



Pegetron

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Summary:

Treatment for hepatitis C virus (HCV) is a combination of two drugs — a long-acting form of interferon called peginterferon and another drug called ribavirin. In Canada, the combination of peginterferon and ribavirin is sold together (bundled) in box and called Pegetron. The long-acting interferon is taken by injection once weekly, while ribavirin comes in the form of capsules and is taken twice daily. Side effects from combination therapy include fever, headache, tiredness and sometimes depression.

What is inside the box of Pegetron?

Pegetron is the brand name of a combination of the following two drugs which are sold together:

- a long-lasting form of interferon-alpha, called peginterferon (interferon-alfa-2b)
- a nucleoside analogue called ribavirin

The rest of this Fact Sheet focuses on peginterferon and ribavirin.

How does peginterferon work?

Interferon-alfa is the name of a chemical messenger, or cytokine, made by cells in your body. This cytokine has at least two important roles:

- It protects your cells from infection by HCV.
- It helps your immune system fight HCV.

The “peg” in peginterferon stands for polyethylene glycol. When peg is attached to interferon, it provides a protective barrier that

shields the interferon from being broken down, thus prolonging the time it remains in the blood. Regular interferon needs to be injected at least three times weekly. Peginterferon only has to be injected once a week and appears to be stronger than regular interferon.

How do people with HIV/AIDS (PHAs) use PEG-Intron?

Your doctor has prescribed peginterferon for you because you have HCV infection. He or she has decided that you require treatment to help reduce liver damage caused by HCV.

For more information about HCV and the liver, see the CATIE Fact Sheet on hepatitis C.

Because peginterferon would be destroyed in your stomach if it were swallowed, it must be injected under the skin, once weekly. Your nurse will teach you how to inject peginterferon. This drug is usually taken at bedtime for up to one year. To make peginterferon more effective at treating HCV, your doctor will also prescribe another drug called ribavirin.

To ensure that combination therapy with peg-interferon and ribavirin is working, your doctor will have your blood tested on a regular basis.

What is ribavirin and how is it used?

Ribavirin, also known as Copegus, is a type of drug called a nucleoside analogue, or simply a “nuke.” When taken by itself, ribavirin is a weak drug. However, when taken together with peg-interferon, the combination is powerful. Most PHAs take ribavirin at doses between 800 and 1,200 mg/day, depending on their weight. Ribavirin is taken orally with meals.

Injecting peginterferon

Your nurse will teach you how to inject peginterferon under the skin. As well, the manufacturer, Schering-Plough, has prepared booklets and brochures to help you with self-injecting. Ask your nurse or doctor for these materials. The best places on the body to inject peginterferon include the following:

- upper leg or thigh
- outer part of the upper arm
- abdomen (but not the bellybutton or waist)

Do not inject peginterferon into the same place all the time; you should change injection sites in a regular pattern.

Warnings

Although potent, combination therapy for HCV with peginterferon and ribavirin is not for everyone with HCV.

1. Mental health

We are about to describe a series of problems that may occur in some people who use peg-interferon and ribavirin. Once you have started combination therapy for HCV, if you notice any of these problems, talk to your doctor right away.

- You become easily upset or angry.

- You have unexpected feelings of sadness.
- You feel hopeless.
- You have thoughts about harming yourself or others.
- You have thoughts about suicide.

2. Lactic acidosis

Lactic acidosis is the name given to a condition where high levels of lactic acid build up in the blood. In general, it is a rare side effect that may be associated with the use of nukes used to treat HIV, such as AZT, ddI, ddC, d4T and 3TC. It can occur in PHAs who use the nuke ribavirin, particularly if they also use the nukes ddI (didanosine, Videx, Videx EC) and/or d4T (stavudine, Zerit, Zerit XR). These drugs damage the energy-producing parts, or power plant, of a cell. When a cell can't produce enough power, it begins to malfunction and can die. The following signs/symptoms can develop when a person has lactic acidosis:

- unexpected tiredness
- nausea and/or vomiting
- abdominal pain
- shortness of breath

If you have these symptoms, talk to your doctor right away.

Blood tests can help your doctor determine whether you have lactic acidosis. The following levels may indicate this problem:

- lactate levels of 5 mmol/L or greater
- bicarbonate levels of 20 mmol/L or lower

3. Pregnancy

If you are pregnant or think that you may be pregnant and you are taking peginterferon and ribavirin, talk to your doctor right away. These drugs should not be used by the following people:

- pregnant women
- women who may become pregnant and their male partners

This is because the combination of these drugs can severely damage the fetus. Pregnancy should not be planned while you or your partner are on this therapy. If you are planning to get pregnant, you should wait up to six months after therapy has been stopped. Ribavirin can also be toxic to sperm.

4. Heart and blood problems

Some people who have used peginterferon have developed heart problems, including low blood pressure, rapid heart beats and chest pain. Peginterferon can also lower levels of white blood cells, increasing your risk of developing infections. As well, this drug can reduce levels of platelets in your blood. Because platelets are needed to help your blood clot, less-than-normal levels of platelets increases your risk of bleeding. Tell your doctor right away if you have any of these problems.

5. Changes in vision

Some people who use peginterferon may develop blurred vision or other problems seeing. If this happens, tell your doctor right away.

Side effects

All of the large clinical trials testing the combination of peginterferon and ribavirin have been in HIV negative people. Though we are unable to list every side effect that occurred, we will list some of the more common ones. The most common group of side effects were those belonging to a flu-like syndrome as follows:

- unexpected tiredness
- headache
- fever
- muscle and/or bone pain
- chills

These side effects tend to appear between six and eight hours after injection with peginterferon. Some doctors recommend that their patients pre-medicate, that is, take pain-

relievers such as ibuprofen (Advil, Motrin), *before* injecting peg-interferon, to prevent or reduce these side effects. Taking peginterferon at bedtime may also be helpful. Drinking plenty of healthful fluids — water, juices, herbal teas — that do not contain caffeine is useful when taking peginterferon therapy. Make sure to get a balance of rest and at least some mild exercise.

Peginterferon can temporarily affect the brain and some people also develop the following symptoms:

- difficulty falling asleep
- reduced ability to concentrate
- problems thinking clearly
- increased feelings of irritability
- depression

The depression may require treatment while you are taking peginterferon. Talk to your doctor about options for managing depression.

Other side effects of peginterferon include the following:

- coughing
- reduced appetite
- shortness of breath
- minor, temporary hair loss
- dry and itchy skin
- psoriasis

The combination of peginterferon and ribavirin will temporarily affect your bone marrow. Regular blood tests are important to monitor this problem. The dose of ribavirin may be reduced if your blood counts fall too low. Your thyroid gland and the hormones it produces will also be affected by this treatment. All in all, regular visits to your doctor for checkups are very important while you are taking peginterferon and ribavirin.

Always tell your doctor and nurse about your side effects.

Drug interactions

Both peginterferon and ribavirin can temporarily weaken the bone marrow. Use of the anti-HIV drug AZT (Retrovir, zidovudine; also in the combination drugs Combivir and Trizivir) may make this worse.

Ribavirin may weaken the activity of the anti-blood-clotting drug warfarin (Coumadin).

Dosage

Your liver specialist will help you decide which doses of peginterferon and ribavirin are best for you. The boxes containing these drugs are colour-coded by weight of the person. Each box contains the right dose of each of the two drugs that you will use.

The dose of peginterferon normally used is between 1 and 1.5 micrograms (mcg) per kilo of body weight, injected under the skin once a week. This is written as 1-1.5 µg/kg/week.

The dose of ribavirin used with peginterferon ranges between 800 to 1,200 mg/day. Ribavirin is taken orally with meals.

Store your box of Pegatron in the refrigerator. When separated from the box, ribavirin capsules may be stored either in the fridge or at room temperature — between 15° and 30° C.

Availability

In Canada, the combination of peginterferon and ribavirin is sold together (bundled) in box and called Pegatron. They are not available separately. As of January 2003, Pegatron is available in major pharmacies in Canada. Payment for Pegatron is not yet covered by provincial drug formularies.

A limited patient assistance program, called CARE-Line, is available in Canada for some people receiving Pegatron. Patients can call 1.800.603.2754 extension 2121 to find out if they are eligible for help from this program. Health care providers who wish to make inquiries about their patients' access to CARE-

Line may call 1.800.463.4636 extension 346.

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Disclaimer

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV-related illness and the treatments in question.

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