



Etoposide

What names may be used for this medication?

Etoposide, VP-16, Vepesid

How and why is this medicine given?

Etoposide is given by an intravenous (IV) infusion (a slow drip through a needle into your port or through a vein in your arm or hand) or infused intraperitoneal (IP; into your abdominal cavity by a special port placed in your abdominal wall), and it is also available in a pill form. We use it most commonly in our office for the treatment of ovarian cancers and gestational trophoblastic disease. It may be used by itself or combined with other chemotherapy drugs. The pill form is only used for patients with recurrent ovarian cancer, and intraperitoneal administration is uncommon.

How does the medicine work?

Etoposide interferes with the function of an enzyme (called topoisomerase II) used by cells to “unwind” DNA (the machinery or “brain” that runs each cell) and allow DNA replication. When this happens, the cell cannot reproduce. Etoposide is not able to discriminate between good cells and cancer cells, so it can affect many parts of your body besides the cancer. Since non-cancer cells are better than the cancer cells at detecting and repairing the damage caused by etoposide, the cancer cells die and your normal cells repair the damage so they can resume their normal function. The side effects you experience from etoposide are a result of this damage to your healthy cells before they have a chance to repair themselves.

Etoposide is cleared from your body by both the liver and the kidneys. The liver metabolizes the drug while the kidney filters out these by-products. It is therefore important that you keep yourself well hydrated (8-10 glasses of water per day) in efforts to keep the kidneys working at their best. We will monitor your liver and kidney function through blood tests performed prior to each infusion. We will also review your list of medications that you take for other medical problems (diabetes, blood pressure, etc.) at each visit to be sure that none of these other medicines are interfering with clearing the etoposide from your body.

How often is this medicine given?

Etoposide is given in a variety of ways depending on your circumstances. For example, it is given IV daily for five days every other week for gestational trophoblastic disease but is given orally every day for 14-21 days of the month for recurrent ovarian cancer. The most appropriate administration regimen and the total number of treatment cycles recommended will be outlined for you by your doctor prior to beginning therapy. The infusions may be given as an outpatient at the infusion center at the Cancer & Research Center (white building located across the parking lot from our office), or you may require hospitalization. Oral etoposide is of course taken at home after a prescription is filled (once daily dosing). Prior to each treatment, you will be seen in the office for an exam, and blood tests will be reviewed to be sure it is safe to administer your treatment. It is, of course, very important to keep all of your appointments for chemotherapy and lab testing.

What side effects does this medicine cause?

There are many possible side effects of all chemotherapy drugs, so the following is only inclusive of the most common or serious possibilities from etoposide. You will be asked to complete a symptom form at each visit in order for us to accurately assess the side effects that you may be experiencing. This form helps your doctor be sure that no adverse effects of treatment are overlooked, and it serves to help you recall which symptoms you may have experienced since your last treatment.

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- ❖ Hair loss is common with etoposide, but hair growth should return upon completion of treatment.
 - ❖ Nausea and vomiting are mild to moderate but less common today than in the past because of much improved anti-nausea medications. These symptoms are more common with oral treatment than with IV infusion. You will be given prescriptions for medications to prevent nausea, and it is important that you take them as directed in order for them to be most effective. If you have questions, do not hesitate to call the office.
 - ❖ Bone marrow suppression is when the bone marrow cannot make enough red cells, white cells, or platelets to keep up with demand, and this is a side effect of most chemotherapy medications, including etoposide. All of your blood counts will be monitored regularly throughout treatment.
 - ◆ *Anemia* is the result of not enough red blood cells and may cause fatigue, chest pain, shortness of breath, or dizziness.
 - ◆ *Neutropenia* results when your white blood cell count goes too low, and this will put you at an increased risk for infection. It is very important that you avoid sick friends and family; be diligent about hand-washing as well. This does not mean that you cannot be out in public, and in fact you can continue to participate in normal activities such as going to church or a movie, etc. If you think you may have an infection or have a fever of 100.5°F or more, call the office immediately.
 - ◆ *Thrombocytopenia* is the term for too low of a platelet count. This can lead to excessive bruising or bleeding with only minor injury such as brushing your teeth or blowing your nose.
 - ❖ *Mucositis* is sores/ulcers in the mouth that can cause pain and difficulty eating or swallowing. This is not common but may occur with etoposide. This can be minimized with good oral hygiene and a warm salt-water solution gargled after each meal. Prescription medication is also available if these steps are ineffective at resolving your symptoms.
 - ❖ Mild diarrhea or constipation are not common but may be seen with etoposide. For your comfort, keep your bowels regular with a regimen that works best for you and your lifestyle. If you develop diarrhea that is not controlled with over the counter medications after 2 days or you develop constipation to the point that you do not move your bowels for 3 days, contact our office.
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- ❖ Radiation recall can occur with etoposide leading to a skin reaction in areas of prior radiation exposure.
 - ❖ Flu-like symptoms with headache and low grade fevers may be experienced by those receiving etoposide. Over the counter agents such as ibuprofen and acetaminophen typically provide adequate relief, but prescription pain medicine can be given if needed.
 - ❖ Allergic reactions to etoposide can occur rarely (1-2%). This typically presents with a rash/hives, itching, lowered blood pressure, and occasional difficulty breathing. You will be given medications prior to your infusion to minimize the chance of this occurring. Slow infusion (over 30-60 minutes) minimizes this risk as well.
 - ❖ There is a risk of developing leukemia following etoposide treatment. This is very rare and typically develops 5-8 years after therapy.
 - ❖ Etoposide can cause problems with fertility. It is not uncommon to stop having periods while receiving etoposide, but these typically return to normal after stopping treatment. Your doctor will discuss this in more detail if applicable to you.
 - ❖ If you are pregnant or become pregnant during therapy, you should notify your doctor immediately.

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