Pentostatin (Nipent®)

**Pronounced:** PEN-toe-stah-tin

**Classification:** Purine Analog

**About Pentostatin (Nipent®)**

Pentostatin is a purine analog, which is a type of antimetabolite. It inhibits the enzyme adenosine deaminase, interfering with the cell’s ability to make and replicate DNA. DNA is critical to cell division and growth. Since cancer cells generally divide more often than healthy cells, medications that target DNA-related processes are more toxic to cancer cells than healthy cells.

**How to Take Pentostatin**

Pentostatin is given by intravenous (IV, into a vein) infusion. The dosage and schedule is determined by the person’s size and type of cancer. Intravenous fluids will be administered prior to and after the infusion of pentostatin. You should not be given this medication in combination with fludarbine.

**Possible Side Effects of Pentostatin**

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

**Infection and Low White Blood Cell Count (Leukopenia or Neutropenia)**

This medication can cause life threatening infections, with or without a decrease in white blood cell counts.

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 or 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 bath 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.

**Fever**

Fever can be a side effect of this medication. Contact your care provider for a temperature of 100.4°F or 38°C or greater.

**Rash**

This medication can cause a rash, which can become severe with continued use of the medication. Let your healthcare team know if you develop a rash or other skin changes. Your skin may also become dry. You should use a moisturizer on your skin and lips, but avoid moisturizers with perfumes or scents. Your doctor or nurse can recommend medication if itching is bothersome. If your skin does crack or bleed, be sure to keep the area clean to avoid infection.

**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 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 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.

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

- **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.
- **Kidney Problems:** This medication can cause kidney problems, including an increased creatinine level, which your oncology care team may monitor for using blood tests. Notify your healthcare provider if you notice decreased urine output, blood in the urine, swelling in the ankles, or loss of appetite.
- **Low Blood Pressure (Hypotension):** The medication can cause low blood pressure. Patients should have their blood pressure checked regularly during therapy. Symptoms include fatigue, lightheadedness, dizziness, nausea and blurry vision. Report any of these symptoms to your care team immediately.
- **Pulmonary Edema:** This medication can cause a build up of excess fluid in the lungs, making it difficult to breathe. If you have trouble breathing, contact your care team or go to the 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 taking this medication.