



Understanding Infusion Set Options

😊 Children with Diabetes*

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There are several ways to get insulin into your body, such as wearing insulin pumps or [automated insulin delivery systems \(AIDs\)](#). This can be very helpful since people come in all shapes and sizes, and one size rarely fits all. Knowing what options are available for the system you use can make all the difference to your satisfaction and success with that system.

What is available with what device?

Insulin Pump	Infusion Set Options Available
Beta Bionics iLet	Straight in cannula or steel needle
Insulet Omnipod	Only the angled proprietary cannula
Medtronic 780G	Straight in cannula normal or extended wear option, steel needle, or angled cannula
Tandem Control-IQ and Mobi	Straight in cannula, steel needle, or angled cannula

Details about each type:

Straight-in Cannula—Available for all options except the Omnipod is Medtronic’s Quick Set, Mio, and Extended Infusion Set. The length of the cannula is typically 6 mm or 9 mm, and the tubing can come in various lengths. For this type of infusion set, the cannula is inserted with a needle, then the needle comes out, with the cannula (thin tube) staying in the body for 3-4 days or 7 days for the extended wear infusion set.

Angled Cannula—These are typically best for those with little body fat and are available for Tandem and Medtronic pumps. The angled cannulas are longer (13 mm or 17 mm) but do not go all the way into the body. Some have built-in insertion devices, while others require manual insertion.

Steel Needle—This sounds much scarier than it is. It is a thin steel needle that stays in for the duration of the infusion set and should be changed every two days. This is an excellent option for someone who struggles with kinked cannulas or dexterity. All steel needle infusion sets are manually inserted. These are available in 6 mm, 8 mm, or 10 mm lengths. They also have an extra adhesive piece separate from the needle, which can help prevent it from being pulled out.

Type of Infusion Set	Brand Name	Compatible Device	Benefits	Challenges
Straight-in (90 degree) Cannula	Inset	Beta Bionics iLet	Self-contained system, flexible cannula	Can be difficult to insert
	AutoSoft 90	Tandem X2 or Mobi		
	AutoSoft XC	Tandem X2 or Mobi	Self-contained system, flexible cannula, larger grip for easier disconnection	
	Quick Set	Medtronic 780G, 670G	Easier to insert if issues with dexterity, flexible cannula	Requires separate insertion device and if not inserted properly can malfunction
	Mio Advanced	Medtronic 780G, 670G	Very easy insertion, self-contained system with flexible cannula	Still a cannula and not 7 day wear
	Extended Infusion Set	Medtronic 780G	Lasts 6-7 days, double the time of usual infusion set, self-contained flexible cannula, easy to insert	You get less supplies than when on a traditional infusion set
Steel Needle	Contact Detach	Beta Bionics iLet	No cannula to bend, easy to insert, extra adhesive	Needs to be changed every two days
	Sure-T	Medtronic 780G, 670G		
	Tru Steel	Tandem X2 or Mobi		
Angled Cannula (30 - 45 degree)	Silhouette	Medtronic 780G, 670G	Manual or separate insertion option, beneficial for lean people	More difficult to insert
	AutoSoft 30	Tandem X2 or Mobi	Self-contained system, beneficial for lean people	
	VariSoft	Tandem X2 or Mobi	Manual insertion for people who do not want an inserter, beneficial for lean people	

Why would you change infusion sets?

There are a lot of reasons why you may want to change your infusion set. Here are some examples of reasons to try a new type of infusion set:

- You are having a hard time keeping one type to stick.
- You have a lot of scar tissue and want to try the steel needle infusion set. Usually, you can tell if you have many kinked cannulas, have erratic blood sugars that are not easily explained, or can visibly see or feel scar tissue.
- Your body could have changed shape, and you want to try a different angle
- You could want to try a different location on your body, and a different type may be more suited to that area
- You could be having issues with irritation and want to switch from cannula to steel or steel to cannula.

- You want to try something new!

At the end of the day, the infusion sets are for your diabetes and your body, so you should get to decide which type you wear. The infusion set you want will likely change throughout your diabetes journey. During pregnancy, most choose to wear steel needles so that there is no risk of a kinked cannula.

How do you try a new type of infusion set?

The good news is that getting a different type of infusion set is usually easy. The easiest way is to ask your healthcare team to send a prescription for one month of the new infusion set. You may also have to call the company from which you get your diabetes supplies—this is either a pharmacy or a durable medical equipment (DME) company. You could also try to contact your local rep or healthcare team to see if they can give you a couple of samples.

In summary, the variety of infusion set options available ensures that people with diabetes have choices based on their needs or desires. Whether you opt for a straight-in cannula, angled cannula, or steel needle, each type offers different benefits for factors like body shape, sensitivity, and lifestyle. If you're experiencing challenges with adherence, skin irritation, or fluctuating blood sugars, switching to a different type of infusion set might help.

Ultimately, it's your decision what infusion set to use, with your healthcare provider's approval. Discussing these choices with your healthcare team and trying out samples can help you find the best infusion set for you.