A.MENARINI diagnostics

Blood glucose testing & insulin injecting techniques

How to finger prick painlessly

Anyone who regularly needs to check their blood glucose and blood ketone levels will agree that they want to get their blood samples without pain and discomfort.

Age, gender and profession will all have an affect on how you prick your finger and any discomfort you may or may not feel, but there are steps you can follow which can improve your experience of this procedure.

If you are someone who works with their hands and has thick skin, your finger pricker settings and needle type may need to be different from someone of advanced age or a young child with small fingers. There are a number of things to consider when you begin to test.

It's all about the system

Check your blood glucose meter; less blood = easier testing

The first thing to consider when blood glucose and blood ketone monitoring is what meter system to use. There have been great improvements in systems over recent years but if you are using an older style meter that needs a lot of blood (over 1.0µl of blood for instance) you may still need to use a lancet that is quite thick to get enough blood from your finger.

Newer blood glucose and blood ketone meters work with very small amounts of blood (only around 0.5µl of blood) allowing you to use a very thin lancet to prick your finger. A thinner needle will give less discomfort than a thicker one. If you have a meter which is 2-3 years old, it is very simple to upgrade to a newer system. Simply ask your nurse, pharmacist or doctor for information on current systems available from us, or see the back of this leaflet.

Here are other hints & tips to help towards pain–free testing...



Find the lancet and pricking device that's right for you

Once you have a meter that works with small blood samples, it is important to use the right needle and lancing device. It can be confusing knowing which one is best, but in general you want to use the thinnest needle you can to get a sufficient blood sample.

Needle size is shown in gauge or millimetres – the higher the gauge number the thinner the needle eg. 33g = 0.20mm thick whereas 30g = 0.31mm thick.

Once you have your lancet, you also need a great finger pricker (lancing device). Choosing one that has multiple depth penetration options allows you to change how deep the needle goes into your skin. Skin thickness and how well your fingers bleed will affect the settings you use.

A finger pricker which has force adjustment also offers another advantage as it lets you vary the needle thrust if one of your fingers has tough callus skin.

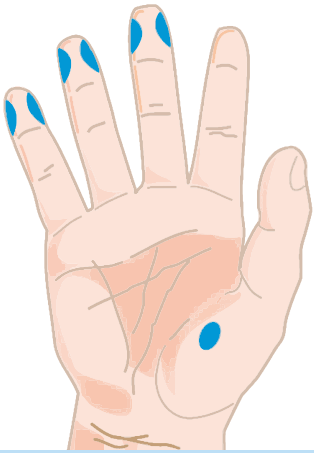
Now you have your system.... Before you go

Know where to prick

You have 5 digits on each hand for testing, and although you could use all of them most people prefer to not use their index fingers and thumbs, to ensure they don't become sore as they are used a lot in daily life.

To reduce trauma to your fingers, remember to change the digit you use each time you test and use both hands, this is called "rotating sites".

Check your meter user manual to see if you can use "alternative sites" for testing such as the base of your thumb- ask your diabetes team which areas are best for you.



It is important you test the correct area on your finger. Prick near the tip of the finger (above the knuckle) slightly to the side. Do not test on the pads of your finger, the tip or near the nail bed, these can be very painful and you may feel discomfort when you later try to pick something up. So remember, always use the side of the finger never right in the middle.

Once you have chosen your system try these tips to help you achieve the sample you need without any discomfort.

Keep your hand warm

Warming your hand will improve circulation. Rubbing the pricking area or washing in warm water will help. Remember to wash your hands with plain soap before and after you test to keep from getting infections and to remove contamination.

If you prick your finger with your fingertip pointing up the blood will have to travel up to come out. By pointing your finger down the blood will be able to come out easier. So test with your finger tips pointing down & below your heart.

Gently squeeze (milk) your fingertip

If enough blood has not come out, try gently milking the finger to help the blood come out. If still no blood, do another finger tip prick as the blood may have already clotted stopping the bleed, but remember to change to a new lancet before re-attempting.

In summary

- Rotate the site every time you test. Changing the site for each test gives time for the previous area used to heal and avoids calluses forming.
- Use a blood glucose and blood ketone meter that works with a tiny amount of blood as less blood needed means less tissue trauma, therefore less discomfort.
- Use a lancing device with depth & force adjustment so you can adjust the system to your skin type. Personalising your devices allows you to achieve the correct blood sample each time, first time.
- Use very thin lancets as they cause fewer traumas to skin tissue, offering more comfort.

How to inject insulin

Giving or receiving insulin injections becomes part of the daily diabetes routine, but the correct technique is vital to ensure your insulin is absorbed correctly and to ensure the procedure is as comfortable as possible.

The layers under the skin surface are the dermis, then the subcutaneous tissue and then the muscle layer. It is important that insulin is injected into the subcutaneous tissue to ensure that the insulin is reliably absorbed and that it is not injected into muscle as this is more painful and can cause the insulin to be absorbed more quickly, leading to hypos.

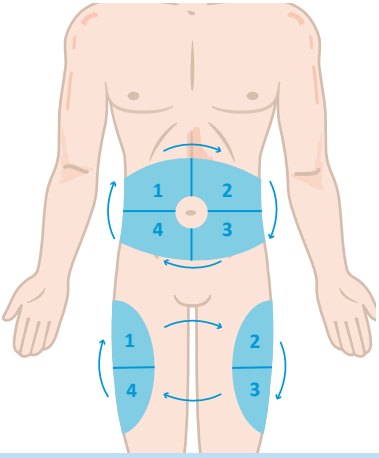
Use the correct insulin injection site

The abdomen (tummy) is the most common site for injecting insulin, however other areas can be used if this is not suitable for you. Other sites can be used, including the upper arms, upper buttocks and the outside of the thigh. These sites are most effective because they have a layer of fat to absorb the insulin better, have fewer nerve endings and are the most comfortable places to use.

You should discuss with your healthcare team which sites are best for you. The insulin you use may also affect which area is best for you as insulin can be absorbed differently through the various injection sites. Some sites are better for rapid absorption (abdomen), whereas others are better for slow absorption (thigh).

Of equal importance in the effort to gain optimum blood glucose control is the rotating of the insulin injection sites. This means varying the area used within each site and leaving a gap of an inch or more between the site of injections.

DO NOT KEEP INJECTING INTO THE SAME SPOT



Rotating sites – lumps and bumps

Failure to rotate insulin injection sites is an extremely common cause of poor blood glucose control and can also cause "lumpy" areas to form. Continuing to inject there will usually result in slower and erratic absorption of the insulin. This can cause variable blood glucose readings.

If lumpy areas form they can take at least 6-8 weeks to go away, so it is a good idea to check for "lumpy" injection sites regularly, as they may not necessarily be visible. If you are unsure how to do this ask a diabetes nurse specialist or a doctor in your diabetes team.

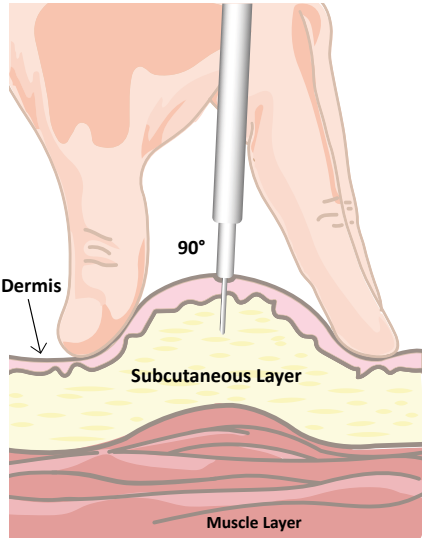
Pinching up

If you have a plentiful layer of fat, you may need to stretch the skin as you are aiming to inject into the subcutaneous layer.

If you are a thinly built person with little fat you can help ensure that the insulin is administered into the subcutaneous tissue by pinching the skin at the injection site if advised to do so by your healthcare professional.

You may also be able to change your needle to a shorter length and your healthcare professional can discuss these options with you.

Insulin should be injected straight into the skin at 90°.



Insulin pen needles are available in a variety of lengths (4mm-12mm) and widths (29G-33G) to suit all body types and individual preferences. The higher the gauge (i.e. 33G), the thinner the needle. Your healthcare professional will be able to advise you on what is the best pen needle type for you.

Here are other hints & tips to help towards good insulin injection technique

Be careful when injecting into the thighs

Exercise will speed up the absorption of insulin.

Change the insulin needle each time you inject

This is important and may make injections less painful in addition to preventing leakage of insulin from the cartridge.

If there is leakage from a cartridge of mixed insulins

The proportions of insulins will be affected so use a new cartridge.

"Cloudy" insulin must be re-suspended

It is important to ensure that the "cloudy" insulin in your pen device is correctly re-suspended to ensure the proportions of insulin are correct. Slowly turning the pen upside down 10- 15 times should achieve re-suspension of the insulin.

Check your pen needle length

Ask your diabetes team which length insulin pen needle is best for you.

In summary

- Only inject into your subcutaneous skin layer.
- Ask your diabetes team which needle length is best for you and if you need to "pinch up".
- Remember to "rotate" your injection area and leave over an inch between sites.
- Insulin is more rapidly absorbed from the abdomen.
- Check regularly for lumpy areas, and if you find any discuss them with your diabetes team.

A.MENARINI diagnostics

Diabetes Care Management Systems



Blood glucose and ketone testing, CGM, and diabetes consumables

Why Menarini?

At Menarini Diagnostics, we provide a total testing solution for people with diabetes, including blood glucose and ketone meters, continuous glucose monitors and other diabetes consumables.

Our blood glucose meter, GLUCOFIX TECH GK, has a best in class set of features to make glucose testing easier. These include contactless download to a free logbook app, hypo/hyper alerts and an extra-large memory (730 results).

All meters come with a finger pricker which has features such as 5 depth penetration settings and fingers-free lancet ejection.

Call: 0800 243 667 **Visit:** www.menarini-diabetes.co.uk

Email: customersupport@menarinidiag.co.uk **Follow:**

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