

My dose is \_\_\_\_\_ mg/units = \_\_\_\_\_ measures on syringe.

**Low Molecular Heparins** are used to **prevent** an abnormal blood clot from developing or to **treat** an abnormal blood clot in the legs or lungs.

### What is a Low Molecular Weight Heparin?

Low molecular weight heparin (LMWH) is an anti-coag-u-lant (blood thinner) that is given by injection under the skin. Anticoagulants are medicines that treat and prevent abnormal blood clots. There are three LMWHs available in Canada: enoxaparin (Lovenox®), tinzaparin (Innohep®) and dalteparin (Fragmin®).

### What dose of Low Molecular Heparin will be prescribed?

The dose of LMWH will depend on whether it is being given to prevent or to treat a blood clot, and will also be based on the child's body weight.

1. **enoxaparin (Lovenox®)** is most often used in children and is given once or twice a day.
2. **tinzaparin (Innohep®)** is given once a day.

Your care provider will determine your LMWH dose which will be based on your weight and on the results of blood tests.

LMWH should be given at the same time(s) every day.

LMWH may come in a prefilled syringe or a multi dose vial which will depend on your dose.

The length of time you will require LMWH will be determined by the reason for anticoagulation.

Patients should not change the dose or stop taking this medication unless instructed by the doctor.

### Do I need blood work?

Blood work is required to ensure the amount of LMWH you are taking is correct.

**Enoxaparin** levels must be drawn 4 hours after the morning injection.

The timing of **Tinzaparin** level is dependent on age. If you are Less than 5 years of age, the blood will be drawn 2 hours after the morning injection. If you are 5 years of age or more, blood should be drawn 4 hours after the injection.

Blood is usually drawn once a month but may be more often if your LMWH dose changes.

## How to I give injectable heparin?

Injectable heparin is given by injection just under the skin.

An insulin syringe with a short ultrafine 5/16" needle is often the best syringe to use.

The needle is very short and thin; and it is easy to measure the correct dose.

1 mg of enoxaparin = 1 measure (line) on the syringe.

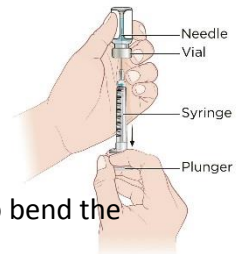
100 u of Tinzaparin = 1 measure (line) on the syringe

100 units of Unfractionated heparin = 1 measure (line) on the syringe

Regardless of which heparin you are prescribed, always ensure your health provider reviews the correct measure for you.

### Simple steps to draw the injectable heparin into the syringe

1. Wash hands.
2. Clean multi-dose vial with alcohol and let it dry.
3. Stick the needle in the bottle and turn the bottle upside down. Be careful not to bend the needle.
4. Pull back to get a bit more than you need in the syringe.
5. Pull needle out of bottle.
6. With a firm grasp on the needle, hold the syringe straight up with the needle pointed up. Flick the syringe with your finger until all of the bubbles float to the top.
7. Gently push the plunger until the top of the plunger is at the correct amount.



### How to Inject Heparins

1. **Wash your hands.**
2. The **skin needs to be clean and dry**, you do not need to use alcohol swabs to clean the site.
3. Injections are given in the **thighs, and the backs of arms** in patients weighing more than 3.5 kg.
4. Use all sites and **rotate sites with each injection**. Avoid sites where there is previous bleeding or bruising. Avoid the abdomen in infants and children.
5. **Pick the site** where you will give the injection.
7. Get comfortable; sit in a position where you can comfortably pinch up the skin into a fold.
8. Remove the cap from the needle by pulling it straight off the syringe.
9. Hold the syringe in the hand you write with. With the other hand, **pinch-up the selected area** between your thumb and forefinger to make a fold in the skin.
10. **Insert the needle** into the pinched/folded up skin at a 90° angle.
11. While continuing to hold the skin fold, slowly **push the plunger down** all the way to inject all of the medicine.
12. Once all medicine has been injected, **pull the needle straight out** and let go of the skin fold.
14. **Apply pressure** (without rubbing) for 5 minutes to the site to prevent bruising.



## Avoid needle sticks and hazards

Some syringes have a protective sleeve that will automatically pop out and cover the needle. If your syringe does not have the auto cover: do not replace the cap.

Put the syringe directly into a hazard container provided by your health provider or pharmacist. They will provide you with instructions on correct disposal of the container.

## Practical Tips

Do not inject into muscle. The best way to avoid this is to pinch up the fold of skin.

Do not use medication past the expiry date on the box or syringe.

Always select a **different site** for each injection.

Give injections at around the same time every day.

Store your medication at room temperature in a safe place away from sunlight.

## What if I miss a dose?

It is important to take LMWH regularly as prescribed and to ensure that the prescription is refilled on time (**\*3 days ahead\***). If a dose is missed:

Take your missed dose as soon as you remember and then call your doctor for further instruction.

If you cannot reach your doctor right away, give your next injection 12 or 24 hours from when you gave the late injection, depending on whether you have once or twice a day injections.

Do not take 2 injections at once in order to make up for an injection that was missed.

## Are there side effects?

The **most common** side effects are pain, redness, bruising, or swelling where the injection is given.

These side effects can usually be minimized by rotating skin injection sites.

The **most important** side effect of LMWH is bleeding.

All anticoagulants increase the risk of bleeding. Bleeding can be minor or major.

- **Minor bleeding** stops on its own, and does not last long. Examples of minor bleeding include: nose bleeding, gum bleeding, bruising, etc.

- **Major bleeding** (see page 4) is more serious, requires medical attention, and stopping the LMWH at least temporarily. Most people taking LMWH do **not** experience major bleeding.

## Tips to minimize bleeding

Use a soft toothbrush and waxed dental floss if there is frequent gum bleeding.

Avoid contact sports (e.g. boxing, martial arts, and football).

### **When should I see a health provider immediately?**

If you have any of the following symptoms of bleeding:

Blood in the bowel movements or black/tarry bowel movements or urine (red coloured).

Menstrual bleeding that is much more than usual.

Coughing or vomiting up blood.

Any bleeding that won't stop.

Physical injury such as head injury, broken bone, car accident.

If an injection site becomes red, painful, warm, or oozes.

Unusual bruising for unknown reasons.

### **Can I still have my immunizations and flu shots while on injectable heparin?**

It is strongly recommended that you receive your immunizations and flu shots.

Plan to get your immunization just before the next injectable heparin dose is scheduled.

Apply firm pressure to the site for 10 minutes following immunization to avoid bruising.

### **Be sure you know how to contact your health provider.**

**You may refer to the resources available at [www.kidclot.com](http://www.kidclot.com) .**