You’re not alone.

20% - 40%

of Americans suffer from recurrent cold sores.¹

68%

of Americans have been exposed to the virus that causes cold sores.²

Cold sores are caused by a virus, called herpes simplex virus type 1. Unlike the virus that causes colds or the flu, the herpes virus stays in your body for life. Even when you don’t have symptoms, the virus can become active and cause a cold sore.³

There is currently no cure for cold sores or the virus that causes them.⁴ But, for adults and children 12 or older who have recurrent cold sores, Denavir® (penciclovir cream, 1%) may provide relief when they do reappear.⁵

Important Safety Information.

Denavir may cause side effects. Please see the full Prescribing Information inside this brochure and the Important Safety Information on the back panel.
Denavir® helps make cold sores disappear.

Denavir is a nongreasy prescription cream that can be easily applied directly to the affected area. The antiviral medication in Denavir penetrates to attack the cold sore virus*6 and helps make cold sores disappear.5

Denavir penetrates the cold sore

…and helps make it disappear.

Ideally, you should apply Denavir at the first sign or symptom of a cold sore. But, Denavir has been proven to work at any stage in cold sore development — not only at the first tingle, but even after the blister has formed.5

Denavir® (penciclovir cream, 1%) has not been shown to prevent the spread of the virus that causes cold sores, or to prevent cold sore outbreaks.
The Denavir® difference.

Denavir is a steroid-free topical prescription cream that:\(^5\)

- Works at the tingle and the blister
- Smoothes on and dries clear
- Reduces the pain and duration of cold sores

In clinical studies, the most common side effect with Denavir was headache, which occurred in 5.3% of patients treated with Denavir and 5.8% of those who received a cream that contained no medication (placebo).\(^5\)
Information for Patients

Want to get $15 off your next prescription? Look inside.

20% - 40% of Americans suffer from recurrent cold sores. 1

68% of Americans have been exposed to the virus that causes cold sores. 2

You're not alone. Cold sores are caused by a virus, called herpes simplex virus type 1. Unlike the virus that causes colds or the flu, the herpes virus stays in your body for life. Even when you don't have symptoms, the virus can become active and cause a cold sore. 3

There is currently no cure for cold sores or the virus that causes them. 4 

But, for adults and children 12 or older who have recurrent cold sores, Denavir® (penciclovir cream, 1%) may provide relief when they do reappear. 5

Important Safety Information.

Denavir may cause side effects. Please see the full Prescribing Information inside this brochure and the Important Safety Information on the back panel.

Get additional coupons at www.denavir.com.

Denavir® helps make cold sores disappear.

Denavir is a nongreasy prescription cream that can be easily applied directly to the affected area. The antiviral medication in Denavir penetrates to attack the cold sore virus* and helps make cold sores disappear. 5

Ideally, you should apply Denavir at the first sign or symptom of a cold sore. But, Denavir has been proven to work at any stage in cold sore development — not only at the first tingle, but even after the blister has formed. 5

Denavir® (penciclovir cream, 1%) has not been shown to prevent the spread of the virus that causes cold sores, or to prevent cold sore outbreaks.

The Denavir® difference.

Denavir is a steroid-free topical prescription cream that:

- Works at the tingle and the blister
- Smoothes on and dries clear
- Reduces the pain and duration of cold sores

In clinical studies, the most common side effect with Denavir was headache, which occurred in 5.3% of patients treated with Denavir and 5.8% of those who received a cream that contained no medication (placebo). 5

Use this money-saving coupon for $15 off your next Denavir prescription.
Why do you get cold sores?

Cold sores are caused by the herpes simplex type 1 virus. They usually appear around the lips or nostrils. The virus can be passed on from person to person by kissing, skin contact, and sharing food or beverages. Many people catch it in early childhood by coming in contact with an infected adult.³,⁴

Once you’ve contracted it, the virus stays in your body the rest of your life. Sometimes it’s what’s called “latent” — which means that it’s not active and not causing symptoms. But, when it does become active, cold sores may appear.⁴

**Denavir® (penciclovir cream, 1%) has not been shown to prevent the spread of the virus that causes cold sores, or to prevent cold sore outbreaks.**

**Ask your doctor or dentist about Denavir or call 1-888-DENAVIR (1-888-336-2847) for more information.**
phosphate inhibits HSV polymerase competitively with deoxyguanosine triphosphate. Consequently, herpes viral DNA synthesis and, therefore,

1 (HSV-1) and 2 (HSV-2). In cells infected with HSV-1 or HSV-2, viral thymidine kinase phosphorylates penciclovir to a monophosphate

CLINICAL PHARMACOLOGY

DESCRIPTION

Denavir

the mean duration of lesions was approximately one-half-day shorter in the subjects treated with

otherwise healthy adults were randomized to either

Denavir

The systemic absorption of penciclovir following topical administration has not been evaluated in patients <18

Pharmacokinetics

‘latent’ — which means that it’s not active and not

Why do you get

Table 1

Method of Assay  Virus Type Cell Type IC50 IC99

HSV-2 (c.i.) MRC-5 0.9-2.1

(c.i.) = clinical isolates. The latent state of any herpes virus is not

in vitro

In vitro

For more information.

Many people catch it in early childhood by coming in

virus. They usually appear around the lips or nostrils.

in vitro

Famvir® (famciclovir [the oral prodrug of penciclovir], 250 mg b.i.d.; n=66) in immunocompetent men with recurrent genital herpes,

There was no evidence of any clinically significant effects on sperm count, motility or morphology in 2 placebo-controlled clinical trials

human AUC). Testicular changes seen in both species included atrophy of the seminiferous tubules and reductions in epididymal sperm

or in male and female mice at doses up to 600 mg/kg/day (approximately 100x the maximum theoretical human AUC for penciclovir).

Carcinogenesis:

Teratogenic Effects-Pregnancy Category B

human equivalent doses of 13 and 18 mg/kg/day for the rat and rabbit, respectively, based on body surface area conversion; the body

in treatment of recurrent herpes labialis (cold
What triggers cold sore outbreaks?

A variety of things can cause the herpes virus to become active and trigger a cold sore.

Some key triggers include:\(^3\)

- Emotional stress
- Feeling tired or “run-down”
- Exposure to sun or ultraviolet light
- Sickness, such as cold or flu
- Mouth injuries and dental work
- Hormonal changes, such as menstruation and pregnancy

Denavir®
(penciclovir cream, 1%)

Important Safety Information.

Denavir may cause side effects. Please see the full Prescribing Information below and the Important Safety Information on the back panel.
REFERENCES


Denavir®

penciclovir cream, 1%

For Dermatologic Use Only

Rx only

Prescribing Information

DESCRIPTION

Denavir contains penciclovir, an antiviral agent active against herpes viruses. Denavir is available for topical administration as a 1% white cream. Each gram of Denavir contains 10 mg of penciclovir and the following inactive ingredients: cetearamiphopropyl 1000 BP, cetostearyl alcohol, mineral oil, propylene glycol, purified water and white petrolatum.

CLINICAL PHARMACOLOGY

Microbiology

Mechanism of Antiviral Activity: The antiviral compound penciclovir has in vitro inhibitory activity against herpes simplex type 1 (HSV-1) and 2 (HSV-2). In cells infected with HSV-1 or HSV-2, viral thymidine kinase phosphorylates penciclovir to penciclovir monophosphate, which, in turn, is converted to penciclovir triphosphate by cellular kinases. In vitro-studies demonstrate that penciclovir triphosphate inhibits HSV polymerase competitively with deoxycytidine triphosphate. Consequently, herpes viral RNA synthesis and, therefore, replication is selectively inhibited.

Pharmacokinetics

Solubility of penciclovir in water is 0.2 mg/mL at 20°C. The aqueous solubility of penciclovir at pH 3.0 is 0.1 mg/mL. The aqueous solubility of penciclovir at pH 2 is 0.5 mg/mL. The pH in an aqueous buffer (pH 2) is the solubility of 10.0 mg/mL. Penciclovir is a white to pale yellow solid. At 20°C it has a solubility of 0.2 mg/mL in methanol, 1.3 mg/mL in propylene glycol, 1.7 mg/mL in water. In aqueous buffer (pH 2) the solubility is 10.0 mg/mL.

In cell culture studies, penciclovir has antiviral activity against HSV-1 and HSV-2. Sensitivity-test results, expressed as the concentration of the drug required to inhibit growth of the virus by 50% (EC50), indicated penciclovir is resistant to penciclovir.

Pharmacokinetics

Viral DNA synthesis and, therefore, replication are selectively inhibited. The triphosphate form of penciclovir is phosphorylated by thymidine kinase to penciclovir monophosphate. This is further phosphorylated by cellular kinases to the triphosphate form, which is toxic to the virus. The half-life of penciclovir in human serum is 0.7 hours. The biological half-life of penciclovir in human serum is about 0.7 hours. Penciclovir is not heparin-sensitive. Its partition coefficient in n-octanol/water at pH 7.5 is 0.204 (log p = –1.62).

In the plasma of healthy volunteers, penciclovir is eliminated by a combination of hepatic and non-hepatic pathways. The major route of elimination is renal. The total apparent volume of distribution is approximately 0.25 liter/kg. The drug is eliminated primarily as penciclovir metabolites. The elimination half-life in plasma is approximately 0.7 hours. The terminal half-life in plasma is approximately 0.7 hours. The terminal half-life in plasma is approximately 0.7 hours. The terminal half-life in plasma is approximately 0.7 hours. The terminal half-life in plasma is approximately 0.7 hours. The terminal half-life in plasma is approximately 0.7 hours. The terminal half-life in plasma is approximately 0.7 hours. The terminal half-life in plasma is approximately 0.7 hours. The terminal half-life in plasma is approximately 0.7 hours. The terminal half-life in plasma is approximately 0.7 hours. The terminal half-life in plasma is approximately 0.7 hours.

The extent of penciclovir penetration into inflamed skin in vivo is unknown. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL. Penciclovir levels at the site of infection are not known. The maximum concentration of penciclovir in inflamed skin is approximately 67 mcg/mL.
Denavir® (penciclovir cream, 1%) is indicated for the treatment of recurrent herpes labialis (cold sores) in adults and children 12 years of age and older.

**IMPORTANT SAFETY INFORMATION**

Denavir should not be used in patients with known hypersensitivity to the product or any of its ingredients.

There are no adequate and well-controlled Denavir studies in pregnant women; therefore, Denavir should be used during pregnancy only if clearly needed. There is no information on whether Denavir is excreted in human milk after topical administration; a decision whether to discontinue Denavir should take into account the importance of the drug to the mother. The effect of Denavir has not been established in immunocompromised patients. Denavir does not cure cold sores.

In clinical studies, the most common adverse reaction with Denavir was headache, which occurred in 5.3% of patients who received Denavir and 5.8% of patients who received placebo. Other adverse reactions with Denavir occurred in less than 2% of patients and included application site reaction, decreased sensitivity to touch/local anesthesia, taste perversion, and rash.

Other reported adverse reactions have included swelling of the mouth or throat, pain, alterations in sense of smell, abnormal touch sensation, itching, skin discoloration, and hives.

**Denavir is available by prescription only. Please see the Full Prescribing Information.**

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

**About New American Therapeutics**

New American Therapeutics, Inc. is a biopharmaceutical company committed to finding new ways to add value to the practice of medicine and patient care. Our focus is on acquiring existing, launch and emerging therapeutics that have the potential to move to the next level—improving outcomes for patients and providing more options for physicians.