



# CIGNA MEDICAL COVERAGE POLICY

The following Coverage Policy applies to all health benefit plans administered by CIGNA Companies including plans formerly administered by Great-West Healthcare, which is now a part of CIGNA.

Subject **Alprostadil (Caverject<sup>®</sup>, Edex<sup>®</sup>, Muse<sup>®</sup>)**

Effective Date ..... 3/15/2011  
Next Review Date..... 3/15/2012  
Coverage Policy Number ..... 7003

## Table of Contents

Coverage Policy .....	1
General Background .....	3
Coding/Billing Information .....	3
References .....	3

## Hyperlink to Related Coverage Policies

Oral Phosphodiesterase-5 Inhibitors  
Oral Phosphodiesterase-5 Inhibitors for PAH (Revatio<sup>®</sup>, Adcirca<sup>®</sup>)  
Penile Prosthesis for Erectile Dysfunction  
Surgery for Male Sexual Dysfunction

### INSTRUCTIONS FOR USE

Coverage Policies are intended to provide guidance in interpreting certain **standard** CIGNA HealthCare benefit plans. Please note, the terms of a customer's particular benefit plan document [Group Service Agreement (GSA), Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a customer's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a customer's benefit plan document **always supercedes** the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. Proprietary information of CIGNA. Copyright ©2011 CIGNA

## Coverage Policy

**Note: Erectile dysfunction therapy is specifically excluded under most benefit plans. Please refer to the applicable benefit plan document to determine benefit availability and the terms and conditions of coverage.**

**If coverage is available for erectile dysfunction therapy, then:**

**CIGNA covers alprostadil as medically necessary for the treatment of male erectile dysfunction when ANY of the following criteria is met:**

- age 60 or older
- hormonally-induced erectile dysfunction with either of the following:
  - erectile dysfunction persists despite correction of an abnormal testosterone, prolactin, or thyroid level
  - correction of the hormonal deficiency is contraindicated due to comorbidity (e.g., a low testosterone in a man with prostate cancer)
- neurogenic erectile dysfunction such as resultant from spinal cord injury, multiple sclerosis, pituitary microadenoma with hyperprolactinemia, cerebral vascular accident (CVA), diabetes, radical prostatectomy or surgically induced impotence
- vasculogenic erectile dysfunction such as resultant from aortic aneurysm, atherosclerosis, hypertension, hyperlipidemia, or peripheral vascular disease (PVD)
- pelvic trauma-induced erectile dysfunction such as resultant from compression injuries or radiation

- pharmacologic-induced erectile dysfunction where the patient has tried ONE alternate, non-erectile dysfunction-causing medication and erectile dysfunction persists OR there is a contraindication to making medication changes

**When medical necessity for alprostadil has been established, Muse is the preferred brand alprostadil product. Non-preferred brand alprostadil (Caverject and Edex) will only be covered when there is a failure or intolerance to Muse.**

**Note: Quantity limits may apply.**

**When coverage is available and medically necessary, the dosage, frequency, site of administration, and duration of therapy should be reasonable, clinically appropriate, and supported by evidence-based literature and adjusted based upon severity, alternative available treatments, and previous response to alprostadil (Caverject<sup>®</sup>, Edex<sup>®</sup>, Muse<sup>®</sup>) therapy.**

---

## **FDA Approved Indications**

### **Caverject**

Caverject is indicated for the treatment of erectile dysfunction due to neurogenic, vasculogenic, psychogenic, or mixed etiology. Intracavernosal Caverject is also indicated as an adjunct to other diagnostic tests in the diagnosis of erectile dysfunction.

### **Edex**

Edex is indicated for the treatment of erectile dysfunction due to neurogenic, vasculogenic, psychogenic, or mixed etiology.

### **Muse**

Muse is indicated for the treatment of erectile dysfunction. Studies that established benefit demonstrated improvements in success rates for sexual intercourse compared with similarly administered placebo.

## **FDA Recommended Dosing**

### **Caverject**

The dose of Caverject should be individualized for each patient by careful titration under supervision by the physician. In clinical studies, patients were treated with Caverject Sterile Powder in doses ranging from 0.2 to 140 mcg; however, since 99% of patients received doses of 60 mcg or less, doses of greater than 60 mcg are not recommended. In general, the lowest possible effective dose should always be employed.

### **Edex**

The dosage range of Edex for the treatment of erectile dysfunction is 1 to 40 mcg. The intracavernous injection should be given over a 5 to 10 second interval. Doses greater than 40 mcg have not been studied. The lowest possible effective dose should always be used.

### **Muse**

Muse is a transurethral delivery system available in 4 dosage strengths: 125 mcg, 250 mcg, 500mcg, and 1000 mcg. Muse should be administered as needed to achieve an erection. The onset of effect is within 5–10 minutes after administration. The duration of effect is approximately 30–60 minutes. However, the actual duration will vary from patient to patient. Each patient should be instructed by a medical professional on proper technique for administering Muse prior to self-administration. The maximum frequency of use is no more than 2 systems per 24-hour period.

## **Drug Availability**

### **Caverject**

Caverject Impulse is supplied as a disposable, single-dose, dual chamber syringe system. The system includes a glass cartridge, which contains sterile, freeze-dried alprostadil in the front chamber and sterile bacteriostatic water for reconstitution in the rear chamber. The syringes contain either 12.8 or 25.6 mcg of alprostadil to allow delivery of a maximum of 10 or 20 mcg/0.5mL.

**Edex**

Edex (alprostadil for injection) is available in single-dose, dual-chamber cartridges intended for use with the reusable Edex injection device. One chamber of the cartridge contains 10.75, 21.5 or 43.0 mcg of alprostadil as a white, sterile, lyophilized powder. The other chamber contains 1.075 mL of sterile 0.9% sodium chloride.

**Muse**

Muse is supplied in individual foil pouches containing one (1) system per pouch. Muse is available in unit cartons containing six (6) systems. Muse is available in the following 4 dosage strengths: 125 mcg; 250 mcg; 500 mcg; and 1000 mcg.

**General Background****Pharmacology**

Alprostadil is the naturally occurring prostaglandin E1 that relaxes vascular smooth muscle and causes vasodilation. When administered by intracavernosal injection or as an intraurethral suppository, alprostadil acts locally to relax the trabecular smooth muscle of the corpora cavernosa and the cavernosal arteries. This results in swelling, elongation, and rigidity of the penis when arterial blood rapidly flows into the corpus cavernosum to expand the lacunar spaces. The entrapped blood reduces the venous blood outflow as sinusoids compress against the tunica albuginea, resulting in penile blood engorgement and erection.

The onset of action of alprostadil is 5–10 minutes, with its peak effect occurring within 20 minutes. The intracavernosal injection form has duration of action of 1–3 hours. The urethral suppository form has duration of action of 30–60 minutes. Common side effects of alprostadil are mainly local adverse reactions, including pain at the site of administration and penile pain during erection. A rare, but serious, side effect is priapism (painful erections more than six hours in duration). Formal drug interaction studies are lacking.

**Adverse Reactions/Contraindications**

Alprostadil is contraindicated in patients who have a known hypersensitivity to the drug (alprostadil or other prostaglandins); in patients who have conditions that might predispose them to priapism, such as sickle cell anemia or trait, multiple myeloma, or leukemia; or in patients with anatomical deformation of the penis, such as angulation, cavernosal fibrosis, or Peyronie's disease. There have been rare reports of prolonged erections longer than four hours and priapism with alprostadil.

There are two main categories of erectile dysfunction, psychogenic and organic. Organic causes may be vascular, neurologic, hormonal, medical, or pharmacological. According to the American Urological Association (AUA), the management of ED begins with the identification of organic comorbidities and psychosexual dysfunctions; both should be appropriately treated. Organic comorbidities include hypertension, atherosclerosis, hyperlipidemia, and diabetes mellitus. Additional risk factors for ED include neurologic disease (e.g., spinal cord injury, multiple sclerosis, cerebral vascular accident); pelvic, perineal, or penile trauma or surgery; pelvic radiation therapy; and endocrinopathy. For patients with a definite endocrinopathy, endocrine therapy for hypogonadism, hyperprolactinemia, and thyroid disorders is an appropriate intervention.

---

**Coding/Billing Information**

**Note:** This section is not in use.

---

**References**

1. American Urological Association. The management of erectile dysfunction: an update. Revised May 2006. Available at: <http://www.auanet.org/guidelines/edmgmt.cfm>.
2. McEvoy GK, ed. AHFS 2010 Drug Information. Bethesda, MD: American Society of Health-Systems Pharmacists, Inc; 2010.

3. Pharmacia & Upjohn Company. Caverject<sup>®</sup> (alprostadil for injection) package insert. Kalamazoo, MI: Pharmacia & Upjohn Company. October 2003.
4. Schwarz Pharma. Edex<sup>®</sup> (alprostadil for injection) package insert. Milwaukee, WI: Schwarz Pharma, January 2006.
5. Vivus, Inc. Muse<sup>®</sup> (alprostadil) urethral suppository package insert. Mountain View, CA: Vivus, Inc., August 2003.

"CIGNA", "CIGNA HealthCare" and the "Tree of Life" logo are registered service marks of CIGNA Intellectual Property, Inc., licensed for use by CIGNA Corporation and its operating subsidiaries. All products and services are provided by such operating subsidiaries and not by CIGNA Corporation. Such operating subsidiaries include Connecticut General Life Insurance Company, CIGNA Health and Life Insurance Company, CIGNA Behavioral Health, Inc., CIGNA Health Management, Inc., and HMO or service company subsidiaries of CIGNA Health Corporation and CIGNA Dental Health, Inc. In Arizona, HMO plans are offered by CIGNA HealthCare of Arizona, Inc. In California, HMO plans are offered by CIGNA HealthCare of California, Inc. In Connecticut, HMO plans are offered by CIGNA HealthCare of Connecticut, Inc. In North Carolina, HMO plans are offered by CIGNA HealthCare of North Carolina, Inc. In Virginia, HMO plans are offered by CIGNA HealthCare Mid-Atlantic, Inc. All other medical plans in these states are insured or administered by Connecticut General Life Insurance Company or CIGNA Health and Life Insurance Company.