Asparaginase (Erwinia, Asparaginase Erwinia Chrysanthemi, Erwinaze)

Pronounced: as-PAR-a-jin-ase

Classification: Enzyme, Antineoplastic agent

About Asparaginase (Erwinia, Asparaginase Erwinia Chrysanthemi, Erwinaze)

All cells in the body need the amino acid asparagine to survive. Normal white blood cells can make their own asparagine, but cancerous white blood cells cannot. Asparaginase is an enzyme that speeds up the breakdown of asparagine in the blood into aspartic acid and ammonia. This reduces the level of asparagine in the body. Without asparagine available in the body, the cancer cells die.

There are several forms of asparaginase, made from different bacteria and your care team will determine which type is best for you.

How to Take Asparaginase

Asparaginase is given by intravenous (into a vein) infusion or as an injection given into a big muscle (called intramuscular or IM). It can be given alone or in combination with other medications. Asparaginase can be given in various dosing schedules, depending on the regimen and the type of asparaginase being used.

Possible Side Effects

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

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.

Less common, but important side effects can include:

- 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, chest pain, rash, flushing, itching, swelling at the injection site or a decrease in blood pressure. If you notice any changes in how you feel during the infusion, let your nurse know immediately.

- High Blood Sugar: This medication can cause elevated blood sugar levels in patients with and without diabetes. Your oncology care 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.

- Pancreatitis: This medication can cause an inflammation of the pancreas, called pancreatitis. Your care provider may
order blood tests to check how your pancreas is functioning. Call your healthcare team if you experience abdominal pain, nausea or vomiting.

- **Blood Clots:** Asparaginase can increase the risk of blood clots. These clots can occur anywhere in the body. Symptoms of blood clots can include severe headache, swelling in the arm or leg, chest pain, or shortness of breath, among others. If you experience any unusual symptoms, you should contact your healthcare provider immediately or go to an emergency room.

- **Bleeding:** This medication can impact the ability of your blood to clot normally. This can cause excessive bleeding. Your healthcare team will monitor your blood clotting ability during and after treatment. Notify your healthcare team or go to the emergency room immediately if you experience uncontrolled bleeding, including blood in the urine, black or bloody stool, nosebleeds, or other bleeding.

**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 and for 3 months after treatment. Even if your menstrual cycle stops or you believe you are not producing sperm, you could still be fertile and conceive. You should not breastfeed while receiving this medication or for 3 months after your last dose.