



Interferon Alfa 2B (Intron-A®, Roferon-A®)

Pronounce: IN-ter-FEER-ahn AL-fuh

Classification: Biologic Response Modifier

About Interferon Alfa 2B (Intron-A®, Roferon-A®)

Interferon alfa 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 various components of the body's immune system. This protein is normally produced in the body but in small amounts. 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 Interferon Alfa

Interferon alfa can be given in several different ways: intravenously (into a vein), by subcutaneous injection (needle under the skin), by intramuscular injection (a needle into the muscle), or injected directly into the lesion. The actual dose is dependent on your body size and the disease it is treating.

This medication can aggravate medical conditions that you already have including psychiatric issues, autoimmune diseases, ischemic disorders, and infectious disorders. It is very important that your care provider is aware of all of your medical history and of all medications, both prescription and over-the-counter, that you are taking.

Possible Side Effects of Interferon Alfa

There are a number of things you can do to manage the side effects of interferon alfa. 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:

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, but you should consult with your care provider before taking any medications. If you have a fever of 100.4°F/38°C or greater, you should contact your care provider. 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.

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.

Low White Blood Cell Count (Leukopenia or Neutropenia)

White blood cells (WBC) are important for fighting infection. While receiving treatment, your [WBC count can drop](#), putting you at a higher risk of getting an infection. You should let your doctor or nurse know right away if you have a fever (temperature greater than 100.4°F/38°C), sore throat or cold, shortness of breath, cough, burning with urination, or a sore that doesn't heal.

Tips to preventing infection:

- [Washing hands](#), both yours and your visitors, is the best way to prevent the spread of infection.
- Avoid large crowds and people who are sick (i.e.: those who have a cold, fever, or cough or live with someone with these symptoms).
- When working in your yard, wear protective clothing including long pants and gloves.
- Do not handle pet waste.
- Keep all cuts or scratches clean.
- Shower or bathe daily and perform frequent [mouth care](#).
- Do not cut cuticles or ingrown nails. You may wear nail polish, but not fake nails.
- Ask your oncology care team before scheduling dental appointments or procedures.
- Ask your oncology care team before you, or someone you live with has any vaccinations.

Headache

Your healthcare provider can recommend medications and other strategies to help relieve pain.

Nausea and/or Vomiting

Talk to your doctor or nurse 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 antacids, (e.g. milk of magnesia, calcium tablets such as Tums), saltines, or ginger ale to lessen symptoms.

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

Diarrhea

Your oncology 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.

Mood Disturbances

Interferon alfa has been reported to cause mood disturbances, depression, anxiety, aggressive behavior, suicidal thoughts, and even suicide. 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 hurting yourself.

Low Red Blood Cell Count (Anemia)

Your red blood cells are responsible for carrying oxygen to the tissues in your body. When the [red cell count is low](#), you may feel tired or weak. You should let your oncology care team know if you experience any shortness of breath, difficulty breathing, or pain in your chest. If the count gets too low, you may receive a blood transfusion.

Low Platelet Count (Thrombocytopenia)

Platelets help your blood clot, so when the [count is low](#) you are at a higher risk of bleeding. Let your oncology care team know if you have any excess bruising or bleeding, including nose bleeds, bleeding gums, or blood in your urine or stool. If the platelet count becomes too low, you may receive a transfusion of platelets.

- Do not use a razor (an electric razor is fine).
- Avoid contact sports and activities that can result in injury or bleeding.
- Do not take aspirin (salicylic acid), non-steroidal, anti-inflammatory medications (NSAIDs) such as Motrin/Advil (ibuprofen), Aleve (naproxen), Celebrex (celecoxib) etc. as these can all increase the risk of bleeding. Please consult with your healthcare team regarding the use of these agents and all over-the-counter medications/supplements while on therapy.
- Do not floss or use toothpicks and use a soft-bristle toothbrush to brush your teeth.

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.

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](#).

Important but Less Common Side Effects

- **Liver Toxicity:** This medication can cause liver toxicity, which your doctor 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 pain in your abdomen, as these can be signs of liver toxicity.
- **Allergic Reaction:** 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.
- **Thyroid Problems:** This medication can cause hypothyroidism (underactive thyroid) and hyperthyroidism (overactive thyroid). Your provider 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.
- **Lung Changes:** This medication may cause lung problems, including interstitial pneumonitis, pulmonary hypertension, and sarcoidosis. These problems may be more common in people with pre-existing lung conditions. Call your provider right away if you have shortness of breath, cough, wheezing, or difficulty breathing.
- **Heart Problems:** Interferon alfa 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.
- **Vision Changes:** While receiving interferon alfa, some patients may develop vision or eye problems.

Notify your healthcare team if you develop any eye pain, swelling, redness, or any vision changes, including blurriness, double vision, and sensitivity to light.

- **Stroke:** Not often, stroke has been reported in patients receiving this medication. Call 911 or go to the nearest emergency room if you develop numbness or weakness on one side of the body, trouble talking, confusion, or mental status changes.
- **Elevated Cholesterol Level:** Some patients will develop elevated triglyceride levels in the blood. Your healthcare provider will monitor your cholesterol level using blood tests.

Sexual & Reproductive Concerns

This medication may affect your reproductive system, resulting in the menstrual cycle becoming irregular or stopping permanently. Women may experience menopausal effects including hot flashes and [vaginal dryness](#). In addition, the desire for sex may decrease during treatment.

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 may want to consider sperm banking or egg harvesting if you may wish to have a child in the future. Discuss these options with your oncology team. You should not breastfeed while taking this medication.

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