Peginterferon Alfa-2b (Sylatron)

**Pronounced:** peg-IN-ter-FEER-on AL-fa

**Classification:** Biologic Response Modifier

### About Peginterferon Alfa-2b (Sylatron)

Interferon-alpha is a type of medication called a biologic response modifier. It is a type of protein called a cytokine that works to increase the function of the body’s immune system. This protein is normally produced in small amounts in the body. By increasing the levels of interferon, the immune system gets a kick-start, mounting an attack against the cancer cells, which are seen as foreign invaders. In addition, interferon-alpha is able to interfere with the cancer cell’s ability to divide.

### How to Take Peginterferon Alfa-2b

Peginterferon Alfa-2b is given as an injection under the skin (subcutaneous injection). The dose is based on your body size. It is helpful to rotate the injection site between the thigh, the outer surface of the upper arm, and the abdomen. Do not inject near the navel (belly button) or waistline. If you are thin, you should only use the thigh or upper arm. Do not inject into bruised, infected, irritated, red, or scarred skin. Giving the medication at bedtime may decrease flu-like symptoms.

This medication can interact with several other medications including paroxetine, venlafaxine, duloxetine, mirtazapine, opioids, haloperidol, tamoxifen, beta-blockers such as metoprolol, carvedilol or propranolol, as well as ondansetron, amitriptyline, olanzapine, haloperidol, caffeine, theophylline, melatonin, tamoxifen, cyclobenzaprine, naproxen, estradiol, ondansetron, propranolol, verapamil, and warfarin. Be sure to notify your healthcare team of all medications and supplements you are taking.

### Storage and Handling

This medication comes in 2 forms, a vial that needs to be mixed and a prefilled syringe/pen. Do not freeze. Keep away from heat. Keep them out of reach of children and pets. Do not reuse either the vial or redipen; they are for single use only.

If you have single-dose vials to be mixed:

- Keep the medication vials at room temperature until they are mixed with sterile water.
- Follow instructions for mixing and injecting the medication.
- Once mixed, it should be used immediately or can be stored in the refrigerator for up to 24 hours.

If you are using the PegIntron Redipen (pre-filled syringe):

- Store unused pens in the refrigerator. Take one out about 30 minutes prior to giving the injection to allow it to come to room temperature.
- Be sure that the dose of Redipen you have matches what you were prescribed.
- Follow instructions for mixing and injecting the medication.
- Once mixed for injection, it should be used immediately or can be stored in the refrigerator for up to 24 hours.

### Disposal for either product:

- Do not throw the vials, syringes, or needles in the household trash.
- Dispose of all used needles and syringes in a puncture-proof disposable container with a lid. The FDA provides further information about the disposal of vials, syringes, and needles. Keep the vials out of the reach of children.
Where do I get this medication?

Depending on your insurance coverage, you may receive this medication at your provider's office or at home. You or a caregiver will be taught how to give injections if you are receiving this medication at home. If you receive this medication at home it will be supplied by a home infusion company or through a specialty pharmacy. Your oncology team will work with your prescription drug plan to identify an in-network specialty pharmacy for the distribution of this medication and shipment directly to your home.

Insurance Information

This medication may be covered under your major medical or your prescription drug plan. Patient assistance may be available to qualifying individuals without prescription drug coverage. Co-pay cards, which reduce the patient co-pay responsibility for eligible commercially (non-government sponsored) insured patients, may also be available. Your care team can help you find these resources if they are available.

Possible Side Effects of Peginterferon Alfa-2b

There are a number of things you can do to manage the side effects of peginterferon alfa-2b. Talk to your care team about these recommendations. They can help you decide what will work best for you. These are some of the most common or important side effects:

Mood Disturbances

Peginterferon alfa can cause mood disturbances, depression, anxiety, aggressive behavior, suicidal thoughts, and even suicide. These feelings can happen during treatment, or even up to 6 months after the last dose. You (or your caregiver) should contact your healthcare provider immediately if you have signs of depression, including extreme sadness, crying, changes in mood, loss of interest in activities, or thoughts of harming yourself.

Fatigue

Fatigue is very common during cancer treatment and is an overwhelming feeling of exhaustion that is not usually relieved by rest. While on cancer treatment, and for a period after, you may need to adjust your schedule to manage fatigue. Plan times to rest during the day and conserve energy for more important activities. Exercise can help combat fatigue; a simple daily walk with a friend can help. Talk to your healthcare team for helpful tips on dealing with this side effect.

Liver Toxicity

This medication can cause liver toxicity, which your oncology care team may monitor for using blood tests called liver function tests. Notify your healthcare provider if you notice yellowing of the skin or eyes, your urine appears dark or brown, or you have pain in your abdomen, as these can be signs of liver toxicity.

Flu-Like Syndrome

Flu-like syndrome occurs in a majority of patients because of the "revving-up" of the immune system. It generally occurs within hours of the injection and includes fever, chills, headache, muscle and joint aches, and poor appetite. Medications, such as acetaminophen, can be used to manage these symptoms. Try to keep warm with blankets and warm clothes, and drink plenty of non-alcoholic fluids. Some patients find that taking the dose before bedtime allows them to sleep through the flu-like symptoms. These symptoms do decrease, for some patients, over time on the therapy.

Decrease in Appetite and Taste Changes

Nutrition is an important part of your care. Cancer treatment can affect your appetite and, in some cases, the side effects of treatment can make eating difficult. Ask your oncology care team about nutritional counseling services at your treatment center to help with food choices.

- Try to eat five or six small meals or snacks throughout the day, instead of 3 larger meals.
- If you are not eating enough, nutritional supplements may help.
- You may experience a metallic taste or find that food has no taste at all. You may dislike foods or beverages that you liked.
before receiving cancer treatment. These symptoms can last for several months or longer after treatment ends.

- Avoid any food that you think smells or tastes bad. If red meat is a problem, eat chicken, turkey, eggs, dairy products, and fish without a strong smell. Sometimes cold food has less of an odor.
- Add extra flavor to meat or fish by marinating it in sweet juices, sweet and sour sauce, or dressings. Use seasonings like basil, oregano, or rosemary to add flavor. Bacon, ham, and onion can add flavor to vegetables.

**Nausea and/or Vomiting**

Talk to your oncology care team so they can prescribe medications to help you manage nausea and vomiting. In addition, dietary changes may help. Avoid things that may worsen the symptoms, such as heavy or greasy/fatty, spicy or acidic foods (lemons, tomatoes, oranges). Try saltines, or ginger ale to lessen symptoms.

Call your oncology care team if you are unable to keep fluids down for more than 12 hours or if you feel lightheaded or dizzy at any time.

**Injection Related Reactions**

In some cases, patients can have an allergic reaction to this medication. Signs of a reaction can include shortness of breath or difficulty breathing, rash, itching, swelling in the face, lips or throat. Let your care team know immediately if you develop any signs of a reaction.

You may experience redness or swelling at the injection site. Rotate injection sites. Notify your care provider if the injection site is painful or warm, as these can be signs of infection.

**Diarrhea**

Your oncology care team can recommend medications to relieve diarrhea. Also, try eating low-fiber, bland foods, such as white rice and boiled or baked chicken. Avoid raw fruits, vegetables, whole-grain breads, cereals, and seeds. Soluble fiber is found in some foods and absorbs fluid, which can help relieve diarrhea. Foods high in soluble fiber include applesauce, bananas (ripe), canned fruit, orange sections, boiled potatoes, white rice, products made with white flour, oatmeal, cream of rice, cream of wheat, and farina. Drink 8-10 glasses of non-alcoholic, un-caffeinated fluid a day to prevent dehydration.

**Rash**

Some patients may develop a rash, scaly skin, or red itchy bumps. Use an alcohol-free moisturizer on your skin and lips; avoid moisturizers with perfumes or scents. Your oncology care team can recommend a topical medication if itching is bothersome. If your skin does crack or bleed, be sure to keep the area clean to avoid infection. Be sure to notify your oncology care team of any rash that develops, as this can be a reaction. They can give you more tips on caring for your skin.

**Loss or Thinning of Scalp and Body Hair (Alopecia)**

Your hair may become thin, brittle, or may fall out. This typically begins two to three weeks after treatment starts. This hair loss can be all body hair, including pubic, underarm, legs/arms, eyelashes, and nose hairs. The use of scarves, wigs, hats, and hairpieces may help. Hair generally starts to regrow soon after treatment is completed. Remember your hair helps keep you warm in cold weather, so a hat is particularly important in cold weather or to protect you from the sun.

**Less common, but important side effects can include:**

- **Thyroid Problems:** This medication can cause hypothyroidism (underactive thyroid) and hyperthyroidism (overactive thyroid). Your doctor will perform blood tests to check the function of your thyroid and treat this side effect if it develops. Symptoms of thyroid problems include: tiredness, feeling hot or cold, change in your voice, weight gain or loss, hair loss, and muscle cramps.
- **High Blood Sugar:** This medication can cause elevated blood sugar levels in patients with and without diabetes. Your healthcare team will monitor your blood sugar. If you develop increased thirst, urination or hunger, blurry vision, headaches or your breath smells like fruit, notify your healthcare team. Diabetics should monitor their blood sugar closely and report elevations to the healthcare team.
- **Vision Changes:** While receiving peginterferon alfa-2b, some patients may develop a decrease or loss of vision, retinopathy, retinal hemorrhages, and other rare eye problems. You should have a baseline eye exam before starting this.
medication. Notify your healthcare team if you develop any eye pain, swelling, redness, or vision changes, including blurriness and sensitivity to light.

- **Heart Problems:** Peginterferon alfa-2b can cause or worsen pre-existing heart problems including low blood pressure, arrhythmia, cardiomyopathy, and heart attack. Notify your healthcare provider if you have sudden weight gain or swelling in the ankles or legs. If you develop chest pain or pressure, pain in the left arm, back, or jaw, sweating, shortness of breath, clammy skin, nausea, dizziness, or lightheadedness, call 911 or go to the nearest emergency room.

**Reproductive Concerns**

Exposure of an unborn child to this medication could cause birth defects, so you should not become pregnant or father a child while on this medication. Effective birth control is necessary during treatment. Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. You should consult with your healthcare team before breastfeeding while receiving this medication.