Read all of this leaflet carefully before you are given this medicine because it contains important information for you.

- Keep this leaflet. You may need to read it again.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you have any further questions, ask your doctor or nurse.
- If you get any side effects, talk to your doctor or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet
1. What Heparin 5,000 I.U./ml is and what it is used for
2. What you need to know before you are given Heparin 5,000 I.U./ml
3. How Heparin 5,000 I.U./ml is given
4. Possible side effects
5. How to store Heparin 5,000 I.U./ml
6. Contents of the pack and other information

1. WHAT HEPARIN 5,000 I.U./ml IS AND WHAT IT IS USED FOR
The name of this medicine is Heparin 5,000 I.U./ml Solution for injection (referred to as ‘Heparin 5,000 I.U./ml’ in this leaflet). Heparin 5,000 I.U./ml belongs to a group of medicines called anticoagulants. Heparin prevents blood clotting

Heparin 5,000 I.U./ml is used to treat and prevent:
- Blood clots in leg veins (deep vein thrombosis)
- Blood clots in the lung (pulmonary embolism) as well as for:
  - The treatment of chest pains resulting from disease of the heart arteries (unstable angina pectoris)
  - The treatment of severe blockages affecting arteries in the legs (acute peripheral arterial occlusion)
  - The prevention of blood clots in the heart following a heart attack (mural thrombosis)

It is also used during heart and lung operations and during kidney dialysis.

2. WHAT YOU NEED TO KNOW BEFORE YOU ARE GIVEN HEPARIN 5,000 I.U./ml
You should not be given Heparin 5,000 I.U./ml if you:
- are allergic to heparin or any of the other ingredients of this medicine (listed in section 6)
- are pregnant
- bleed or bruise easily
- have had severe skin problems resulting from previous heparin treatment
- are about to have surgery of the brain, spine or eye, a lumbar puncture or local anaesthetic nerve block or some other procedure where bleeding could be a problem

Heparin 5,000 I.U./ml must not be given to premature or newborn babies or children up to 3 years of age.

Warnings and precautions
Talk to your doctor or nurse before receiving Heparin 5,000 I.U./ml. Particularly careful medical supervision is required if you:
- are over 60 years of age
- have any condition which makes you likely to bleed more easily. If you are unsure, ask your doctor or nurse.
- are diabetic
- have high levels or potassium in your blood or are taking a medicine that may increase the potassium level in your blood
- have kidney or liver disease. Your doctor may decide that a lower dose is necessary
- suffer from allergies or have previously had an allergic reaction to heparin.

Your doctor will check your blood if you receive treatment for longer than five days and may do other blood tests if you have major surgery.

Children
Heparin 5,000 I.U./ml must not be given to premature or newborn babies or children up to 3 years of age.

Other medicines and Heparin 5,000 I.U./ml
Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines.

Some medicines may affect the way heparin injection works. Taking some medicines at the same time as heparin may mean you may be likely to bleed more.

In particular, tell your doctor if you are taking any of the following:
- Aspirin or other non-steroidal anti-inflammatory drugs (e.g. diclofenac or ibuprofen)
- Medicines which may interfere with the proper clotting of the blood (e.g. dipyridamole, epoprostenol, clopidogrel or streptokinase)
- Medicines that may increase the potassium level in your blood
- Glyceryl trinitrate (for heart disease)

If you need one of the above medicines your doctor may decide to alter the dose of heparin injection or the other medication.

If you have any doubts about whether this medicine should be administered then discuss things more fully with your doctor or nurse before Heparin 5,000 I.U./ml is given.

Pregnancy and breast-feeding
If you are pregnant or breast-feeding, think may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before receiving this medicine.

You should not be given Heparin 5,000 I.U./ml if you are pregnant.

Driving and using machines
Heparin injection has not been reported to affect ability to drive or operate machines.

Heparin 5,000 I.U./ml contains benzyl alcohol
Heparin 5,000 I.U./ml contains benzyl alcohol which may cause toxic and allergic reactions (possibly delayed) and exceptionally bronchospasm.

3. HOW HEPARIN 5,000 I.U./ml IS GIVEN
Your doctor or nurse will inject your dose of heparin into a vein either at once or over a longer period of time (usually via a drip). Alternatively they may inject your heparin underneath your skin.

Heparin injection must not be given to premature or newborn babies.

You may require a lower dose if you have kidney or liver disease.

To prevent blood clots in leg veins (deep vein thrombosis) and blood clots in the lung (pulmonary embolism)

Adults
The usual dose of heparin injection in adults is 5,000 units injected under the skin 2 hours before your operation, followed by:
- 5,000 units injected under the skin every 8-12 hours, for 7-10 days or until you are fully able to move about.

Elderly
Lower doses may be used in the elderly. You may need to have blood tests if you are elderly, to check on the effects of your heparin treatment.

Heparin injection must not be given to premature or newborn babies.

To treat blood clots in leg veins (deep vein thrombosis) and blood clots in the lung (pulmonary embolism).

Adults
The usual dose in adults is 5,000 units injected into a vein. This is followed by:
- 1,000-2,000 units/hour injected slowly into a vein or
- 10,000-20,000 units 12 hourly injected under the skin or
- 5,000-10,000 units 4 hourly injected all at once into a vein.

Elderly
Lower doses may be used in the elderly.
Small adults and children
Small adults and children will be given 50 units/kg bodyweight injected into a vein followed by:
- 15-25 units/kg bodyweight/hour injected slowly into a vein or
- 250 units/kg bodyweight 12 hourly injected under the skin or
- 100 units/kg bodyweight 4 hourly injected all at once into a vein

To treat chest pains (unstable angina pectoris) and severe blood clots in the arteries (acute peripheral arterial occlusion)

Adults
The usual dose in adults is 5,000 units injected into a vein. This is followed by:
- 1,000-2,000 units/hour injected slowly into a vein or
- 5,000-10,000 units 4 hourly injected all at once into a vein.

Elderly
Lower doses may be used in the elderly

Small adults and children
Small adults and children will be given 50 units/kg bodyweight injected into a vein followed by:
- 15-25 units/kg bodyweight/hour injected slowly into a vein or
- 100 units/kg bodyweight 4 hourly injected all at once into a vein

To prevent a blood clot in the heart following a heart attack.

Adults
The usual dose for adults is 12,500 units 12 hourly injected under the skin for at least 10 days.

Elderly
A lower dose may be needed.

During Heart and Lung Surgery (Adults)
Initially you will be given 300 units/kg body weight. This will be changed according to the results of your blood tests.

During kidney dialysis (Adults)
Initially you will be given 1,000-5,000 units. This will be changed according to the results of your blood tests.

If you think you have been given too much Heparin 5,000 I.U./ml
Your doctor will decide which dose is best for you.

Too much heparin can cause bleeding. Slight bleeding can be stopped by stopping your heparin treatment. However if you have more severe bleeding you may need blood tests and an injection of a medicine called protamine sulphate.

If you think too much medicine has been given to you, contact your doctor or nurse.

If you have any further questions on the use of this medicine, ask your doctor or nurse.

4. POSSIBLE SIDE EFFECTS
Like all medicines, this medicine can cause side effects, although not everybody gets them.

If any of the side effects gets serious, or if you notice any side effects not listed in this leaflet, tell your doctor or pharmacist.

Important side effects to lookout for (frequency not stated):
Severe allergic reactions
Heparin can cause a severe allergic reaction with wheezing, difficulty breathing, a blue tinge to the lips, fever, chills, swelling of the eyes and lips and shock.

If you think you are having a severe allergic reaction you must stop receiving heparin and tell your doctor or nurse immediately.

Bleeding and Bruising
Signs that you are bleeding more easily include:
- unusual bruising or purple spots on your skin
- unusual bleeding from your gums
- unusual nose bleeds
- blood in your urine (which may cause this to go dark)
- black, tarry-looking stools
- bleeding that will not stop from any operation site or other injury

If you are concerned about unusual bleeding you must tell your doctor or nurse immediately as you may need to stop your heparin treatment.

Other side effects (frequency not stated) include:
- red lumps or red, itchy patches like eczema often develop 3-21 days after the start of heparin treatment, where injections have been given under the skin
- sloughing of skin may occur around the injection site.

• persistent erection of the penis
• abnormal results for blood tests that report on how the liver is working
• high level of blood fats after stopping heparin
• high or low blood potassium. If affected you may feel tired and weak.

If heparin injection is given over many months then the following may occur:
- loss of hair
- thinning of the bones (osteoporosis)

Reporting of side effects
If you get any side effects, talk to your doctor or, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard. By reporting side effects you can help provide more information on the safety of this medicine.

5. HOW TO STORE HEPARIN 5,000 I.U./ml
Keep this medicine out of the sight and reach of children.

Your doctor or nurse will usually be responsible for storing and preparing injection before use and for checking that the vials have not passed their expiry date stated on the carton and the label. This medicine must not be used after the expiry date which is stated on the carton and the label. The expiry date refers to the last day of that month.

Heparin injection should not be given if it shows signs of deterioration such as discolouration.

Chemical and physical in-use stability after reconstitution in glucose 5% and in 0.9% sodium chloride solution has been demonstrated for 48 hours at 18-22°C.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. CONTENTS OF THE PACK AND OTHER INFORMATION

What Heparin 5,000 I.U./ml contains
- The active substance is heparin sodium
- Each vial with 5 ml solution for injection contains 25,000 I.U. of heparin sodium.
- The other ingredients are benzyl alcohol, sodium hydroxide, hydrochloric acid, water for injections.

What Heparin 5,000 I.U./ml looks like and contents of the pack
Heparin 5,000 I.U./ml is available in packs of 10 vials.

Marketing Authorisation Holder and Manufacturer
Marketing Authorisation Holder
PANPHARMA
Z.I. du Clairay
35133 Luitré
France

Manufacturer
ROTEXMEDICA GmbH
Arzneimittelwerk – Bunsenstrasse 4
D-22946 TRITTAU
GERMANY

This leaflet was last revised in July 2016.