugs<sup>®</sup>), corticotropin may be an alternative therapy for patients if IV corticosteroids cannot be administered or are not tolerated.<sup>1</sup>

## Symptomatic sarcoidosis

Indicated for people with symptoms of sarcoidosis.

 Per the evidence-based consensus for the treatment of sarcoidosis, repository corticotropin injection should be used in patients who may require another treatment option after corticosteroids and/or anti-metabolites.<sup>19†</sup>

## **Rheumatic and collagen disorders**

Indicated for:

- Short-term administration as an adjunctive therapy during an acute episode or exacerbation in rheumatoid arthritis, including juvenile rheumatoid arthritis
- Exacerbations or as maintenance therapy in select cases of systemic lupus erythematosus and systemic dermatomyositis (polymyositis)



# Dose and frequency will vary by condition

Dosing and frequency should be individualized according to medical condition, severity of the disease, and initial response of the patient.<sup>20,21</sup>



## Neurology

In the treatment of acute exacerbations of multiple sclerosis:

• The recommended daily intramuscular dosage is 80-120 units for 2-3 weeks



## Rheumatology

In the treatment of rheumatoid arthritis, including juvenile rheumatoid arthritis; psoriatic arthritis; and ankylosing spondylitis as adjunctive therapy for short-term administration (to tide the patient over an acute episode or exacerbation)<sup>1,22</sup>:

• The recommended dosage is 40-80 units every 24-72 hours, per evidence-based drug compendia\*

\*Dosage and schedule per the Wolters Kluwer Lexi-Drugs and the Truven Health Analytics Micromedex® DRUGDEX®, which are evidence-based drug compendia recommended by Centers for Medicare and Medicaid Services.

Please monitor your patients for side effects if Cortrophin Gel is administered at more than 40 units daily, because chronic administration of more than 40 units daily may be associated with uncontrollable adverse effects.

Standard tests for verification of adrenal responsiveness to corticotropin may utilize as much as 80 units as a single injection or one or more injections of a lesser dosage. Verification tests should be performed prior to treatment with corticotropins. The test should utilize the route(s) of administration proposed for treatment. Following verification, dosage should be individualized according to the disease under treatment and the general medical condition of each patient.

## Important Safety Information (continued)

#### Warnings and Precautions (continued)

- Use in patients with latent tuberculosis or tuberculin reactivity: Closely observe for reactivation of the disease.
- **Comorbid diseases:** Corticotropin should be used with caution in patients with diabetes, abscess, pyogenic infections, diverticulitis, renal insufficiency, and myasthenia gravis.



## Dose and frequency will vary by condition



## Nephrology

In the treatment of proteinuria in the nephrotic syndrome, by inducing a diuresis or a remission, without uremia of the idiopathic type or that due to lupus erythematosus<sup>1,22</sup>:

• The recommended dosage is 40-80 units every 24-72 hours, per evidence-based drug compendia\*



## **Ophthalmology & Pulmonology**

In the treatment of other conditions, including severe acute and chronic allergic and inflammatory conditions affecting the eye and its adnexa (such as allergic conjunctivitis; keratitis; iritis and iridocyclitis; diffuse posterior uveitis and choroiditis; optic neuritis; chorioretinitis; and anterior segment inflammation) and symptomatic sarcoidosis<sup>1,22</sup>:

• The recommended dosage is 40-80 units every 24-72 hours, per evidence-based drug compendia\*

\*Dosage and schedule per the Wolters Kluwer Lexi-Drugs and the Truven Health Analytics Micromedex® DRUGDEX®, which are evidence-based drug compendia recommended by Centers for Medicare and Medicaid Services.

Please monitor your patients for side effects if Cortrophin Gel is administered at more than 40 units daily, because chronic administration of more than 40 units daily may be associated with uncontrollable adverse effects.

Standard tests for verification of adrenal responsiveness to corticotropin may utilize as much as 80 units as a single injection or one or more injections of a lesser dosage. Verification tests should be performed prior to treatment with corticotropins. The test should utilize the route(s) of administration proposed for treatment. Following verification, dosage should be individualized according to the disease under treatment and the general medical condition of each patient.

## Important Safety Information (continued)

#### Warnings and Precautions (continued)

- Growth and development: Carefully observe growth and development of infants and children on prolonged corticotropin therapy.
- Acute gouty arthritis: Treatment of acute gouty arthritis should be limited to a few days. Conventional concomitant therapy should be administered during corticotropin treatment and for several days after it is stopped.
- Drug interactions: Aspirin should be used cautiously with corticotropin in hypoprothrombinemia.





## A dedicated support program for your patients

The Cortrophin In Your Corner program can provide your patients with support and educational information throughout their treatment. Our team of experts is here to help patients:

- Get information on insurance coverage and financial support
- Coordinate shipments with the specialty pharmacy supplying the medication
- · Learn how to administer treatment through in-person or virtual injection training
- Get access to useful resources and answers to questions about treatment or Cortrophin Gel



If you have questions about the Cortrophin In Your Corner program, call 1-800-805-5258, Monday–Friday, 8 AM–8 PM ET





# **Resources for you and your patients**

## For you and your office

	Purified Cortrophi Gel restriction (SP 87) htt
Dosing and Administratio	n Guide
ACTH injection treatment opti	on for patients with specific chronic
autoimmune and inflammator	y conditions, including:
Acute exace-bations	
Short-term administr     on the solicity or set	ation as an adjunctive therapy during an certration in theumataid arthritis, including
povenile rheumatoid spondyfris; and acu	arthritis; pearlatic arthritis; ankylasing
	re gouty arthress r a remission of proteinuria due to
	without uremia of the idiopathic type or
Find tools and resources for your or	
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Important Safety Information	
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administration.	susceptibility to infections and may mask the sumptor
<ul> <li>Controphin Gel is contraindicated in patients who have any of the following conditions: scieroderma;</li> </ul>	of infections. • Advenal insufficiency: Prolonged corticatropin
asteoporosis; systemic fungal infections; acular	therapy can increase the potential for advenal
herpes simples; recent surgery; history of or the presence of a peptic ulcer; congestive heart failure;	insufficiency after withdrawal of the medication. Adrenal insufficiency may be minimized by gradually
hypertension; primary adrenocortical insufficiency; adrenacortical hyperfunction; or sensitivity to	reducing the corticatropin datage. Harmone therapy should be ministrated if streastful situations arise durin
proteins derived from porcine sources.	decontinuation.
Nease see full Prescribing Information.	



Dosing and Administration Guide



## For your patients



Informational Brochure Find more resources at **Cortrophin.com** or contact your ANI Pharmaceuticals Representative

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Injection Calendar



## Indications

Cortrophin Gel is a prescription medicine that is injected subcutaneously or intramuscularly. It is indicated for:

- Short-term administration as an adjunctive therapy during an acute episode or exacerbation in rheumatoid arthritis, including juvenile rheumatoid arthritis; psoriatic arthritis; ankylosing spondylitis; and acute gouty arthritis.
- Exacerbations or as maintenance therapy in select cases of systemic lupus erythematosus and systemic dermatomyositis (polymyositis).
- Severe erythema multiforme (Stevens-Johnson syndrome) and severe psoriasis.
- Atopic dermatitis and serum sickness.
- Severe acute and chronic allergic and inflammatory conditions affecting the eye and its adnexa, such as allergic conjunctivitis, keratitis, iritis and iridocyclitis, diffuse posterior uveitis and choroiditis, optic neuritis, chorioretinitis, and anterior segment inflammation.
- Symptomatic sarcoidosis.
- Inducing a diuresis or remission of proteinuria due to nephrotic syndrome without uremia of the idiopathic type or that due to lupus erythematosus.
- Acute exacerbations of multiple sclerosis.

## Important Safety Information

#### Contraindications

- Cortrophin Gel is contraindicated for intravenous administration.
- Cortrophin Gel is contraindicated in patients who have any of the following conditions: scleroderma; osteoporosis; systemic fungal infections; ocular herpes simplex; recent surgery; history of or the presence of a peptic ulcer; congestive heart failure; hypertension; primary adrenocortical insufficiency; adrenocortical hyperfunction; or sensitivity to proteins derived from porcine sources.

#### **Warnings and Precautions**

- Infections: Corticotropin therapy may increase susceptibility to infections and may mask the symptoms of infections.
- Adrenal insufficiency: Prolonged corticotropin therapy can increase the potential for adrenal insufficiency after withdrawal of the medication. Adrenal insufficiency may be minimized by gradually reducing the corticotropin dosage. Hormone therapy should be reinstituted if stressful situations arise during discontinuation.
- Elevated blood pressure, salt and water retention, and hypokalemia: Corticotropin can cause elevation of blood pressure, salt and water retention, and increased excretion of potassium or calcium.

- **Masking symptoms of other diseases:** Corticotropin may only suppress signs and symptoms of chronic disease without altering the natural course of disease.
- **Psychiatric reactions:** Psychic derangements may appear when corticotropin is used, ranging from euphoria, insomnia, mood swings, personality changes, and depression to psychosis. Existing conditions may be aggravated.
- **Ophthalmic reactions:** Prolonged use of corticotropin may produce posterior subcapsular cataracts and glaucoma with possible damage to the optic nerves.
- **Immunogenicity potential:** Prolonged administration of Cortrophin Gel may increase the risk of hypersensitivity reactions. Neutralizing antibodies with chronic administration may lead to loss of endogenous ACTH and Cortrophin Gel activity.
- **Vaccination:** Patients should not be vaccinated against smallpox while on corticotropin therapy. Other immunizations should be undertaken with caution due to possible neurologic complications and lack of antibody response.
- Use in patients with hypothyroidism and cirrhosis: There is an enhanced effect in patients with hypothyroidism and in those with cirrhosis.
- Use in patients with latent tuberculosis or tuberculin reactivity: Closely observe for reactivation of the disease.
- **Comorbid diseases:** Corticotropin should be used with caution in patients with diabetes, abscess, pyogenic infections, diverticulitis, renal insufficiency, and myasthenia gravis.
- **Growth and development:** Carefully observe growth and development of infants and children on prolonged corticotropin therapy.
- Acute gouty arthritis: Treatment of acute gouty arthritis should be limited to a few days. Conventional concomitant therapy should be administered during corticotropin treatment and for several days after it is stopped.
- **Drug interactions:** Aspirin should be used cautiously with corticotropin in hypoprothrombinemia.
- **Pregnancy:** Since fetal abnormalities have been observed in animals, Cortrophin Gel should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

#### **Adverse Reactions**

Adverse reactions for Cortrophin Gel include fluid or sodium retention; muscle weakness; osteoporosis; peptic ulcer with possible perforation and hemorrhage; impaired wound healing; hypertension; convulsions; headache; development of Cushingoid state; and suppression of growth in children. These are not all the adverse reactions reported with Cortrophin Gel.



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