

*Ask your
physician, nurse
or pharmacist
if you have
any questions
about LMWH.*

Low Molecular Weight Heparins: Dalteparin (Fragmin®), Enoxaparin (Lovenox®)

A low molecular weight heparin (LMWH) is a special form of heparin, an anticoagulant (“blood thinner”) medication. This medication helps prevent blood clots from forming. LMWH can also be used to treat existing blood clots in the veins or lungs. Clots can block the blood flow either to or from vital organs and cause serious medical problems. **It is very important to take this medication as directed.**

Before you go home, we will teach you:

- How to inject the LMWH
- How to dispose of the used syringes
- What side effects to let your physician know about
- How to prevent bleeding problems

While you are in the hospital, watch the LMWH patient education video on your TV. Your nurse can help you access the video.

Taking LMWH

LMWH is a shot (or injection). You or a family member can do this. Your nurse will show you how. Your physician will prescribe:

- How many doses you will need to take and when to stop.
- How often you will need to take LMWH. This will be either 1 time each day (every 24 hours) or 2 times a day (every 12 hours).

Take this medication exactly as directed by your physician. It is best to take your dose at the same time each day. **Do not** stop taking this medication — even if you feel better — unless your physician tells you to do so.

If you forget to take a dose, take it as soon as you remember. However, if it is almost time for your next dose, skip it and go back to taking it at your regular schedule. Call your physician for more instructions. **Never** take 2 doses close together to make up for missing 1.

Supplies

- Alcohol wipes or cotton balls soaked with 70% rubbing alcohol
- Pre-filled syringe of your medication
- A metal or heavy plastic puncture-proof container with a tight-fitting lid (“Sharps” containers may also be used. Use this to discard the used syringes. **Never put used needles or syringes directly into a garbage can.**)

How to inject your medication

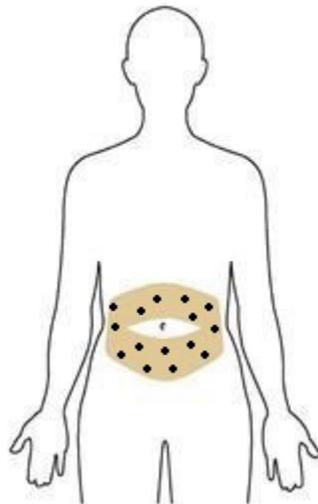
Before starting, look closely at the syringe. The liquid in the syringe should be clear. **Do not use it if you notice any leaks, discoloration or floating materials in the syringe.** Return any defective syringes to your pharmacy and ask for replacements.

Follow these steps to give the injection:

1. Wash your hands.
2. Sit or lie down with your head up so you can see your stomach.
3. Choose a place to inject the medication. The best sites are on your abdomen, at least 2 inches away from your navel (belly button). If needed, you can use the upper outer area of your thigh. In Figure 1, the shaded area shows possible injection sites above and below the navel.

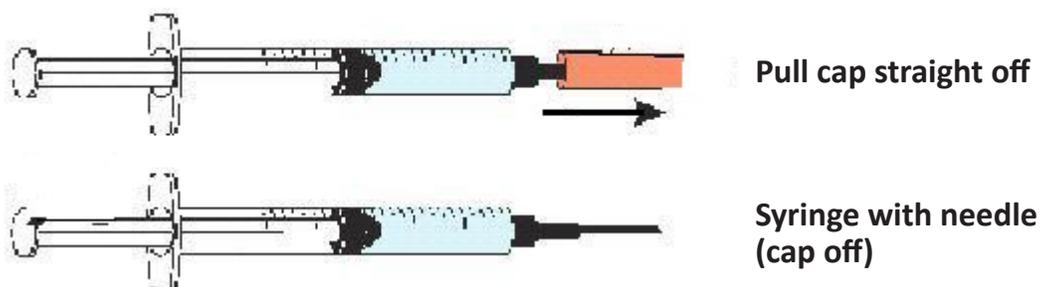
Choose a different site for each dose. For example, if you use the right side 1 time, go to the left side next time. When you return to the right side, select a site at least a few inches away from the previous one. Do not inject the medication into a bruised area or scar.

Figure 1. Injection sites



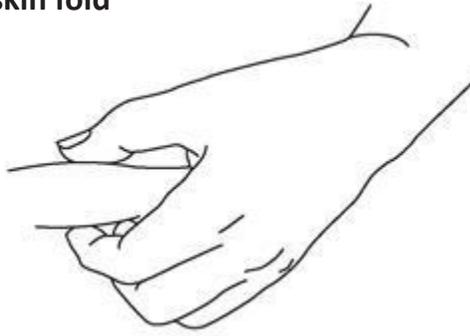
4. Gently wipe the injection site with an alcohol wipe or cotton ball soaked with rubbing alcohol. Let it dry.
5. Pull the needle cap away from the syringe to take it off (Figure 2). Do not push any air or medication out of the syringe.

Figure 2. Removing the needle cap



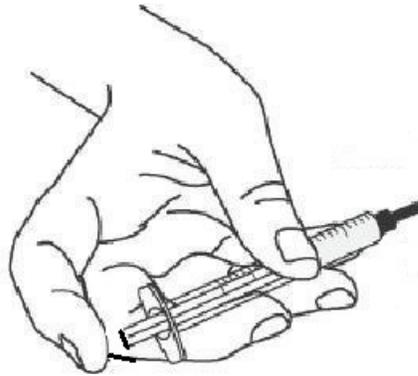
6. Gently squeeze the skin between your thumb and index finger (Figure 3).

Figure 3. Creating a skin fold



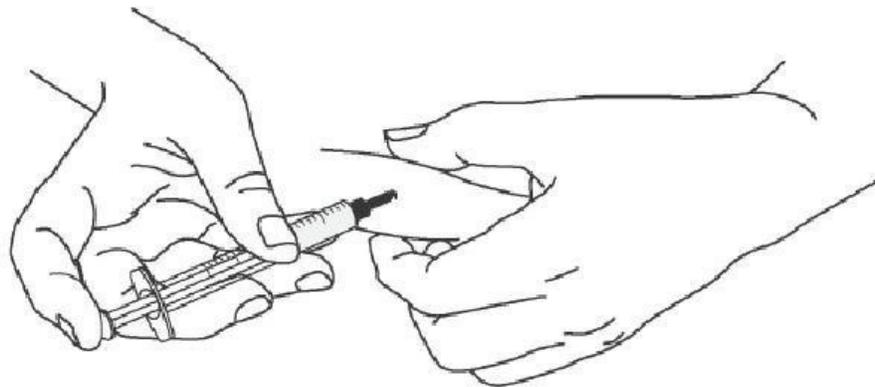
7. Carefully hold the syringe with the needle facing you. It may be easiest if you put your thumb and middle finger on each side of the syringe. This leaves your index finger free to push the plunger at the right time (Figure 4). If someone else is giving this to you, they may need to change the finger placement.

Figure 4. Holding the syringe for self-injection



8. Insert the needle at a 90-degree angle into the thickest part of the squeezed skin. **Be sure to insert the entire length of the needle.**

Figure 5. Self-injection



9. Keeping the skin pinched, slowly push the plunger all the way down.

10. After all the medication has gone in, pull out the syringe and release your skin. Hold the needle away from you and anyone else.
11. **Do not put the cap back on the needle.** Use the needle safety device to retract the needle and prevent injury. Depending on the type of syringe, press the plunger rod or button to activate. Please note:
 - The safety device only works when the syringe has been emptied.
 - Activate the safety device only **after** removing the needle from your skin.
12. Discard the syringe and needle cap in the disposal container and secure the lid.

When all the doses have been used, **secure the lid** of the disposal container and discard.

- If you are using a metal or hard plastic household container, you can put it in the garbage can. **Never put these into the recycle bin.**
- If you are using a red biohazard-labeled sharps container, do not put it in the garbage can. For information about proper disposal of special sharps containers and syringes, go to the State of Illinois site: epa.illinois.gov/topics/waste-management/waste-disposal/medication-disposal.html.

If you do not live in Illinois, ask your local pharmacist, or check your state and local laws for proper disposal instructions.

Special instructions

- Store this medication at room temperature. Do not store it in the bathroom or refrigerator. Protect from heat, moisture and direct light. Keep it away from children and pets.
- Do not forget to rotate injection sites. Use a different place for each shot.

Food and drug interactions

- Do not stop or start taking any new medications without your physician's approval.
- **Herbal supplements.** Some supplements may interact with the LMWH to cause bleeding or blood clots. Examples include: feverfew, garlic, ginger, kava, clove oil, ginkgo and horse chestnut. Do not take these or others like them. Check with your physician or pharmacist before taking any herbal supplements to make sure it is safe to do so.
- **Some medications increase the risk of bleeding.** These include aspirin, non-steroidal anti-inflammatory drugs (NSAIDs) and many over-the-counter, non-prescription medications (including those used to treat pain or cold/flu symptoms). Check with your physician or pharmacist before taking any non-prescription medications to make sure it is safe to do so.
- **Alcohol** may increase the risk of bleeding. Talk with your physician about drinking alcohol.

For your safety

Be careful to avoid injury when taking this medication. An injury may increase the risk of bleeding.

- Use a soft toothbrush so you do not scratch your gums.
- Use an electric razor for shaving. Do not use razor blades.
- Try not to scratch your skin.
- Wear gloves while gardening.
- Be careful when you use sharp items, such as knives or power tools.
- Always protect the soles of your feet from injury. Never trim corns, calluses or nails with a sharp knife or razor blade.
- Do not do activities or contact sports (such as football) where you could be injured and bleed.
- If you cut yourself, put pressure on the area **for at least 5 minutes or until the bleeding has stopped.**
- Do not share this medication with anyone else.

Medical care

As long as you are taking this medication, **please remember to:**

- Tell your dentist, dental hygienist or any other healthcare professional that you are seeing that you are taking an anticoagulant.
- Tell the physician who prescribed this medication if you plan any of these things:
 - Oral surgery or any teeth pulled
 - Any surgical procedure, including an intra-uterine device (IUD) placement
 - Out-of-town travel for an extended time
 - Pregnancy

When to call the physician

Any treatment can have side effects. Common side effects of LMWH may include irritation at the injection site, diarrhea, nausea, fever or bruising. Even though serious side effects are unlikely, it is important to be aware of them. Please notify your physician right away if you have any of the following symptoms:

- **Signs of bleeding:**
 - Bleeding from cuts or wounds that lasts
 - Back pain
 - Nosebleed
 - Coughing up blood
 - Blood in your urine or stool
 - Black stool (if not taking iron supplements)
 - Bleeding gums

- Unusual bruising or change in your skin color
- Dizziness
- Faintness
- Stomach or intestinal upset
- Pain or swelling
- Continuing headaches
- Unusually heavy menstrual bleeding
- **Signs of clotting:**
 - Difficulty breathing
 - Chest pain
 - Dizziness
 - Shortness of breath
 - Swelling in your legs or arms
 - Pain when walking
 - Pain and warmth in your arms or legs
- **Signs of an allergic reaction:**
 - A rash or hives
 - Itching
 - Wheezing
 - Chest or throat tightness
 - Swelling of your mouth, face, lips, tongue or throat
 - Trouble breathing or talking, or unusual hoarseness

If you become pregnant, LMWH can increase the chance of bleeding in both you and your unborn baby.

If you hit your head (such as a fall or car accident), go to the nearest Emergency Department right away, even if you feel fine.

Ask questions to make sure you know how to take this medication and when to take it.

Call your physician if you have any questions after leaving the hospital.

This information is not intended to describe all possible medication uses, side effects or precautions. Please contact your physician or pharmacist for more information.