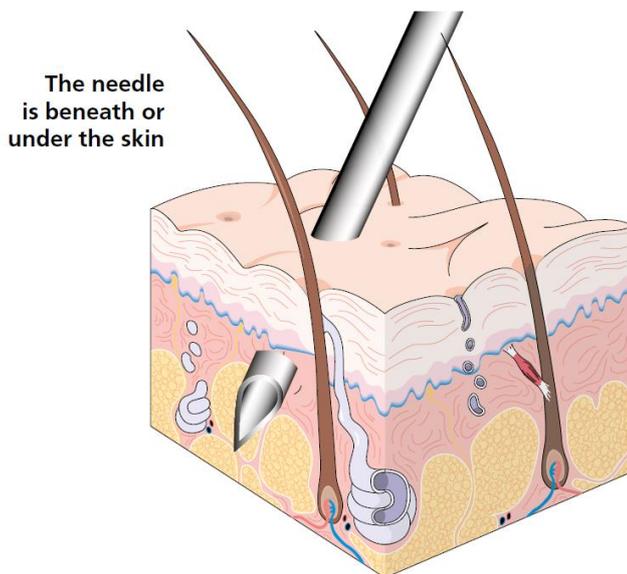


Giving subcutaneous injections: information for families

This information sheet from Great Ormond Street Hospital (GOSH) explains about subcutaneous injections and why they might be needed. It also describes how to give a subcutaneous injection to your child and should act as a reminder for the teaching you received at GOSH.

A subcutaneous injection is given into the subcutaneous fat under the skin. The skin is made up of different layers. Underneath the epidermis and dermis, which contain sweat glands and hair follicles, is a layer of fat. This is the area into which subcutaneous injections are given.



We use three types of device to give subcutaneous injections at GOSH: an ordinary syringe, auto-injector and pen device. This information sheet mainly covers the use of a syringe to give the injections. Information about auto-injectors and pen devices is provided in the packaging and our nurses will teach you how to use them safely.

Why does my child need subcutaneous injections?

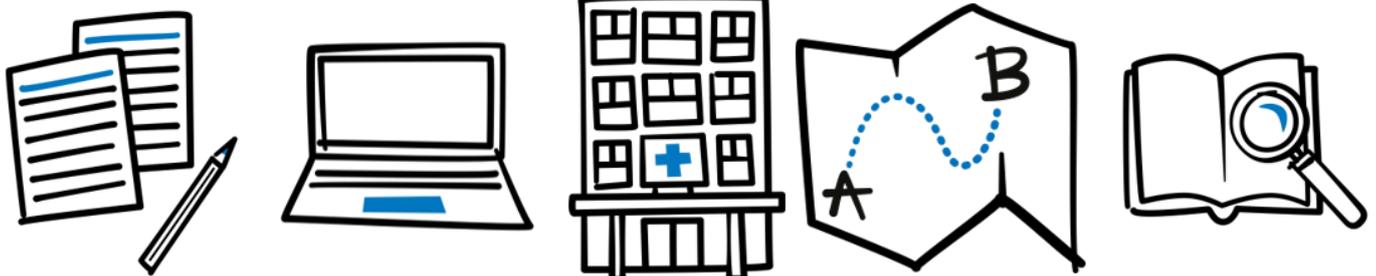
Some medicines work best when they are injected under the skin into the fatty layer. These medicines need to be absorbed more slowly than others that are taken by mouth or injected into a vein. Medicines given subcutaneously at GOSH include octreotide, growth hormone, mecasermin (insulin-like growth factor), insulin, glucagon and epinephrine.

Will they hurt?

Subcutaneous injections can be painful but there are various ways you can reduce this pain. You will find that your child finds them less painful as they get used to them and as your injection technique improves.

Avoiding nerve endings

The skin is full of nerve endings, which can send a pain message to the brain if they are touched by the needle. They branch out throughout the skin



but you can work out where they are by gently pressing the skin to see which area is less painful.

Some areas of the body also contain fewer nerve endings than others. For instance, most children find that some areas of the thighs are less painful than the abdomen.

Inserting the needle

How you insert the needle can also make a difference. The needles are designed so that the sharp end is cut at a 45° angle. If you insert the needle with the cut angle facing towards the skin, this will be painful. However, if you insert it with the cut angle facing upwards, the point will be inserted into the skin first and so will be less painful.

Rotation of injection sites

One important factor in making subcutaneous injections less painful and reducing irritation at the injection site is to rotate the position on the body where you give the injections.

There are several areas of the body suitable for giving subcutaneous injections. As a general rule, suitable areas are those with a substantial amount of fat below the skin, so the thighs, buttocks and abdomen tend to be most suitable in children.

As your child grows, other areas may become suitable as well, such as the upper arms but these vary from child to child.

Some parents find that it helps to put a small circular plaster over the injection site to mark it as a reminder for the next injection.

It is important to rotate the injection sites daily. Injecting the medicine into the same area all the time will cause a fatty lump (lipohypertrophy) to form. While these are not dangerous in themselves, medicine will be absorbed more slowly through them.

Preparing your child for the injection

There are lots of techniques you can use to prepare your child for injections and to distract them while the injection is happening. Talk to your play specialist or read our *Distraction therapy* information sheet for ideas. We will make sure that you feel confident in giving subcutaneous injections by the time you leave GOSH but if you have any concerns, support and advice is always available on the telephone.

Getting ready to give the subcutaneous injection

You will need

- Cleaning wipe
- Medicine bottle
- Syringe package
- Cotton wool or gauze
- Site rotation chart

What to do

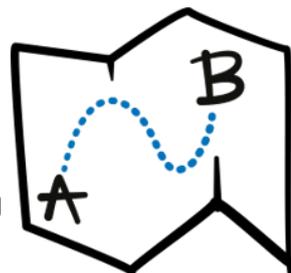
1. Wash your hands
2. Wipe the top of the medicine bottle with the cleaning wipe and leave to dry
3. Choose the injection site for this dose
4. Open the syringe package and put on a clean surface
5. Insert the needle into the top of the bottle at an angle of 90°
6. Pull back the plunger and draw up slightly more than the prescribed dosage
7. Remove the needle from the bottle

Note: If you are using an auto injector or pen device, load it according to the instructions in the package and how you have been taught.

Giving the subcutaneous injection

What to do

8. Holding the needle upwards, tap the syringe gently to move any air bubbles towards the needle



9. Push the plunger gently to remove the air bubble and squirt a small amount of the medicine into the air
10. Lift the skin in the chosen injection area between your thumb and index finger
11. Holding the needle at a 90° or 45° angle as shown by your nurse, insert the needle into the skin fold

Note: If you are using a 5-6mm needle, you do not need to lift the skin into a skin fold as described above.

12. Continue to hold the skin and push the syringe plunger to inject the medicine while counting to 10 slowly
13. Remove the needle from the skin and let go of the skin fold
14. Put a piece of cotton wool or gauze over the injection site for a few seconds

15. Throw the syringe away in a 'sharps' bin as you have been taught
16. Mark the injection site on your site rotation chart

Note: If you are using an auto injector or pen device, after you have given the injection, remove the needle from the device as you have been shown and dispose of it in the sharps bin.

What do I do when the sharps bin is full?

When we taught you how to give subcutaneous injections, we will have explained about disposal of the syringes.

We will give you a sharps bin to take home with you but when it is full, please call your community team to ask them to dispose of it and give you a new one. All other packaging, such as the syringe package and medicine bottles can be disposed of with your normal household rubbish.

Further information and support

If you have any questions, please call your clinical nurse specialist or the ward from which your child was discharged.

