

# Erwinia Asparaginase

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## Patient/Caregiver Information

### What is Erwinia asparaginase?

Erwinia asparaginase is an enzyme used in the treatment of acute lymphoblastic leukaemia (ALL).

### How does it work?

Erwinia asparaginase is asparaginase derived from cultures of *Erwinia chrysanthemi*. Asparaginase is an enzyme that breaks down the amino acid asparagine to aspartic acid and ammonia. Leukemic cells are unable to make their own asparagine and depend on circulating asparagine for growth; however asparaginase deprives the leukaemic cells of circulating asparagine leading to death of the leukaemic cell.

### How is it given?

Erwinia asparaginase is given as an intramuscular (IM) injection.

### Special instructions:

- If you develop an allergic reaction to pegaspargase or other forms of asparaginase, you will be treated with erwinia asparaginase. Six injections of erwinia asparaginase are required to substitute each injection of pegaspargase.
- After the administration of erwinia asparaginase, a nurse will need to monitor you for at least 1 hour for any reaction to the medicine. Do not leave the hospital during this time. Report any rash, swelling, itch, shortness of breath, vomiting, dizziness immediately.
- If there is swelling, pain, redness or warmth at the site of injection site, report it right away to a doctor or nurse.
- Your platelets will be checked prior to receiving IM erwinia asparaginase. If the platelet levels are low, a platelet transfusion may be required.

### Possible Side Effects:

Listed below, but not limited to, are the more commonly experienced side effects that you may see. The side effects your child might experience may be temporary and some may be permanent.

	<b>Less Likely</b> Happens to 5-20 children out of every 100	<b>Rare but serious</b> Happens to <5 children out of every 100
<b>Immediate</b> Within 1-2 days of receiving the medicine	<ul style="list-style-type: none"> <li>▪ Hives; red and sometimes itchy bumps on the skin</li> <li>▪ Allergic reaction that may include fever, chills, hives or skin rash, low blood pressure, rapid heart rate wheezing, swelling or the throat and difficulty breathing. This can be life threatening and potentially fatal.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Local allergic reactions including rashes and hives around the site of the injection</li> <li>▪ Fever</li> </ul>
<b>Prompt</b> Within 2-3 weeks, prior to the next course		<ul style="list-style-type: none"> <li>▪ Inflammation of the pancreas (an organ in the abdomen which makes insulin and certain digestive chemicals) which causes severe pain in the abdomen and back and may increase blood sugar levels</li> <li>▪ Abnormal control of blood sugar levels</li> <li>▪ Formation of blood clots that plug blood vessels and can lead to pain and swelling in the area of the clot. Such clots may break loose and travel to another area. They can cause damage or be life threatening depending on where they go.</li> </ul>

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<b>Prompt</b> Within 2-3 weeks, prior to the next course		<ul style="list-style-type: none"> <li>▪ Excessive or uncontrolled bleeding which occur in the head, stools, the nose, urine and other parts of the body</li> <li>▪ Sudden or temporary loss of blood flow and oxygen to the brain causing problems with vision, dizziness, weakness and numbness (especially in one side of the body), and trouble speaking. Also called a mini stroke.</li> <li>▪ A bleeding disorder in which small blood clots develop throughout the bloodstream blocking small blood vessels and depleting platelets and clotting factors needed to control bleeding. This condition can lead to bleeding from many areas of the body and can be life threatening</li> <li>▪ Increased levels in the blood of certain enzymes and bilirubin (a waste product that passes through the liver) which could indicate liver irritation or damage</li> <li>▪ High blood sugar which may require treatment with insulin</li> <li>▪ An increase in the level of ammonia found in the blood</li> <li>▪ Vomiting and/or nausea</li> <li>▪ Belly pain</li> <li>▪ Headache</li> <li>▪ Diarrhoea</li> <li>▪ Seizures; sudden, uncontrolled spasm and loss of consciousness resulting from abnormal brain function</li> </ul>

This information sheet is a brief overview. Each individual can respond differently to the medication, it is vital that you communicate all signs and symptoms you observe to your doctor or nurse.

If you have any questions about the information provided please discuss them with your oncologist or haematologist.

Further information can be obtained from your doctor, nurse or pharmacist or at the following website:  
<http://medsafe.govt.nz/consumers/medicine/where.asp>