

What is Sargramostim?

Sargramostim is granulocyte macrophage colony-stimulating factor (GM-CSF). It is generally given after chemotherapy to reduce the time when you have low neutrophils (a type of white blood cell in your body that fights infections). It can also be given before, during and/or after certain types of immunotherapy (i.e. Dinutuximab) to enhance its effects on the killing of tumour cells.

How does it work?

Sargramostim stimulates the production and maturation of monocytes, granulocyte, erythrocytes and sometimes megakaryocytes in the bone marrow (different types of red and white blood cells).

How is it given?

Sargramostim can be given as an intravenous (IV) infusion or subcutaneous (SC) injection.

Special instructions:

- Keep the sargramostim vials or prefilled syringes stored in the fridge. Do not freeze.
- Before giving a dose of sargramostim, take the syringe or vial out of the fridge 1 hour prior to administration.
- If you are administering the sargramostim yourself, your nurse will provide you with all the necessary equipment and training.
- If you have been provided with sargramostim vials, follow the instructions below.
- If you do not wish to administer the injection yourself, a community nurse can be arranged by your local hospital to come to your home daily to administer the sargramostim injection.

Safe Handling:

- Before performing this procedure, hands should be washed and gloves be worn.
- We suggest that the caregiver wears gloves while handling this medicine. If your skin comes into contact with the medicine, wash your hands or the area of contact right away.

Administration:

- Most patients will have an Insuflon[®] inserted to make the administration of subcutaneous injections easier, but not all.
- Each vial should be used once only i.e. a new vial for each dose

You will need the following for each dose:

- 1 x 250 micrograms sargramostim vial (comes as a vial with powder)
- 1 x 10 mL ampule of Water for Injection
- 1 x needle for drawing-up the sargramostim (21g yellow)
- 1 x needle for administering the sargramostim (26g brown)
- 1 x alcohol swab (or similar)
- 1 x 1mL Tb syringe

Follow the instructions below to withdraw the correct dose from the sargramostim vials:

1. Remove the plastic cap from the vial of sargramostim.
2. Wipe the top of the vial with an alcohol swab, and allow this to dry.
3. Using a 1ml Tb syringe and attach a yellow (21g) needle, and withdraw 1mL of water from the ampule of water for injection.
4. Add the 1ml of water for injection to the sargramostim vial.

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5. Swirl the vial, to avoid foaming, until the powder is fully dissolved. **Do not shake the vial.** This makes a solution with a concentration of 250 micrograms per 1mL.
6. Using the 1ml Tb syringe with the yellow (21g) needle attached, withdraw _____mL (to be completed by your nurse/pharmacist) which contains a dose of _____micrograms (to be completed by your nurse/pharmacist).
7. Remove and discard the yellow (21g) needle into a sharps bin.
8. Attach the brown (26g) needle.

9.1. If you are administering via an insufflon:

- a) Wipe the injection port on the insufflon with an alcohol swab, and allow this to dry.
- b) Inject the sargramostim via the insufflon slowly.
- c) Discard syringe with needle into sharps bin.

9.2. If you are administering directly as a subcutaneous injection:

- a) Wipe the area for administration with an alcohol swab (usually upper outer side of thigh), and allow the skin to dry
- b) Lightly pinch the area for administration, and insert needle at a 45 degree angle.
- c) Inject the sargramostim slowly.
- d) Discard syringe and needle into sharps bin.
- e) Apply plaster to injection site if 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.

	Likely Happens to 21-100 children out of every 100	Less Likely Happens to 5-20 children out of every 100	Rare but serious Happens to <5 children out of every 100
Immediate Within 1-2 days of receiving the medicine	<ul style="list-style-type: none"> ▪ Headache ▪ A feeling of tiredness, weakness or not feeling well ▪ Rash ▪ Itchy skin ▪ Bone pain ▪ Muscle or joint aches and pains ▪ Fever ▪ Chills 	<ul style="list-style-type: none"> ▪ Pain in the abdomen ▪ Tiredness and/or weakness ▪ Loss of appetite ▪ Nausea ▪ Local irritation at the injection site 	<ul style="list-style-type: none"> ▪ Severe allergic reaction which can be life threatening with shortness of breath, swelling of the face or throat, fever, back pain, low blood pressure and a rapid heart rate. ▪ Vomiting ▪ Diarrhea ▪ Inflammation and discomfort in the area through which the sargramostim is given. ▪ An irregular timing or pattern of the heart beat due to improper electrical activity of the heart. ▪ Build-up of fluid around the heart
Prompt Within 2-3 weeks, prior to the next course		<ul style="list-style-type: none"> ▪ Weight gain 	<ul style="list-style-type: none"> ▪ With high doses: capillary leak syndrome (buildup of fluid around the lungs that can make it difficult to breathe, build up fluid in your legs and around your tummy, weight gain and a low blood pressure) ▪ Inflammation of the lungs which could lead to chest pain and shortness of breath and which may be life threatening. ▪ Fluid retention ▪ Elevation in the blood of certain enzymes found in the liver ▪ Higher levels of creatinine in the blood which may mean that your kidneys are not working as well

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Delayed Anytime later during therapy, excluding the above conditions		<ul style="list-style-type: none"> Fewer platelets in the blood. A lower number platelets may cause you to bruise and bleed more easily 	

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>