



PHARMACOLOGICAL PROPERTIES OF THE SUBSTANCE HEPARIN

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Annotation:

Heparin is used to prevent blood clots from forming in people who have certain medical conditions or who are undergoing certain medical procedures that increase the chance that clots will form. Heparin is also used to stop the growth of clots that have already formed in the blood vessels, but it cannot be used to decrease the size of clots that have already formed. Heparin is also used in small amounts to prevent blood clots from forming in catheters (small plastic tubes through which medication can be administered or blood drawn) that are left in veins over a period of time. Heparin is in a class of medications called anticoagulants ('blood thinners'). It works by decreasing the clotting ability of the blood.

Keywords: heparin , causes , blood .

Heparin comes as a solution (liquid) to be injected intravenously (into a vein) or deeply under the skin and as a dilute (less concentrated) solution to be injected into intravenous catheters. Heparin should not be injected into a muscle. Heparin is sometimes injected one to six times a day and sometimes given as a slow, continuous injection into the vein. When heparin is used to prevent blood clots from forming in intravenous catheters, it is usually used when the catheter is first put in place, and every time that blood is drawn out of the catheter or medication is given through the catheter.

Heparin may be given to you by a nurse or other healthcare provider, or you may be told to inject the medication by yourself at home. If you will be injecting heparin yourself, a healthcare provider will show you how to inject the medication. Ask your doctor, nurse, or pharmacist if you do not understand these directions or have any questions about where on your body you should inject heparin, how to give the injection, or how to dispose of used needles and syringes after you inject the medication.

If you will be injecting heparin yourself, follow the directions on your prescription label carefully, and ask your doctor or pharmacist to explain any part you do not understand. Use heparin exactly as directed. Do not use more or less of it or use it more often than prescribed by your doctor.

Heparin solution comes in different strengths, and using the wrong strength may cause serious problems. Before giving an injection of heparin, check the package label to make sure it is the strength of heparin solution that your doctor prescribed for you. If the strength of heparin is not correct do not use the heparin and call your doctor or pharmacist right away.

Your doctor may increase or decrease your dose during your heparin treatment. If you will be injecting heparin yourself, be sure you know how much medication you should use.

Heparin is also sometimes used alone or in combination with aspirin to prevent pregnancy loss and other problems in pregnant women who have certain medical conditions and who have experienced



these problems in their earlier pregnancies. Talk to your doctor or pharmacist about the risks of using this medication to treat your condition.

This medication may be prescribed for other uses; ask your doctor or pharmacist for more information. Before using heparin,

- tell your doctor and pharmacist if you are allergic to heparin, any other medications, beef products, pork products, or any of the ingredients in heparin injection. Ask your doctor or pharmacist for a list of the ingredients.
- tell your doctor and pharmacist what prescription and nonprescription medications, vitamins, nutritional supplements, and herbal products you are taking or plan to take. Be sure to mention any of the following: other anticoagulants such as warfarin (Coumadin); antihistamines (in many cough and cold products); antithrombin III (Thrombate III); aspirin or aspirin-containing products and other nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen (Advil, Motrin) and naproxen (Aleve, Naprosyn); dextran; digoxin (Digitek, Lanoxin); dipyridamole (Persantine, in Aggrenox); hydroxychloroquine (Plaquenil); indomethacin (Indocin); phenylbutazone (Azolid) (not available in the US); quinine; and tetracycline antibiotics such as demeclocycline (Declomycin), doxycycline (Monodox, Vibramycin), minocycline (Dynacin, Minocin) and tetracycline (Bristacycline, Sumycin). Your doctor may need to change the doses of your medications or monitor you carefully for side effects.
- tell your doctor if you have a low level of platelets (type of blood cells needed for normal clotting) in your blood and if you have heavy bleeding that cannot be stopped anywhere in your body. Your doctor may tell you not to use heparin.
- tell your doctor if you are currently experiencing your menstrual period; if you have a fever or an infection; and if you have recently had a spinal tap (removal of a small amount of the fluid that bathes the spinal cord to test for infection or other problems), spinal anesthesia (administration of pain medication in the area around the spine), surgery, especially involving the brain, spinal cord or eye, or a heart attack. Also tell your doctor if you have or have ever had a bleeding disorder such as hemophilia (condition in which the blood does not clot normally), antithrombin III deficiency (condition that causes blood clots to form), blood clots in the legs, lungs, or anywhere in the body, unusual bruising or purple spots under the skin, cancer, ulcers in the stomach or intestine, a tube that drains the stomach or intestine, high blood pressure, or liver disease.
- tell your doctor if you are pregnant, plan to become pregnant, or are breast-feeding. If you become pregnant while using heparin, call your doctor.
- if you are having surgery, including dental surgery, tell the doctor or dentist that you are using heparin.
- tell your doctor if you smoke or use tobacco products and if you stop smoking at any time during your treatment with heparin. Smoking may decrease the effectiveness of this medication.

If you will be injecting heparin at home, your healthcare provider will tell you how to store the medication. Follow these directions carefully. Be sure to keep this medication in the container it came



in, tightly closed, and out of reach of children. Store it at room temperature and away from excess heat and moisture (not in the bathroom). Do not freeze heparin.

It is important to keep all medication out of sight and reach of children as many containers (such as weekly pill minders and those for eye drops, creams, patches, and inhalers) are not child-resistant and young children can open them easily. To protect young children from poisoning, always lock safety caps and immediately place the medication in a safe location – one that is up and away and out of their sight and reach.

Keep all appointments with your doctor and the laboratory. Your doctor will order certain lab tests to check your body's response to heparin. Your doctor may ask you to check your stool for blood using an at-home test.

Before having any laboratory test, tell your doctor and the laboratory personnel that you are using heparin.

Do not let anyone else use your medication. Ask your pharmacist any questions you have about refilling your prescription.

It is important for you to keep a written list of all of the prescription and nonprescription (over-the-counter) medicines you are taking, as well as any products such as vitamins, minerals, or other dietary supplements. You should bring this list with you each time you visit a doctor or if you are admitted to a hospital. It is also important information to carry with you in case of emergencies.

Literature

1. "Heparin". 2012-02-10. Archived from the original on 2012-02-15.
2. "Heparin Sodium". The American Society of Health-System Pharmacists. Archived from the original on 27 January 2016. Retrieved 1 January 2016.
3. "Heparin (Mucous) Injection BP – Summary of Product Characteristics". Electronic Medicines Compendium. September 2016. Archived from the original on 20 December 2016. Retrieved 15 December 2016.
4. Alquwaizani M, Buckley L, Adams C, Fanikos J (June 2013). "Anticoagulants: A Review of the Pharmacology, Dosing, and Complications". *Current Emergency and Hospital Medicine Reports*. 1 (2): 83–97. doi:10.1007/s40138-013-0014-6. PMC 3654192. PMID 23687625.
5. McClatchey KD (2002). *Clinical Laboratory Medicine*. Lippincott Williams & Wilkins. p. 662. ISBN 9780683307511. Archived from the original on 2017-09-10.