

Chemotherapy Drugs



Isotretinoin

Trade Name: Accutane®

Other Name: 13-cis-Retinoic Acid

Drug Type:

Isotretinoin is an anti-cancer drug. Isotretinoin is classified as a retinoid. (For detail, see "How Isotretinoin Works" section below).

What Isotretinoin Is Used For:

- Being investigated for use treating various different cancers.
- Treatment of severe acne.

Note: If a drug has been approved for one use, physicians sometimes elect to use the same drug for other problems if they believe it might be helpful.

How Isotretinoin Is Given:

- By mouth in the form of a soft gelatin capsule, capsule sizes are 10, 20 and 40 mg.
- Protect capsules from light.
- Take capsules with a meal and a full glass of liquid.
- The amount of Isotretinoin you will receive depends on many factors, including your height and weight, your general health or other health problems, and the type of cancer you have. Your doctor will determine your dosage and schedule.

Side Effects of Isotretinoin:

Important things to remember about the side effects of Isotretinoin:

- Most people do not experience all of the side effects listed.
- Side effects are often predictable in terms of their onset and duration.
- Side effects are almost always reversible and will go away after treatment is stopped.
- There are many options to help minimize or prevent side effects.
- There is no relationship between the presence or severity of side effects and the effectiveness of the medication.

The following side effects are common (occurring in more than 30%) for patients taking Isotretinoin:

- Typical retinoid toxicity (symptoms that are similar to those found in patients taking high doses of vitamin A)

- [Headache](#)
- [Fever](#)
- [Dry skin](#)
- Dry mucous membranes (mouth, nose)
- [Back pain](#)
- [Nausea and vomiting](#)
- [Rash](#)
- [Mouth sores](#)
- [Itching](#)
- Sweating
- [Eyesight changes](#)

These are less common side effects (occurring in 10-29%) for patients receiving Isotretinoin:

- [Back pain](#)
- [Muscle pain](#)
- [Joint pain](#)
- [Allergic reaction](#)
- [Abdominal pain](#)
- [Poor appetite](#)
- [Dizziness](#)
- Drowsiness
- [Insomnia](#)
- [Anxiety](#)
- [Numbness and tingling](#)
- [Weakness](#)
- [Depression](#)
- [Hair loss](#) (thinning)
- Dry eyes, sensitivity to light (see [eye problems](#))
- Decreased night vision, which may persist after treatment is stopped
- [Swelling](#) of the feet or ankles
- [Low blood counts](#). Your white and red blood cells and platelets may temporarily decrease. This can put you at increased risk for infection, anemia and/or bleeding.
- [Blood test abnormalities](#): increased triglyceride, cholesterol and/or blood sugar.
- Increases in blood tests measuring liver function. These return to normal once treatment is discontinued (see liver problems).

Rare but serious possible side effects of Isotretinoin:

- [Blood clots](#). Blood clots rarely can lead to pulmonary embolus or stroke - potentially life-threatening conditions.
- Pancreatitis (inflammation of the pancreas) is a rare side effect. Mainly noted in blood tests that return to normal after therapy is discontinued. Rarely may be severe symptoms. Symptoms of acute pancreatitis include pain in the upper abdomen that worsens with eating, swollen and tender abdomen, nausea, vomiting, fever, and rapid pulse. If these symptoms occur notify your health care professional immediately.
- A very serious side effect that has been observed in patients that have taken medications similar to Isotretinoin for treatment of leukemia, is called APL.

differentiation syndrome. This syndrome is a reaction between the drug and leukemia. It is preventable with proper monitoring and immediate treatment. This syndrome produces fever, difficulty breathing, weight gain, lung and heart problems. It is generally treated with high-dose steroids. Be sure to let your health care professional know if you experience fever of 100.5F or 38C, difficulty breathing, or sudden weight gain.

Not all side effects are listed above, some that are rare (occurring in less than 1% of patients) are not listed here. However, you should always inform your health care provider if you experience any unusual symptoms.

When To Contact Your Doctor or Health Care Provider:

Contact your health care provider immediately, day or night, if you should experience any of the following symptoms:

- Shortness of breath, wheezing, difficulty breathing, closing up of the throat, or swelling of facial features, hives (possible allergic reaction)
- Fever of 100.5 F (38 C) or higher, chills (possible signs of infection)
- Having thoughts or feeling like you may want to harm yourself or others
- Difficulty breathing, sudden weight gain, swelling, vision changes
- Severe abdominal pain

The following symptoms require medical attention, but are not emergency situations. Contact your health care provider within 24 hours of noticing any of the following symptoms:

- Black or tarry stools, or blood in your stools or urine
- Unusual bleeding or bruising
- Abdominal cramping
- Nausea (interferes with ability to eat and unrelieved with prescribed medication)
- Vomiting (more than 4-5 episodes within a 24-hour period)
- Diarrhea (more than 4-6 episodes in a 24-hour period)
- Mouth sores (painful redness, swelling or ulcers)
- Extreme fatigue (inability to perform self-care activities)
- Anxiety, changes in thinking or mood, confusion, difficulty concentrating or sleeping, aggressive or violent behavior, or suicidal thoughts.
- Depressed (interfering with your ability to carry on your regular activities)
- Ringing in the ears, problems with hearing
- Yellowing of the skin or eyes

Always inform your health care provider if you experience any unusual symptoms.

Isotretinoin Precautions:

- Before starting Isotretinoin treatment, make sure you tell your doctor about all medications you are taking (including prescription, over-the-counter, vitamin supplements, and herbal remedies, etc.). Do not take aspirin, or products containing aspirin unless your doctor specifically permits this.

- Do not take vitamin A supplements. Vitamin A in high doses has many of the same side effects as Isotretinoin. Taking both together may increase your chance of side effects.
- Do not receive any kind of immunization or vaccination without your doctor's approval while taking Isotretinoin.
- Inform your health care professional if you are pregnant or may be pregnant before starting this treatment. Pregnancy category X (Isotretinoin may cause fetal harm when given to a pregnant woman. Isotretinoin must not be given to a pregnant woman or a woman who intends to become pregnant. If a woman becomes pregnant while taking Isotretinoin, the medication must be stopped immediately and the woman given appropriate counseling).
- Because of the extremely high risk that a deformed infant can result if pregnancy occurs while taking Isotretinoin in any amount even for short periods of time, both men and women: Do not conceive a child (get pregnant) while taking Isotretinoin. Methods of effective contraception are recommended for women of childbearing potential, unless absolute abstinence is the chosen method. Discuss with your doctor when you may safely become pregnant or conceive a child after therapy.
- Do not breast feed while taking Isotretinoin.

Isotretinoin Self Care Tips:

- Take Isotretinoin at about the same time every day along with a meal that includes some fats.
- Avoid grapefruit juice
- Avoid wearing contact lenses if you have dry or irritated eyes
- Drink at least two to three quarts of fluid every 24 hours, unless you are instructed otherwise.
- You may be at risk of infection so try to avoid crowds or people with colds, flu, fever or any other signs of infection immediately to your health care provider.
- Wash your hands often.
- To reduce nausea, take anti-nausea medications as prescribed by your doctor and eat small, frequent meals.
- To help treat/prevent mouth sores, use a soft toothbrush, and rinse three times a day with 1/2 to 1 teaspoon of baking soda and/or 1/2 to 1 teaspoon of salt mixed in 8 ounces of water.
- When you start taking Isotretinoin, you may experience headache, loss of night vision, sleepiness or eyesight changes. Use caution when driving or engaging in tasks requiring alertness until response to drug is known.
- Avoid sun exposure. Wear SPF 15 (or higher) sunblock and protective clothing.
- In general, drinking alcoholic beverages should be kept to a minimum or avoided completely. You should discuss this with your doctor.
- Get plenty of rest.
- Maintain good nutrition.
- If you experience symptoms or side effects, be sure to discuss them with your health care team. They can prescribe medications and/or offer other suggestions that may be effective in managing such problems.

Monitoring and Testing While Taking Isotretinoin:

You will be monitored regularly by your health care professional while you are taking Isotretinoin to monitor side effects and check your response to therapy. For women of childbearing age, a pregnancy test is required one week prior to beginning this treatment and every month during treatment. Blood counts and lipid (fats, cholesterol) levels and liver function all need to be analyzed before treatment begins and regularly during treatment. These are measured through blood tests.

How Isotretinoin Works:

Retinoids are drugs that are relatives of vitamin A. Retinoids control normal cell growth and cell differentiation (the normal process of making cells different from each other) and cell death during embryonic development and in certain tissues later in life. Retinoid effects on the cells are controlled by receptors on the nucleus of each cell (nuclear receptors).

There are two major classes of retinoid nuclear receptors: retinoic acid receptors (RAR) and retinoid-X-receptors (RXR). There are also subtypes within each class. Each of these types of receptors has different functions in different tissues. The different retinoid drugs work by binding to different receptors; which, in turn, affect cell growth and differentiation.

Retinoids are relatively new types of anti-cancer drugs. They have been used in combination to treat a variety of cancers such as skin cancers, cutaneous T-cell lymphoma, acute promyelocytic leukemia, lung cancer, breast cancer, ovarian cancer, bladder cancer, kidney cancer, and head and neck cancers. Retinoids have also been used experimentally in an attempt to prevent certain types of cancer. There is ongoing research to determine their role in both cancer treatment and prevention.

Retinoids have been associated with side effects such as skin problems (dryness, itching, sun sensitivity), reversible elevation in liver enzymes, temporary abnormal thyroid levels, low thyroid levels (hypothyroidism), and headaches. Taking supplements of vitamin A may increase the side effects. Vitamin supplementation should be discussed with your physician.

Note: We strongly encourage you to talk with your health care professional about your specific medical condition and treatments. The information contained in this website is meant to be helpful and educational, but is not a substitute for medical advice.



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