University Health System

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A 24-hour nurse telephone service for University Health System patients.

What is Unfractionated Heparin (UFH) or Heparin?

Heparin is an anticoagulant medicine. "Anti" means against and "coagulant" refers to blood clotting. An anticoagulant helps keep clots from forming in your blood. They also help stop blood clot growth. Anticoagulants are sometimes called "blood-thinners," but they do not actually thin your blood. They work by blocking the part of your blood that normally forms clots.

Why am I taking heparin?

Heparin is prescribed to patients who have existing clots or a high risk of developing clots, such as people who have or need:

- Blood clot in the legs (deep vein thrombosis or DVT)
- Blood clot in the lungs (pulmonary embolism or PE)
- Irregular heart rhythms (for example, atrial fibrillation)
- Blood clots in the arteries
- Clotting prevention during hospitalization or after surgery

How does heparin work?

Many steps must happen inside the body to form a blood clot. Proteins called the clotting factors are involved in this process. Heparin acts at a number of sites within the blood clotting system.

Heparin combines with *antithrombin III*, a cofactor, along with interacting with a number of other clotting factors to block the formation of clots and prevent the clots from getting larger. But, heparin does not break up clots that already exist.

Heparin begins working from immediately to about 30 minutes depending on how it was given to you. If you stop taking the medication, its effect can wear off quickly.

How is heparin taken?

Heparin can be taken as an injection into a vein (intravenous) or the fatty part of the skin (subcutaneous).. Heparin should NOT be given into the muscle (intramuscular). Heparin doses ranges from standardized to weight-based dosing. The dose of heparin may be adjusted by your doctor based

on lab test . **Do not stop taking it without first talking with your doctor. Stopping heparin may increase your risk of having a clot.**

Please see <u>attachment A</u> for more directions on how to use a heparin injection.

What if I miss a dose of heparin?

- Take the missed dose as soon as you remember. But if it is almost time for your next dose, skip the missed dose and return to your normal dose time
- Do not take 2 doses at the same time or extra doses
- If you are sick and cannot take heparin, contact your doctor

Would my blood need to be tested while taking heparin?

Blood tests will be obtained before or after the heparin injection to help provide the most accurate dose of medication for you. There may also be lab exams to look at your blood (hematocrits, platelets) and stool (occult blood) while you are taking heparin. **It is very important to show up to all follow-up appointments with your doctor and complete all lab tests requested.**

What are the side effects of heparin?

Bleeding is a common and serious side effect of heparin. Other side effects include low platelet levels (thrombocytopenia), and a serious allergic reaction in the body that causes clots to form (Heparin-induced Thrombocytopenia Thrombosis (HITT) and Heparin-induced Thrombocytopenia (HIT))

Minor bleeds may occur, and it can cause the following symptoms:

- Gums bleeding when you brush your teeth
- Nosebleeds
- Easy bruising
- More bleeding than normal from small cuts
- For women, longer or heavier menstrual bleeding

For more serious bleeds, call your doctor or come to the hospital emergency room right away if you:

- Have a serious fall or hit your head
- Have any of these symptoms:
  - Bleeding in your eyes
  - Red or dark brown urine
  - Red or black tarry stool
  - Vomiting or coughing up blood
  - Severe headache or stomachache
  - Bruises that appear for no known reason
  - Nosebleeds, bleeding gums, or unusual bleeding that keeps happening
  - Any bleeding that does not stop or is very heavy

There are options to reverse the effects of heparin if you start to bleed. Your doctor will treat you with reversal product (Protamine), blood transfusions and other methods.

Does heparin affect other medicines?

Talk to your doctor before starting any new drugs, including over the counter, prescription, herbal products and vitamins. Some drugs can raise your risk of bleeding if you take them while on heparin. If you are taking heparin, do **NOT** take any of these medicines without first checking with your doctor:

- Aspirin or products that contain aspirin, such as Excedrin, Alka-Seltzer, Bayer, and Pepto-Bismol
- Non-steroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen, naproxen, celecoxib
- Warfarin (Coumadin), dabigatran (Pradaxa), apixaban (Eliquis), rivaroxaban (Xarelto)
- Clopidogrel (Plavix), prasugrel (Effient), ticagrelor (Brilinta)
- Oritavancin (Orbactiv)

Other drugs may also affect how heparin works in your body. It is very important to tell your doctor whenever you start or stop any medicine, including Over-the-Counter (OTC) and herbal products.

Do I need to avoid certain foods while taking heparin?

There are no eating restrictions. You can eat all types of foods while you are taking the medication.

Should I limit activities while taking heparin?

Since heparin increases your risk of bleeding, it is best to avoid activities that can cause an injury. Activities such as walking, jogging, or swimming are usually safe options. Use a soft toothbrush and electric razor. If you have questions about a certain activity, ask your doctor.

What about pregnancy?

Heparin can be used in pregnancy. Heparin has shown to not cross the placental barrier.. If you become pregnant or plan to become pregnant while taking this medication, call your doctor.

When to Get Help Right Away

Call your doctor or go to the nearest emergency room right away if you have any of these symptoms:

- Rashes on your skin
- Large areas of bruises on your skin
- Sudden weakness in an arm or leg
- Changes in your eyesight or not being able to see out of one or both eyes

- Suddenly having slurred speech or not being able to speak
- New pain, swelling, redness, or heat in your arm, leg, or foot
- New shortness of breath or chest pain

These symptoms may represent a serious emergency. Do NOT wait to see if the symptoms will go away. Get medical help right away. Call your local emergency service (911 in the U.S.). Do not drive yourself to the hospital.

Attachment A:
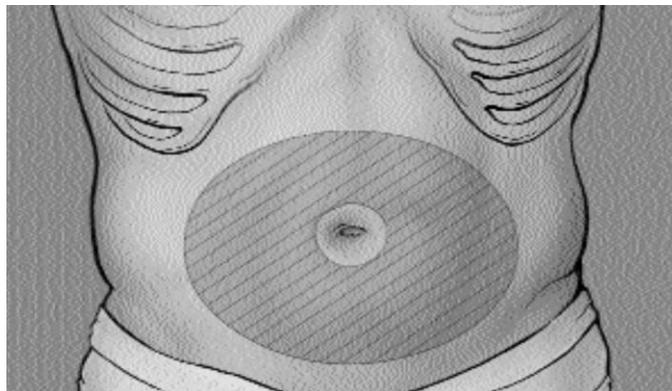
How to Use Heparin-Vial and Syringe

Supplies required:

- Heparin vial
- Needle
- Syringe
- Alcohol wipes or soap and water
- Sharps container (hard plastic container)

https://www.wikihow.com/Give-a-Heparin-Shot

How do I give a heparin injection?

- Wash your hands with soap and water and dry them.
- Attach the needle (with the cap) to the syringe.
- Remove the top cover on the heparin vial.
- Set heparin vial on a flat surface and wipe the top of the heparin vial with an alcohol wipe.
  - Clean top of vial after each use
- Draw air into the syringe by pulling the plunger out to the number of milliliters (mL) needed for your dose.
- Remove the cap of the needle and push the needle through the rubber top of the heparin vial. Then push the plunger down to inject air into the vial.
- Check for air bubbles before taking the needle out of the vial.
  - Flick the syringe a few times to move air to the top of the syringe
- Choose a site on your belly ≥2 inches away from your belly button. Avoid scars, bruises, or swollen areas. You should use a different place each time you give yourself a shot.
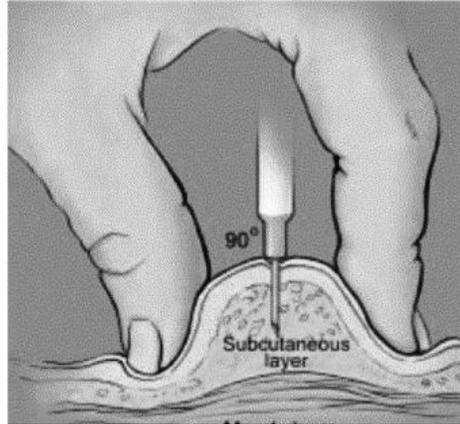

https://www.cc.nih.gov/ccc/patient_education/pepubs/subq.pdf

- Clean the area where you will give the shot with an alcohol pad and let it dry.
- Hold the syringe like a pencil in your hand. With the other hand, pinch the area you cleaned with your thumb and fingers to make a fold in the skin. Hold the skin and inject the entire needle straight at a 90º angle into the skin.

- Press down on the plunger until the syringe is empty, and then pull the syringe with the needle straight out. Do NOT rub the site. This can cause bruising or change how the medicine is absorbed.
- After the injection, set the cap of the needle on a flat surface. Use the syringe to scoop up the cap to cover the needle. Do NOT recap the needle while holding the cap.
- Dispose of the used syringe and needle into a Sharps container (a hard-plastic container). Keep the container away from children and pets.