

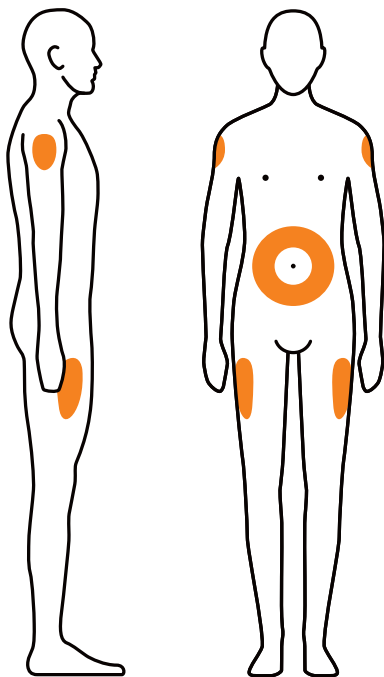
The Subcut Handbook

A guide to subcutaneous
injecting technique

Introduction

Subcutaneous (also known as ‘subcut’) injecting is the injection of a small amount of medicine just under the skin into the fat layer below, so that it can be slowly absorbed into the bloodstream.

This booklet has been written to explain how to expertly deliver a subcutaneous injection. It describes how to carefully draw up, and inject with minimal pain and risk of skin damage and infection.



Subcutaneous injecting sites

You can prevent injecting site damage, and hardening of the skin by rotating injecting sites, leaving as much time as possible between injections into the same spot.

The best sites for subcutaneous injecting are:

- Abdomen (at least 5cm away from the belly button)
- Upper outer thighs
- Upper outer arms

If an injecting site becomes painful, red, or hot the most likely cause is an infection. If this happens, see your GP, or call 111 so that you can be assessed and treated if necessary.

Getting the whole dose

There is a space between the needle and the plunger where drug remains after injecting. This is known as the 'dead space'.



You can reduce the amount of drug left in the syringe by choosing low dead space equipment. Low dead space needles and syringes have less space between the needle and the plunger so there is less wasted drug and lower risk of passing on infection if the syringe is accidentally shared.

LOWEST DEAD SPACE

HIGHEST DEAD SPACE

Low dead
space syringe

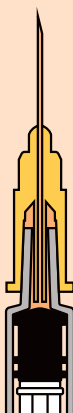


Insulin type
syringe

Fixed
needle

Dead space
under 5 μL

Low dead
space needle

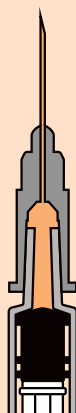


Standard
syringe

Total Dose
detachable needle

Dead space
under 35 μL

High dead
space



Standard
syringe

Standard
detachable needle

Dead space
typically 90 μL

Preparation

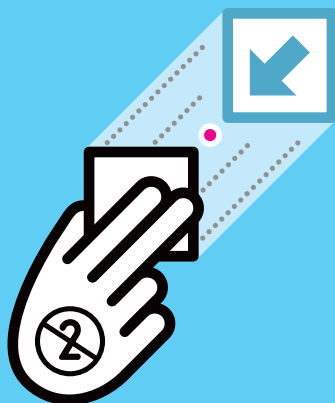
Ensure the area used to prepare your injection is clean.

Gather everything you need, including a sharps bin for disposal when you're finished.

Wash your hands thoroughly with soap and water to prevent bacterial infection.

Use an alcohol swab to clean the top of the vial.

Use another alcohol swab to wipe over the injecting site **once, in one direction.**



Keeping your needle sharp

Needles are super sharp, for an easy (almost) painless single puncture of the skin.

To keep it sharp, the needle must be uncapped correctly, as contact between the needle and the cap can easily blunt the needle.

The action of piercing the rubber stopper on a multi-dose vial can also blunt the needle, for this reason it is recommended that you change the needle or syringe after drawing up from a multi-dose vial, and before injecting.



Cap removal

Fine needles are very delicate – any contact with the inside of the cap can blunt them.

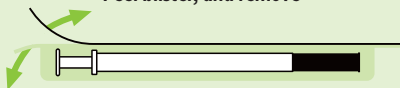


Do not hold the syringe out in front of you and pull off the cap in a single motion: the rotation of your arms around your chest will bring the needle into contact with the cap and blunt it.

**Do not hold the syringe out in front of you
and pull off the cap in a single motion**



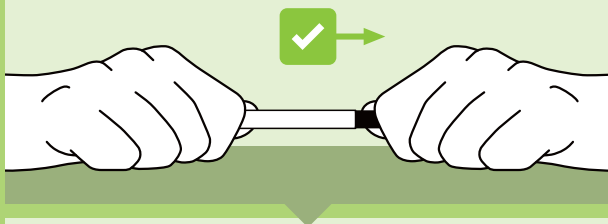
Peel blister, and remove



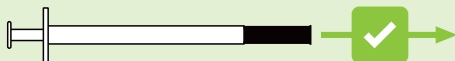
Rotate cap to break seal



With hands on a firm surface, give a short, one direction controlled pull to release contact between syringe and cap



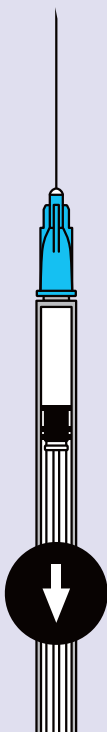
Straight pull



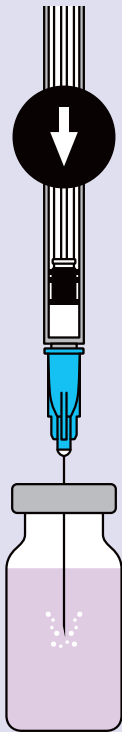
Drawing up from the vial

- 1** Pull the syringe plunger back to draw up a volume of air equal to the amount of medication you want to draw up.
- 2** Insert the needle into the centre of the vial's rubber stopper and push the air into the vial. (This prevents a vacuum forming that makes it difficult to draw up).
- 3** With the needle inside, turn the vial upside down. Make sure the needle tip is still in the liquid.

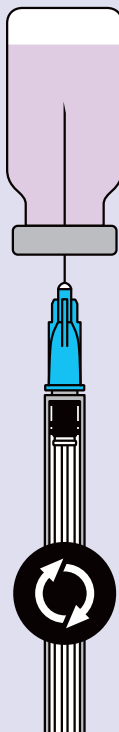
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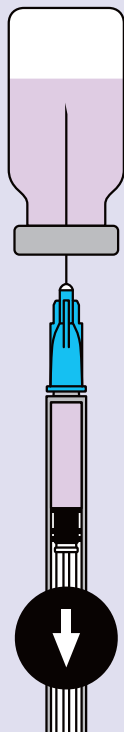


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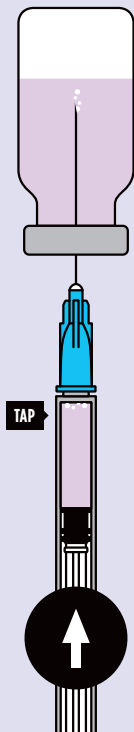


- 4** Pull back on the plunger to draw up slightly more than you need.
- 5** Tap the barrel of the syringe gently to force any air bubbles to the top, then push the plunger to expel remaining air.
- 6** Remove the needle from the vial and change to a new sterile needle or syringe for injecting.

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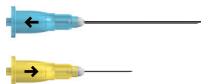
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Injecting with a detachable needle and syringe

You will need

- 2 x swabs (one for cleaning the top of the vial and one for cleaning the injecting site)
e.g. Exchange Supplies product A205
- 1 x syringe (barrel)
e.g. Exchange Supplies product TDC1W
- 1 x needle for drawing up from a vial
e.g. Exchange Supplies product TB30
- 1 x thin needle for injecting
e.g. Exchange Supplies product TY13
- 1 x sharps bin for disposal
e.g. Exchange Supplies product A162



Injecting with a detachable needle and syringe

- 1** Ensure the area used to prepare your injection is clean.
- 2** Wash your hands thoroughly, and clean skin around injecting site.
- 3** Use an alcohol swab to wipe over the top of the vial.
- 4** Use another alcohol swab to wipe over the injecting site once, in one direction.
- 5** Draw up from the vial into the syringe with a new needle (see page 14).
- 6** Remove the needle from the end and place in a sharps bin.
- 7** Attach a new needle to the syringe.

- 8** Pinch 1–2 inches of skin and fat with your thumb and forefinger.
- 9** Carefully insert the needle at 90-degree angle, holding it like a dart (45 degrees for people with extremely low body fat).
- 10** Take your time and inject slowly (20 seconds or so).
- 11** Dispose of all used equipment in a sharps bin. (Return to your needle exchange/pharmacy).

Injecting with a detachable needle and syringe

When you are ready to inject, pinch 1–2 inches of fat and skin, making sure not to pull the skin too tight.

Hold the needle like a dart and push it under the skin without hesitation with a firm, single push.

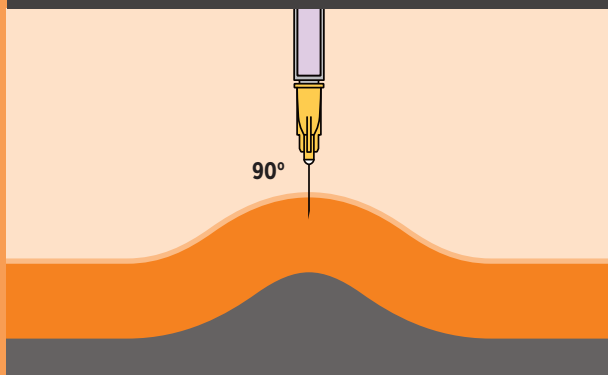
The angle is important.

Normal or high body fat: push it in at a 90-degree angle.

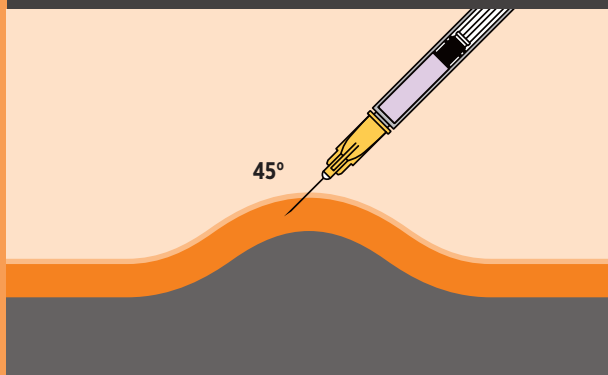
Low body fat: insert at 45 degrees.

Take your time and inject slowly (20 seconds or so).

Normal or high body fat



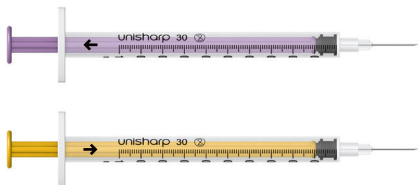
Low body fat



Injecting with a fixed needle syringe

You will need

- 2 x swabs (one for cleaning the top of the vial and one for cleaning the injecting site)
e.g. Exchange Supplies product A205
- 1 x syringe for drawing up from a vial
e.g. Exchange Supplies product UF30M
- 1 x syringe for injecting
e.g. Exchange Supplies product UF30M
- 1 x sharps bin for disposal
e.g. Exchange Supplies product A162



Injecting with a fixed needle syringe

- 1** Ensure the area used to prepare your injection is clean.
- 2** Wash your hands thoroughly, and clean skin around injecting site.
- 3** Use an alcohol swab to wipe over the top of the vial.
- 4** Use another alcohol swab to wipe over the injecting site once, in one direction.
- 5** Draw up from the vial using a sterile syringe (see page 14).
- 6** Transfer the drug solution to a new sterile syringe (see page 28 for backloading instructions).
- 7** Dispose of the empty syringe in a sharps bin.

- 8** Pinch 1–2 inches of skin and fat with your thumb and forefinger.
- 9** Carefully insert the needle at 90-degree angle, holding it like a dart (45 degrees for people with extremely low body fat).
- 10** Take your time and inject slowly (20 seconds or so).
- 11** Dispose of all used equipment in a sharps bin. (Return to your needle exchange/pharmacy).

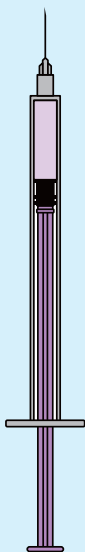
‘Backloading’ fixed needle syringes

Backloading

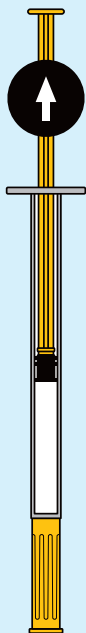
Transferring liquid from one syringe to another so that you have a fresh needle to inject with:

- 1** Draw your medication into the syringe from the vial (see page 14).
- 2** Take a second syringe from its blister pack and remove the plunger.
- 3** With the cap still on, hold this new syringe needle facing down.

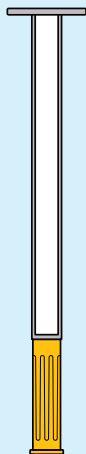
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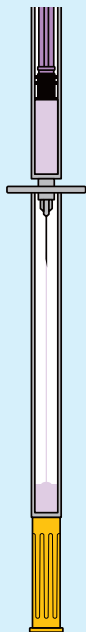
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‘Backloading’ fixed needle syringes

- 4 Take the syringe containing the drug and squirt the contents into the second syringe where you have removed the plunger.
- 5 With the cap facing down, put the plunger back in but **don’t** push – this will expel all the liquid from the syringe.
- 6 Hold the plunger firmly in place without pushing, turn the syringe slowly upwards and gently tap the barrel so that the liquid moves back down the syringe.

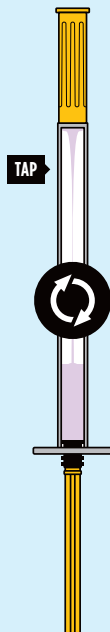
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‘Backloading’ fixed needle syringes

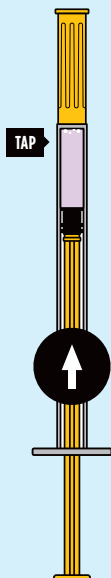
- 7** Once all the liquid has dropped to the plunger end, you can begin to depress the plunger until the liquid is at the top of the syringe.
- 8** Tap the barrel of the syringe gently to force any air bubbles to the top, then push the plunger to expel remaining air.
- 9** The syringe is now ready for injecting.

We have included this guidance because some people prefer to use a fixed needle syringe for drawing up and we advise against using the same syringe for injecting. We recommend using a syringe barrel with a detachable needle for drawing up, so the needle can be replaced easily with a new one for injecting.

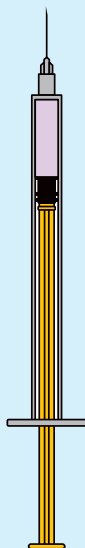
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Injecting with a fixed needle syringe

When you are ready to inject, pinch 1–2 inches of fat and skin, making sure not to pull the skin too tight.

Hold the needle like a dart and push it under the skin without hesitation with a firm, single push.

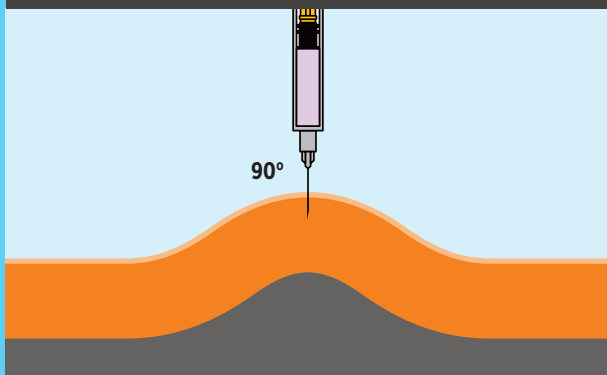
The angle is important.

Normal or high body fat: push it in at a 90-degree angle.

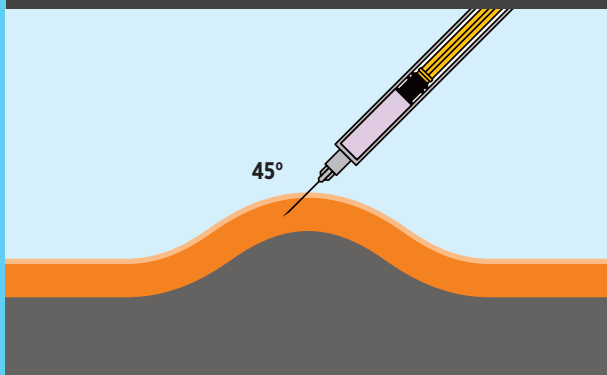
Low body fat: insert at 45 degrees.

Take your time and inject slowly (20 seconds or so).

Normal or high body fat



Low body fat



Injecting with pen needles

You will need

- 1 x swab (for cleaning the injecting site)
e.g. Exchange Supplies product A205
- 1 x pen injector
- 1 x pen needle
e.g. Exchange Supplies product PU324
- 1 x sharps bin for disposal
e.g. Exchange Supplies product A162



Injecting with pen needles

- 1** Ensure the area used to prepare your injection is clean
- 2** Wash your hands, and thoroughly clean skin around injecting site.
- 3** Use an alcohol swab to wipe over the injecting site once, in one direction.
- 4** Take the needle out of its sterile packaging and remove the cap.

- 5** Attach the needle to your injector pen and prime, following the manufacturer's instructions.
- 6** Inject as directed in pen's instruction leaflet.
- 7** Dispose of all used equipment in a sharps bin.

Injecting with a pen needle

When you are ready to inject, hold the needle like a dart and push it under the skin without hesitation with a firm, single push.

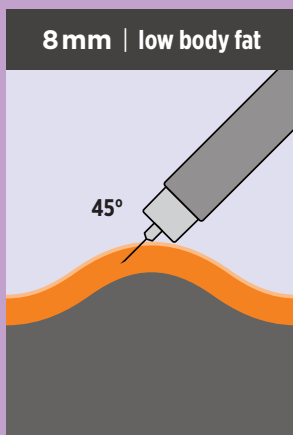
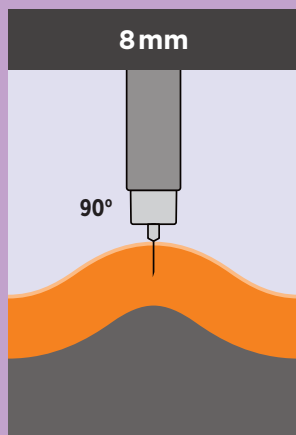
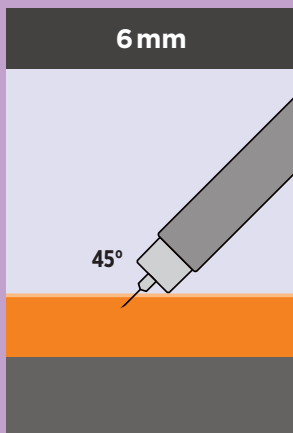
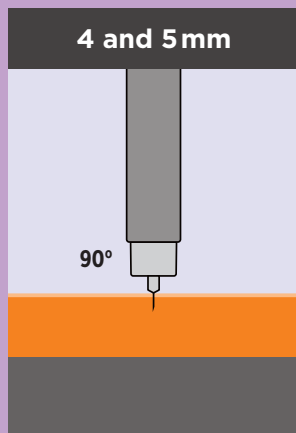
The angle is important.

4 and 5mm needles: carefully insert the needle at a 90-degree angle.

6mm needles: carefully insert the needle at a 45-degree angle.

8mm needles: pinch 1–2 inches of skin and fat with thumb and forefinger and carefully insert the needle at a 90-degree angle (or 45 degrees for people with extremely low body fat).

Take your time and inject slowly (20 seconds or so).



The Subcut Handbook

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The Subcut Handbook will be regularly updated
– if you have any comments or suggestions,
please send them to deb@exchangesupplies.org

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we stock that might be of interest include:

What works? (product code: A299)

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(product code: P099)

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The Subcut Handbook is a guide for people who are using medications specifically formulated for subcutaneous injection such as peptides and some hormone treatments.

This booklet does not cover intramuscular or intravenous injecting.

You can use it to familiarise yourself with the safest methods for subcutaneous injecting and the needle and syringe combinations that might cause less damage to your injecting sites.

You can order copies of this book from exchangesupplies.org, the product code is P305.

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