

## YOUR GUIDE TO INFUSION SETS, SITE SELECTION AND CARE





## GUIDE TO INFUSION SET TYPES

There are many types of infusion sets available through NZ Medical and Scientific Ltd. Our infusion sets are obtained through Animas and are all manufactured by Uno Medical which has a world wide reputation for producing high quality infusion sets for insulin pumps.

There are many options to consider when choosing which types of infusion set(s) you want to use and so we thought we would put together this guide to help you. Please contact your pump trainer to discuss the various options further, if you have any questions or would like to trial some.

The myriad of options available in infusion sets include

- ✿ Automatic or manual insertion
- ✿ Angled or straight cannula
- ✿ Metal or Teflon cannula
- ✿ Different cannula lengths
- ✿ Different line lengths
- ✿ Colour options

Prices for sets vary according to the type and this may also be an important consideration for you when choosing sets.

### Angled Sets



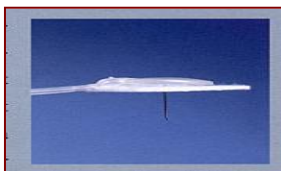
Angled insertions are especially suited for people that do not have a lot of fatty tissue as the angle can be changed to suit. A shallower angle can be used for areas where there is not a lot of subcutaneous fat and a deeper angle for areas where there is more. The recommended angle of insertion is between 20°-45°.

The standard cannula length is 17mm however shorter 13mm cannula lengths are also a great option for areas where there is not a lot of subcutaneous fat, very thin people and children.

Many people use a combination of the standard 17mm cannula and the shorter 13mm cannula length depending where on their body they are inserting.

Angled sets are also suitable for active people as the cannula is less likely to come out accidentally. The reason for this is that there is more cannula under the skin.

### Straight Sets



These sets are extremely easy to insert and so are a great option for those who are a bit tentative to insert or who do not have a lot of manual dexterity.

Straight sets end up at a predictable depth each time as they are inserted at 90°.

The straight in sets have shorter cannula so there is a higher risk that they can be pulled out accidentally.



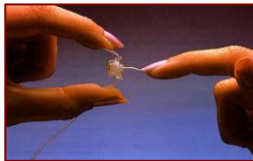
## Metal Cannula



Metal cannulas do not kink and are also a great option for people who have an allergy to Teflon.

Some people do say that they can feel the cannula under the skin but most find them very comfortable.

## Teflon Cannula



Teflon is a robust but flexible, soft material and therefore very comfortable to wear.

Metal needles are still used to insert the cannula under the skin and they are then removed to leave the teflon cannula behind.

## Manual Insertion



The speed of the insertion is controlled by the user.

These sets are cheaper than automatic inserters.

## Automatic Insertion



These sets are simple to insert with one hand and this means that more “real estate” can be used. Eg you can reach around to use the back of your bottom to insert your site.

The speed of the insertion also means that they are virtually painless to insert.

Automatic inserters are easy to use and so are a great option for caregivers and grandparents who may not have to perform a site insertion very often.

Automatic insertions are also a great option for those who have a needle phobia.

Now that you worked through the various options available, we have summarised some of the key features about the sets we offer incorporating these options.



## GUIDE TO INFUSION SETS

### Comfort™



The Comfort™ set is an angled set with a teflon cannula.

These sets are manually inserted on an angle between 20° and 45°.

The more subcutaneous fat there is, the greater the angle that the needle can be inserted within the recommended range.

The sites also have a clear viewing window so that sites can easily be checked for irritation, infection and dislodgement.

Site disconnected at the site.

#### Choices

13mm or 17mm cannula length.

60cm or 110cm line length

Boxes of 10 full sets or 10 cannulas/5 lines

### Contact™ Detach



The Contact™ Detach set is a straight set (90° insertion) with a metal cannula.

The Contact™ Detach is manually inserted and the introducer needle is also the cannula. The needle is made from hypo-allergenic stainless steel.

The Contact™ Detach is the flattest site in the range.

The site is disconnected at a separate point to the infusion site.



#### Choices

6mm or 8mm cannula length

60cm or 110cm length



## Inset™ II



The Inset™ II is a straight set (90° insertion) with a Teflon cannula.

The Inset™ II is an all-in-one concept featuring a built in automatic needle introducer.

Once the set is inserted the lid is replaced on the container which then becomes a sharps container to protect against accidental needle-stick injury.

Each disposable insertion device has less carbon footprint than a disposable coffee cup.

A small window in front of the cannula housing enables the pump user to easily check for signs of irritation or inflammation.

The Inset™ II has an easy grip reversible connector which disconnects at point of insertion.

### Choices

Pink, blue or grey

6mm or 9mm cannula length

60cm or 110cm line length

## Inset™ 30



The Inset™ 30 is an angled set with a Teflon cannula.

The Rolls Royce of all infusion sets. It has all of the advantages of an angled set but with all the advantages of an automatic insertion device.

The Inset™ 30 has a hidden introducer needle so it is a great option for people who have a needle phobia.

It comes with a 13mm cannula length and has a pre-fixed insertion angle of 30° to ensure consistent insertion depth.

A small window in front of the cannula housing enables the site to be easily checked for signs of irritation or inflammation.

Disconnection at point of insertion.

### Choices

Pink, blue or grey

60cm or 110cm line length



	<b>Inset™ 30</b>	<b>Inset™ II</b>	<b>Comfort™</b>	<b>Contact™ Detach</b>
<b>Degree of insertion</b>	<b>Angled</b>	<b>Straight</b>	<b>Angled</b>	<b>Straight</b>
<b>Cannula Type</b>	<b>Teflon</b>	<b>Teflon</b>	<b>Teflon</b>	<b>Metal</b>
<b>Insertion Type</b>	<b>Automatic</b>	<b>Automatic</b>	<b>Manual</b>	<b>Manual</b>
<b>Colours</b>	<b>Pink, blue, grey</b>	<b>Pink, blue, grey</b>	<b>Grey</b>	<b>Grey</b>
<b>Cannula Length</b>	<b>13mm</b>	<b>6mm, 9mm</b>	<b>13mm, 17mm</b>	<b>6mm, 8mm</b>
<b>Line Length</b>	<b>60cm, 110cm</b>	<b>60cm, 110cm</b>	<b>60cm, 110cm</b>	<b>60cm, 110cm</b>
<b>Price per box of 10</b>	<b>\$190</b>	<b>\$190</b>	<b>\$145</b>	<b>\$165</b>



## SITE SELECTION AND CARE

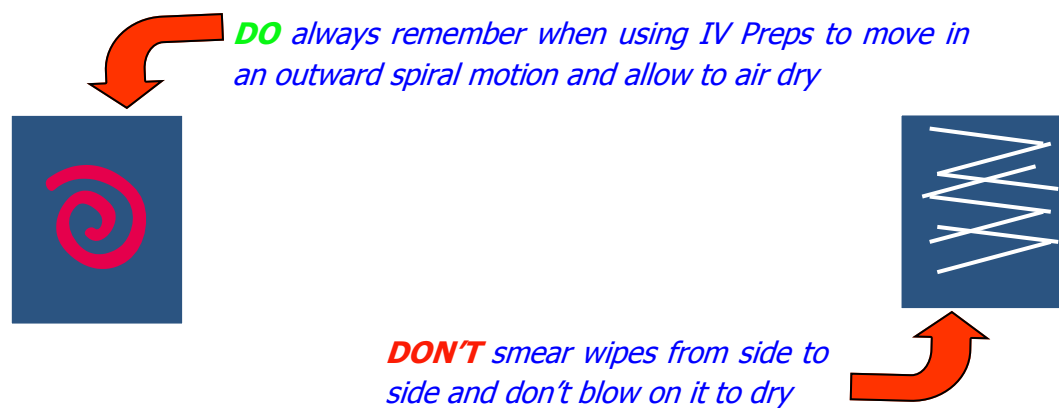
Your pump team will assist you in site selection. The most commonly recommended areas for site insertion are the abdomen and buttocks. Legs and arms can be used however they are muscular and move a lot. This can affect the insulin absorption dramatically and lead to unpredictability of blood glucose levels.

Avoid the area around the belly button and insert the new site at least 3cm away from the last site.

Sites should be changed every 2-3 days or as directed by your health care professional. This is because sites degrade and insulin absorption is reduced over this period. The risk of infection also increases the longer the site remains in. If you are unsure about what change regimen is best for you, always discuss with your clinical team.

As sites deteriorate, you may notice that you need more insulin for boluses or you need more corrections and your blood sugars just keep getting higher.

Remember aseptic technique. Make sure you wash and dry your hands thoroughly before performing a site change. Once you have washed your hands, don't cough or sneeze into them, rub them through your hair or do any other activity. If you do, start again.



Keep the new site and line inside the site packaging while you prepare the site, the packaging is sterile prior to opening and makes a convenient work surface.

When using IV Preps, wipe in an outward spiral and not side to side. You will notice better site adhesion if you insert the site after the liquid has evaporated but while it is still tacky.

Always insert your new site before removing the old one. The reasons for this are 2 fold. Firstly if there is an infection developing in the old site, handling the old site and then inserting a new site risks the transfer of the infection. The budding infection in the old site may not even be apparent at the time.

Secondly if you are out and have only one spare set, then if something goes wrong with a routine site change then at least you can reconnect to the old site (as long as the old site has not failed) until you get home.

After insertion check your site regularly for signs of infection or irritation.

Always check your blood glucose ~2 hours after insertion to check the site is functioning correctly.

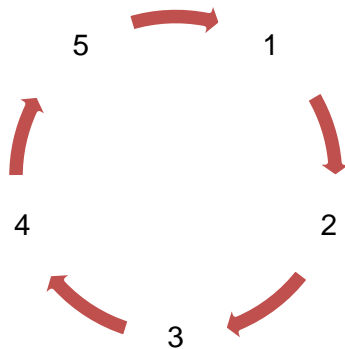
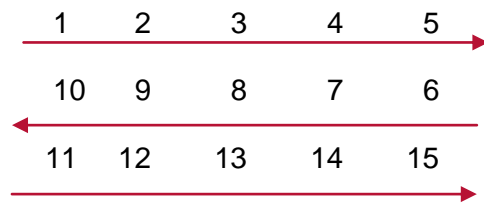
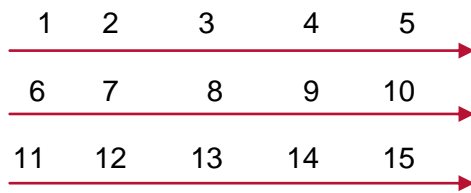


## Site Rotation

Regardless of the type of infusion set you use, it is important to change your sites regularly and rotate your sites.

Rotating the site location will help to ensure ideal insulin absorption, reduce the risk of infection and lessen the chance of lipohypertrophy occurring. (Lipohypertrophy is the clinical name for those bumps that develop under the skin from excessive use of an area). If you have these bumps, avoid the area for several weeks to allow them to heal.

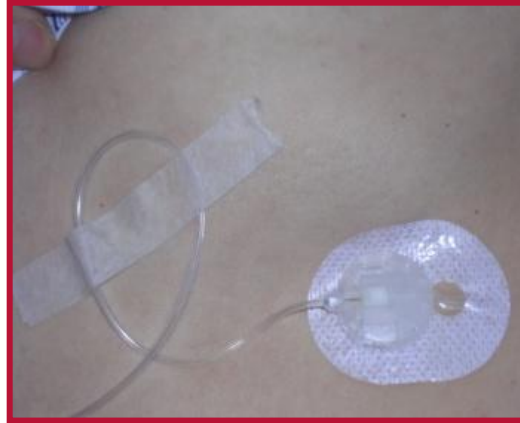
It does not matter what rotation method you use as long as it is done.





## Safety Loops

Remember to wear a safety loop. Without a safety loop, it is easy for the site to be tugged on when the line gets pulled. This can be caused by a multitude of incidents including sport, catching the line on door handles, going to the toilet, or getting out of bed.



Inserting a site causes minor trauma to the body which usually goes unnoticed by the pump user. After insertion, the body naturally begins to heal the damage. This results in the hardening of the surface along the cannula and a small path forms alongside. If movement at the site then occurs eg from sport or snagging the line, the gap can become large enough that insulin begins to leak from the end of the insertion set back to the surface of the skin. This is called tunneling.

Constant tugging at the site can also cause a leak in the set by rupturing the cannula where it connects to the set.

Not wearing a safety loop is a very common cause of increased scarring, nasty irritations, site infections and tunnelling.

Making a safety loop after connecting helps prevent this tugging. (See illustration) New tape should be used each time you reconnect.

Micropore tape or similar is commonly available in pharmacies and is not expensive. Certainly cheaper than replacing your set due to site failure and/or resultant infection.

