

Infusion Sets Overview

What is an infusion set?

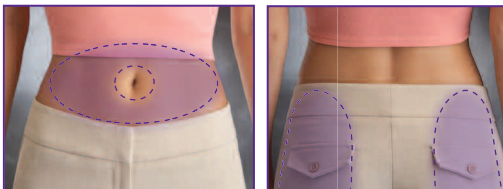
An infusion set is a constant connection between your body and an insulin pump. Infusion sets have several components, including a cannula or needle, a site or hub, adhesive dressing, tubing, and a connector to the pump cartridge. The cannula or needle is inserted under the skin using an introducer needle. The site anchors the cannula or needle with an adhesive dressing or tape. Flexible tubing connects the site with the pump, which supplies insulin continually.



An infusion set is typically worn for 2-3 days, then is removed and discarded. A variety of needle lengths (ranging from 6mm to 17mm) and needle types (angled, 90°, and bent) are available to accommodate users' lifestyles and preferences.

Where is the infusion set inserted?

The abdomen is the best place to insert an infusion set. Insulin is absorbed faster and more predictably in the abdomen than anywhere else in the body, according to the American Diabetes Association. However, other possibilities include the thigh, back of the arms, or the upper buttocks. It is best to avoid areas that might be constricted or



bumped (like the belt line), or that may contain scar tissue, or the area around the navel.

Infusion set materials

Plastic cannula: A flexible, plastic cannula can be inserted using an introducer needle. After insertion, the needle is immediately removed, leaving the cannula behind. The Cleo® 90 infusion set has a plastic cannula.

- Comfortable to wear
- Can remain inserted for up to 72 hours

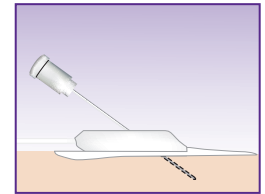
Metal needle: A thin metal needle is inserted directly into the skin and stays in place during insulin delivery.

- Metal needle sets will not kink, maintaining a consistent flow of insulin
- Preferred by people who have a plastic allergy

Angle of insertion

Angled insertion: The needle or cannula is inserted between 20° and 45°.

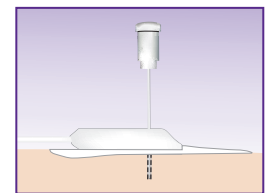
- Good for individuals with low body fat
- Good for active individuals – cannula stays in place for better reliability
- Angle of insertion controlled by patient, depending on location and body fat



Angled insertion

90° insertion: Inserted straight or perpendicular to the skin. The Cleo® 90 infusion set inserts at 90°.

- Shorter inserter needle is less intimidating
- May be used with an insertion aid, inserting the cannula in one quick motion



90° insertion

What is a Cleo® 90 infusion set?

The Cleo® 90 infusion set is an all-in-one, single use set. It's different from other infusion sets because it has a canister that houses both an inserter needle and a cannula. The canister serves as both the inserter and needle retractor, so you don't need to see or touch the needle at all if you don't want to. You can insert the set quickly and with just one hand. The Cleo® 90 infusion set uses a standard Luer connection, which means that it can be used with any pump that has a Luer fitting.



Questions About Infusion Sets

How big is the needle?

Needles in infusion sets are typically 26 gauge or 27 gauge. (Gauge measures the diameter of a needle. Gauge increases with decreasing needle size.) To accommodate lifestyles and preferences, there are a variety of needle or cannula lengths, ranging from 6 mm to 17 mm; and needle or cannula types: angled, 90°, and bent. You can also choose between a plastic cannula and a metal needle. The Cleo® 90 infusion set uses a 28-gauge introducer needle (thinner than most infusion sets) that inserts at 90° and is available in 6 mm and 9 mm cannula lengths.

What is the best way to insert an infusion set?

With angled insertion, pinch the skin to create a “hill” of fat. This will lessen the possibility of inserting the set too deeply into muscle. Release your “pinch” after insertion.

With 90° insertion, such as the Cleo® 90 infusion set, stand or sit up straight to prevent your skin from “bunching up” or wrinkling as you insert the set. For children, parents may find it easier to insert the set in a child who is lying down.

If you are concerned about inserting the needle, you can numb your skin with a cold can of soda, a cold spoon, a small bag of ice, or a small ice pack prior to insertion. You may want to try a nonprescription topical numbing cream (such as lidocaine), or check with your healthcare provider to obtain a prescription topical numbing cream, if necessary. Remember to numb the skin before you clean and prepare the site for your set insertion.



How do I remove the site to change infusion sets?



Sites are held in place by adhesive. Peel off the adhesive to remove the site and cannula. The Cleo® 90 infusion set has a white dot on the edge of the adhesive disc that is not adhered to the skin, to help ease the removal of the site.

How do I dispose of an infusion set?

Infusion sets should be disposed of using a secure sharps container.

Are all infusion sets compatible with all insulin pumps?

No. Most infusion sets—including the Cleo® 90 infusion set—use a standard Luer connection, which can be used with any pump with a standard Luer connection. Some infusion sets, however, have proprietary connections that can only be used with select pumps.

How can I move around if I have a tube connecting me to the insulin pump?

Tubing can come in a variety of lengths to allow you ample mobility. The Cleo® 90 infusion set offers 24-, 31-, and 42-inch tubing lengths. In addition, the Cleo® 90 tubing has a Flex Attach™ 360° site connection so you can attach it from any direction.

Can you see the infusion set when I'm wearing it?

Sites typically lie flat against your skin, with adhesive to hold it in place. The Cleo® 90 set is low profile and transparent. The tubing is clear and skin-friendly, making the Cleo® 90 infusion set comfortable and discreet to wear under your clothing.

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