

Neupogen (Filgrastim)

Information for Patients and Caregivers

What is Neupogen?

Neupogen is a man-made form of granulocyte colony-stimulation factor (G-CSF), which is made using the bacteria *E coli*. G-CSF is a substance naturally produced by the body. It stimulates the growth of neutrophils (nu-tro-fils), a type of white blood cell important in the body's fight against infection.

What is Neupogen used for?

Neupogen is used to treat neutropenia (nu-tro-peen-ee-ah), a condition where the body makes too few white blood cells. Neutropenia may be a long-standing condition where your body does not make enough white blood cells, or it may be used to treat cancer. In some cases, your body may make enough white blood cells, but as part of your treatment for cancer, your doctor may want to increase the number of white blood cells your body makes and collect them. The cells are collected using a process call apheresis (ay-fer-ree-sis). These collected cells are given back to you after you receive your treatment for cancer.

How does Neupogen work?

Neupogen works by stimulating the growth of neutrophils, a type of white blood cell. To make sure Neupogen is working, your doctor will ask that you have regular blood tests to count the number of white blood cells you have. It is important that you follow your doctor's instructions about getting these tests.

Who should not take Neupogen?

People who have had an allergic reaction to other products made using the bacteria *E coli* should not take Neupogen.

What important information do I need to know about taking Neupogen?

Neupogen may reduce your risk of getting an infection, but may not prevent all infections. An infection can still happen during the short time when your white blood cell levels are low. You must be alert and look for some of the common signs of infection, such as fever, chills, rash, sore throat, diarrhea, or redness, swelling, or pain around a cut or sore. If you have any of these symptoms during treatment with Neupogen, tell your doctor or nurse immediately.

There is a possibility that you could have a reaction at the injection site. If there is a lump, swelling, or bruising at an injection site that does not go away, call your doctor.

What are the possible side effects of Neupogen?

The most common side effect you may experience is aching in the bones and muscles.

Some people experience redness, swelling, or itching at the site of injection. This may be an allergy to the ingredients in Neupogen, or it may be a local reaction. If you notice any signs of a local reaction, call your doctor.

Serious allergic reactions can also happen. These reactions can cause a rash over the whole body, shortness of breath, wheezing, a drop in blood pressure, swelling around the mouth or eyes, fast pulse, or sweating. If you seem to be having a serious allergic reaction, ***stop injecting Neupogen and call your doctor or emergency medical personnel immediately (call 911).***

How to prepare and give a Neupogen Injection

Neupogen should be injected at the same time each day. If you miss a dose contact your doctor or nurse. Take your Neupogen at **6:00 am and 6:00 pm, unless otherwise instructed.**

You must always use the correct dose of Neupogen. Your doctor will determine your correct dose based on your body weight.

If you are giving someone else Neupogen injections, it is important that you know how to inject Neupogen, how much to inject, and how often to inject Neupogen.

Neupogen is available as a liquid in vials or in prefilled syringes. When you receive your Neupogen, always check to see that:

- The name Neupogen appears on the package and vial or prefilled syringe label.
- The expiration date on the vial or prefilled syringe label has not passed. **You should not use a vial or prefilled syringe after the date on the label.**
- The strength of the Neupogen (number of micrograms in the colored dot on the package containing the vial or prefilled syringe) is the same as your doctor prescribed.
- The Neupogen liquid in the vial or in the prefilled syringe is clear and colorless. **Do not use Neupogen** if the contents of the vials or prefilled syringe appear to contain lumps, flakes, or particles.

If you are using vials of Neupogen only use the syringe that your doctor prescribes.

Your doctor or nurse will give you instructions on how to measure the correct dose of Neupogen. This dose will be measured in milliliters. You should only use a syringe that is marked in tenths of milliliters, or mL (for example, 0.2 mL). The doctor or nurse may refer to an mL as a cc (1 mL = 1 cc). If you do not use the correct syringe, you could receive too much or too little Neupogen.

Only use disposable syringes and needles. Use the syringes only once and dispose of them as instructed by your doctor or nurse.

IMPORTANT: To help avoid possible infection, you should follow these instructions.

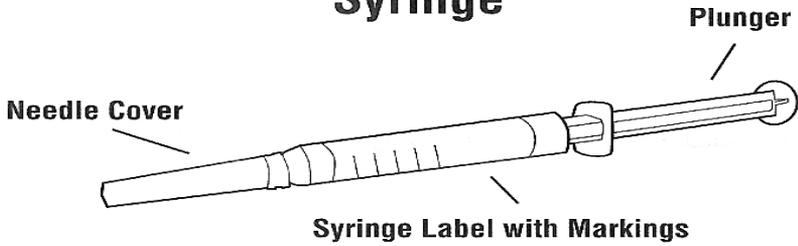
Setting up for an injection

1. Find a clean flat working surface, such as a table.
2. Remove the vial or prefilled syringe of Neupogen from the refrigerator. **Allow Neupogen to reach room temperature** (this take about 30 minutes). Vials or prefilled syringes should be used only once. **DO NOT SHAKE THE VIAL OR PREFILLED SYRINGE.** Shaking may damage the Neupogen. If the vial or prefilled syringe has been shaken vigorously, the solution may appear foamy and it should not be used.
3. Assemble the supplies you will need for an injection:
 - Neupogen vial and disposable syringe and needle

Vial

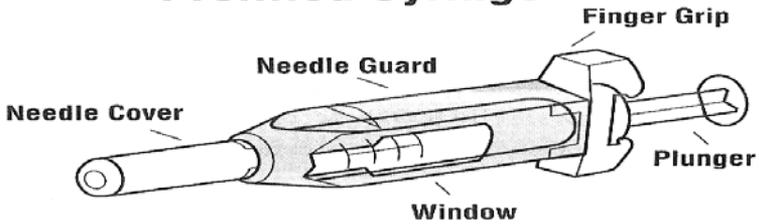


Disposable Syringe



- Or Neupogen prefilled syringe with transparent (clear) plastic orange needle guard attached

Prefilled Syringe



- Two alcohol swabs and one cotton ball or gauze pad

Alcohol Swabs

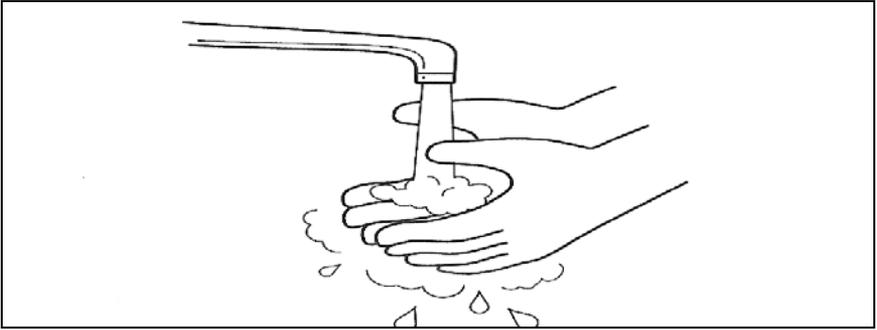


Cotton Ball



- Puncture-proof disposable container

4. Wash your hands with soap and warm water.

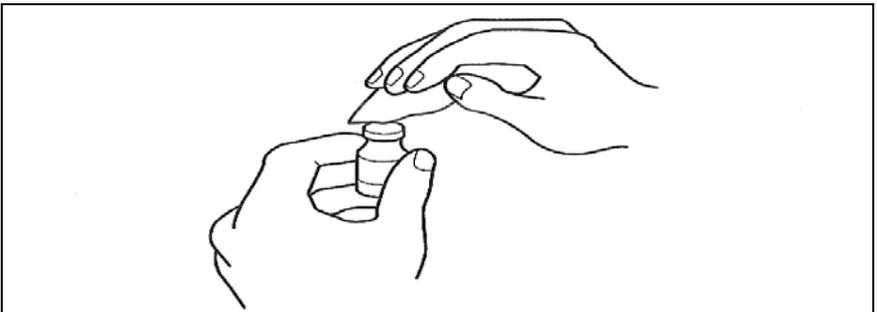
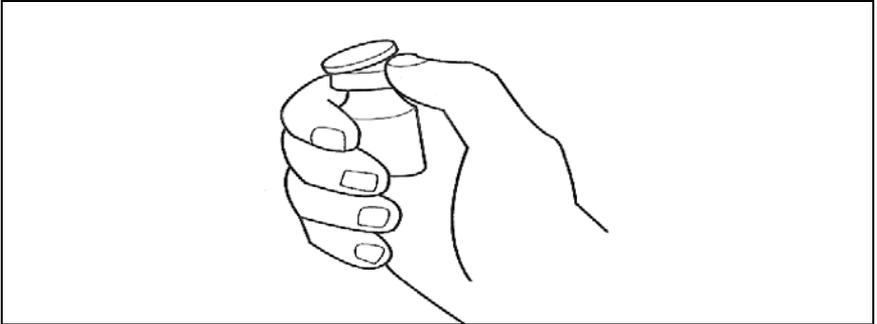


HOW TO PREPARE THE DOSE OF NEUPOGEN IN VIALS OR PREFILLED SYRINGES

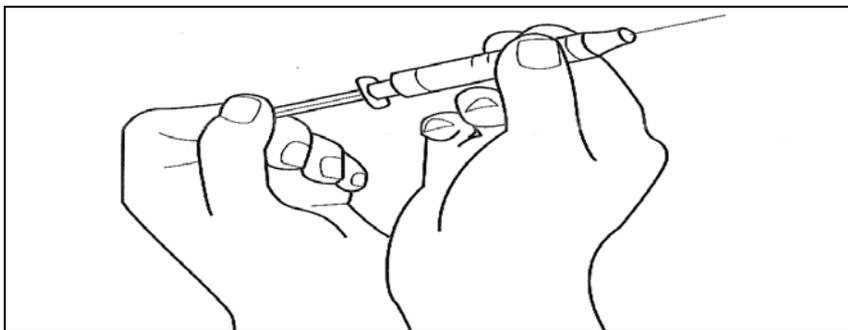
If you are using Neupogen in a vial, follow the instructions in Section A. If you are using Neupogen in a prefilled syringe, go to Section B.

Section A. Preparing the dose of Neupogen in a vial

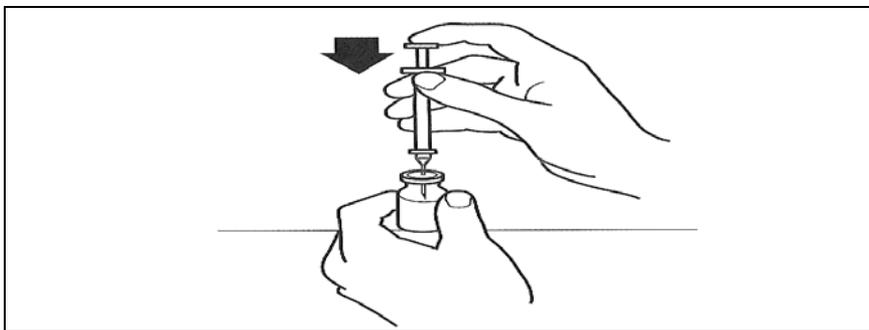
1. Take the cap off the vial. Clean the rubber stopper with one alcohol swab.



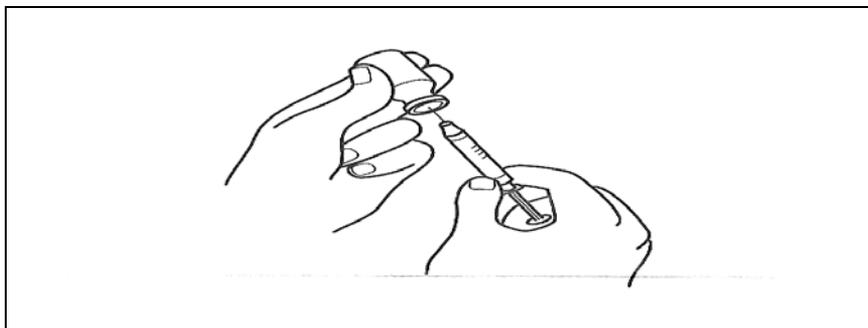
2. Check the package containing the syringe. If the package has been opened or damaged, do not use that syringe. Dispose of that syringe in a puncture-proof disposal container. If the syringe package is undamaged, open the package and remove the syringe.
3. Pull the needle cover straight off the syringe. Then, pull back the plunger and draw air into the syringe. The amount of air drawn into the syringe should be the same amount (mL or cc) as the dose of Neupogen that your doctor prescribed.



4. Keep the vial on your flat working surface and insert the needle straight down through the rubber stopper. Do not put the needle through the rubber stopper more than once.
5. Push the plunger of the syringe down and inject the air from the syringe into the vial of Neupogen.



6. Keeping the needle in the vial, turn the vial upside down. Make sure that the Neupogen liquid is covering the tip of the needle.



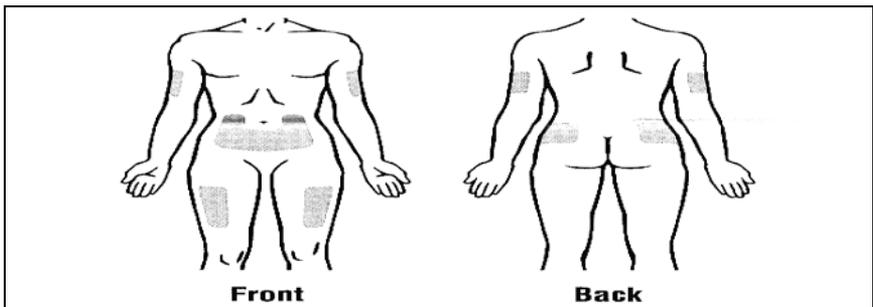
7. Keeping the vial upside down, slowly pull back on the plunger to fill the syringe with Neupogen liquid to the number (mL or cc) that matches the dose your doctor prescribed.
8. Keeping the needle in the vial, check for air bubbles in the syringe. If there are air bubbles, gently tap the syringe with your fingers until the bubbles rise to the top of the syringe. Then slowly push the plunger up to force the air bubbles out of the syringe.
9. Keeping the tip of the needle in the liquid, once again pull the plunger back to the number on the syringe that matches your dose. Check again for air bubbles. The air in the syringe will not hurt you, but too large an air bubble can reduce your dose of Neupogen. If there are still air bubbles, repeat the steps above to remove them.
10. Check again to make sure that you have the correct dose in the syringe. It is important that you use the exact dose prescribed by your doctor. Remove the syringe from the vial but **do not lay it down** or let the needle touch anything. (Go to “Injecting the Dose of Neupogen”).

Section B. Preparing the dose of Neupogen in a prefilled syringe

1. Remove the syringe from the package and the tray. Check to see that the plastic orange needle guard is covering the barrel of the glass syringe. **DO NOT push the orange needle guard over the needle cover before injection.** This may activate or lock the needle guard. If the orange needle guard is covering the needle that means it has been activated. Do NOT use that syringe. Dispose of that syringe in the puncture-proof disposal container. Use a new syringe from the package.
2. Hold the syringe barrel through the needle guard windows with the needle pointed up. Holding the syringe with the needle pointing up helps to prevent medicine from leaking out of the needle. Carefully pull the needle cover straight off.
3. Check the syringe for air bubbles. If there are air bubbles gently tap the syringe with your fingers until the air bubbles rise to the top of the syringe. Slowly push the plunger up to force the air bubbles out of the syringe.
4. Push the plunger up to the number (mL) on the syringe that matches the dose of Neupogen that your doctor prescribed.
5. Check again to make sure the correct dose of Neupogen is in the syringe.

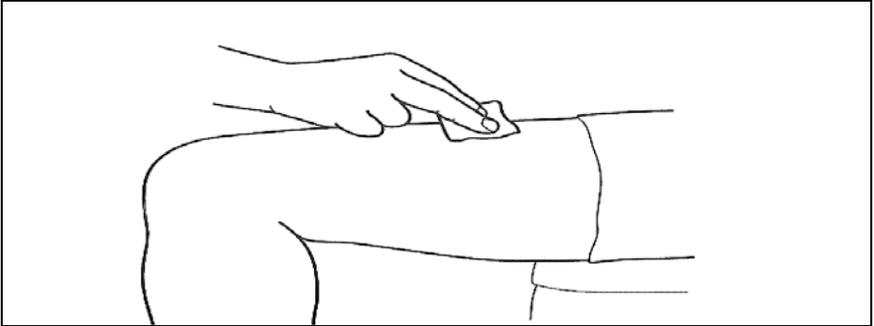
Selecting and preparing the injection site

1. Choose an injection site. Three recommended injection sites for Neupogen are:
 - The outer area on your upper arms
 - The abdomen, except for the two inch area around your navel
 - The front of your middle thighs



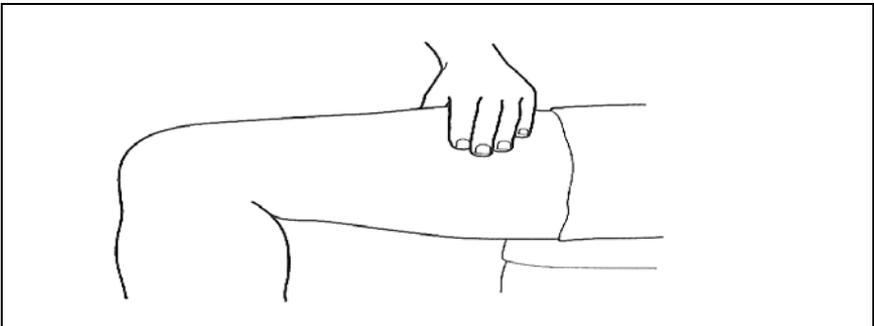
Choose a new site each time you inject Neupogen. Choosing a new site can help avoid soreness at any one site. Do not inject Neupogen into an area that is tender, red, bruised, or hard or that has scars or stretch marks.

2. Clean the injection site with a new alcohol swab.

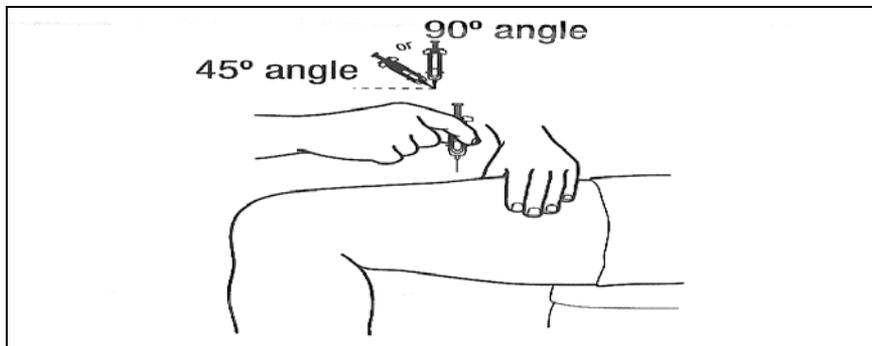


Injecting the dose of Neupogen

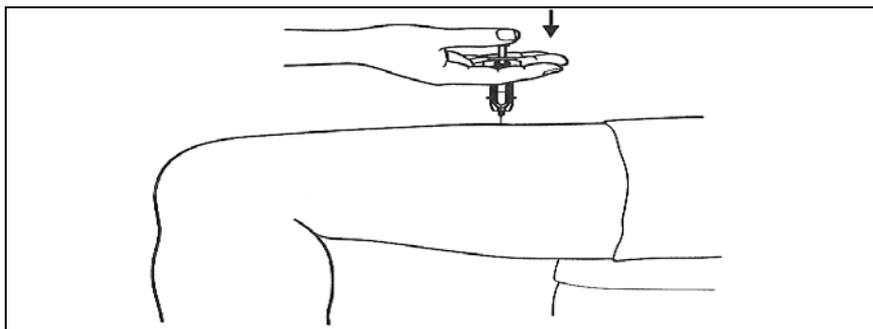
1. For injecting the dose of Neupogen from a vial, remove the syringe and needle from the vial. For injecting the dose of Neupogen from a prefilled syringe, grab the sides of the needle guard, along with the wings of the syringe, using your thumb and forefinger.
2. Hold the syringe in the hand you will use to inject Neupogen. Use the other hand to pinch a fold of skin at the cleaned injection site. Note: If using a prefilled syringe with a needle guard, hold the syringe barrel through the needle guard windows when giving the injection.



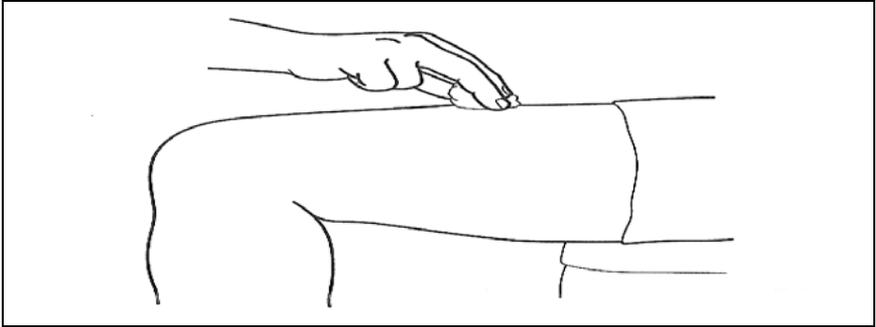
3. Holding the syringe like a pencil, use a quick “dart-like” motion to insert the needle either straight up and down (90 degree angle) or at a slight angle (45 degrees) into the skin.



4. After the needle is inserted, let go of the skin. Pull the plunger back slightly. If no blood appears, slowly push down on the plunger all the way, until all the Neupogen is injected. **If blood comes into the syringe, do not inject Neupogen, because the needle has entered a blood vessel.** Withdraw the syringe and discard it in the puncture-proof container. Repeat the steps to prepare a new syringe (or get a new prefilled syringe) and choose and clean a new injection site. Remember to check again for blood before injecting Neupogen.



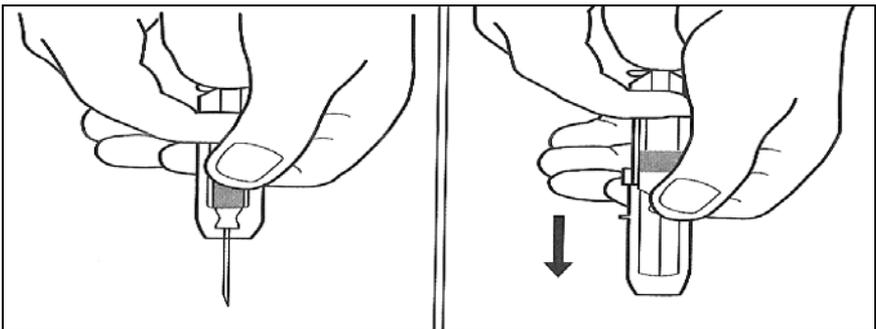
5. When the syringe is empty, pull the needle out of the skin and place a cotton ball or gauze over the injection site and press for several seconds.



6. Use a prefilled syringe with the needle guard or a syringe and vial only once. If you are using a syringe, DO NOT put the needle cover (the cap) back on the needle. Discard the vial with any remaining Neupogen liquid.

Activating the Needle Guard for the prefilled syringe after the injection has been given

1. After injecting Neupogen from the prefilled syringe, do not recap the needle. Keep your hands behind the needle at all times. While holding the clear plastic finger grip of the syringe with one hand, grasp the orange needle guard with your free hand and slide the orange needle guard over the needle until the needle is completely covered and the needle guard clicks into place.
NOTE: If an audible click is not heard, the needle guard may not be completely activated.



2. Place the prefilled syringe with the activated needle guard into a puncture-proof container as described below.

Disposal of syringes, needles, vials and needle guards

You should always follow the instructions given by your doctor, nurse, or pharmacist on how to properly dispose of containers with used syringes, needles, vials and needle guards. There may be special state and local laws for disposal of used needles and syringes.

- Place all used needles, needle covers, syringes, and vials (empty or unused contents) into a “Sharps” container given to you by your doctor or pharmacist or in a hard-plastic container with a screw-on-cap, or a metal container with a plastic lid, such as a coffee can, labeled “used syringes.” If a metal container is used, cut a small hole in the plastic lid and tape the lid to the metal container. If a hard-plastic container is used, always screw the cap on tightly after each use.
- Do not use glass or clear plastic containers.
- When the container is full, tape around the cap or lid to make sure the cap or lid does not come off. **Do not throw the container in the household trash. Do not recycle.**
- **Always** keep the container out of the reach of children.

How should Neupogen be stored?

Neupogen should be stored in the refrigerator at 2° to 8°C (36° to 46°), but not in the freezer. Avoid shaking Neupogen.

For questions, you may contact an Apheresis Nurse at :
Atlanta Blood Services or BMTGA Clinic
404-255-1930