

*“My Doctor Says I Should Begin
Using an Insulin Pen...”*

How Do I Use Them?



Helping all people
live healthy lives

BD Getting Started™

Using Insulin Pens and
Pen Needles

Insulin Pens – easy to carry, dose and use

An **insulin pen** is a convenient way to give yourself an insulin shot or injection. It looks like a large fountain pen and comes in two basic types: disposable and reusable. Disposable pens come already filled with insulin. When a pen is empty or expired, it is simply discarded. Reusable pens have a replaceable cartridge of insulin. The cartridge is replaced when the insulin is used or expired.

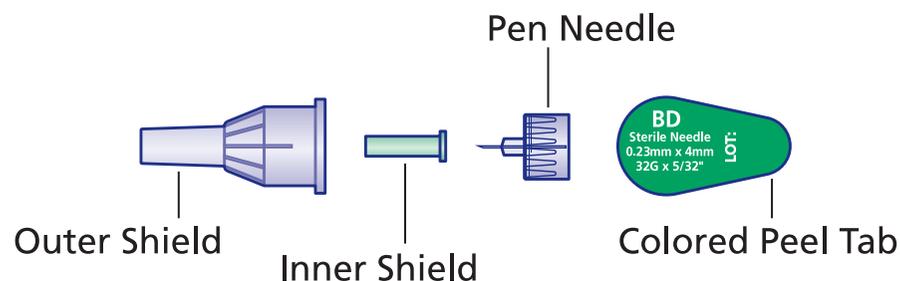


Whichever type of pen you use, you will need to attach a new pen needle onto the pen with each injection and remove it after every use. The pen may be kept in your pocket or purse at room temperature while in use. The insulin should not get warm or be exposed to direct sunlight. Store unused insulin pen cartridges and pre-filled pens in the refrigerator.



Note: Pens from different manufacturers operate differently. Check pen manufacturer's guidelines for operating instructions and insulin expiration details.

Parts of a Pen Needle



Each pen needle has an outer shield, an inner shield, and a colored peel tab.

How to attach the needle to a pen

1. Remove the colored peel tab from the outer shield.
2. Push the needle straight onto the pen and twist until it is tight.
3. Pull off the outer shield and set it aside. You will need it later to remove the needle from the pen.
4. Pull off the inner shield and prime your pen before injecting.

Always prime your insulin pen before each injection

Always refer to the instructions of the pen manufacturer when preparing your pen for use. Dial two units on your pen and then press the button to shoot some insulin into the air to make sure it works. This is called an "air shot" or "priming" the pen. If you do not see at least two drops of insulin after repeated priming, do not use the pen.



Sometimes, when you put a needle on a pen, a drop of insulin may leak out. This does not mean the pen has

been primed. You will still need to perform an “air shot” before you inject.

When you inject, hold the needle in your skin until you count to 5 or 10

Count slowly to five or ten before removing the needle from your skin. If the needle is taken out too fast, insulin



will leak out, affecting the dose that is delivered. Again, refer to the instructions of the pen manufacturer, as some pens are designed to inject at different rates.

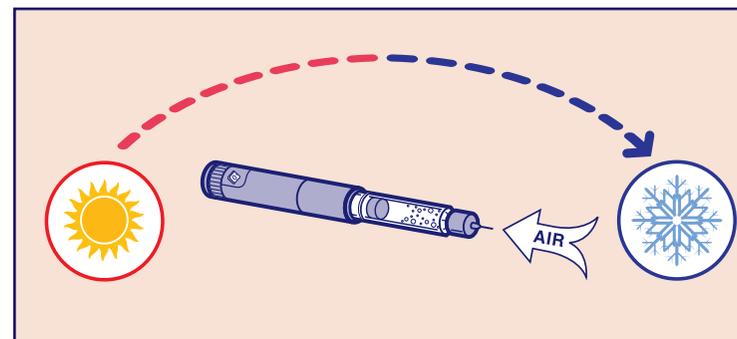
If insulin does drip from the needle after you take it out of your skin, don't worry as this may be normal. If bleeding occurs, press gently but do not rub to avoid bruising.

Never leave the pen needle attached between injections

A pen needle has openings on both ends that allow for a possible exchange of insulin and air. When you leave a needle attached to your pen, changes in the environment could severely impact your dosage.



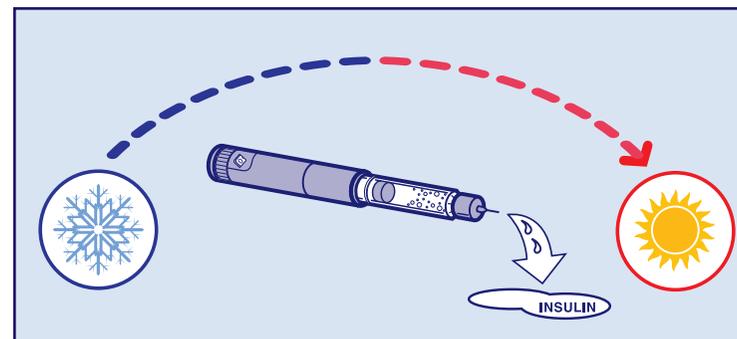
Warm to Cold Causes Compression



- Going from a warm place to a cold place causes insulin to compress or shrink.
- Air may fill the empty place in the cartridge.
- This may cause an under-dose of insulin. Up to 2/3 of the insulin may not be delivered.¹

¹ Ginsberg BH, Parkes JL, Sparacino C: The kinetics of insulin administration by insulin pens. *Horm Metab. Res.* 1994; 26:584-587.

Cold to Warm Causes Expansion



- Going from a cold place to a warm place causes the insulin to expand.
- As insulin expands it may leak out through the passage way that the needle creates.
- The fluid may leak out while the insulin particles stay in, changing the concentration of insulin.
- The strength of your insulin may change, which will affect the dose administered (may overdose).

Insulin Pens – Advantages and Disadvantages

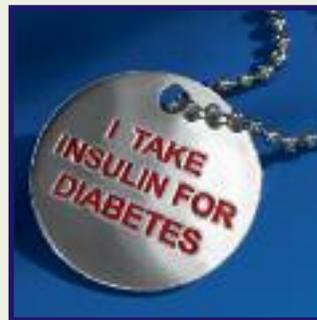
Advantages:

- Easy to use and carry
- No need to draw insulin
- Can use most types of insulin
- Doses are easily dialed
- Less waste of expired insulin if not much insulin is used
- To some people it may be less scary than a syringe

Disadvantages:

- Cannot self-mix insulins
- Modest hand strength needed to push button on pen
- Takes more time to push the pen “button” than a syringe
- Slightly more expensive than insulin vials
- May not be covered by some insurance companies
- Limited cartridge size

Wear a diabetes identification, tag, pendant or bracelet at all times. If you are ever in an accident or unconscious, time wasted looking for clues to your condition can be eliminated; first responders are trained to look for medical identification and this information can save your life. Your identification may prompt a check of your blood sugar to determine if your inability to communicate is due to your diabetes. If you cannot afford some form of medical alert jewelry, always carry a card in your pocket with information that says you are a diabetic and what medications you normally take.

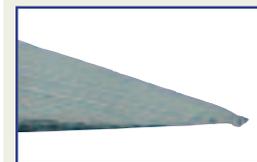


Pen Needle Disposal

- Use a pen needle only once.
- Discard it right away in a “sharps” container for medical waste (to prevent anyone from getting stuck with your used pen needle).
- Check your town or county recommendations for discarding medical waste. Every location has different regulations.



For comfort and safety, use insulin needles only once.



Used
needle
magnified
370 times



Same used
needle
magnified
2000 times

Photographs showing the type of damage that can occur with needle reuse.²

Today's insulin needle is thinner and more delicate for greater comfort, so needle re-use can damage the tip and cause injury. Use only once.

Needle re-use can:

- Dull or bend the tip, causing bleeding, bruising, or scarring
- Increase the risk of the needle breaking off in the skin
- Increase the risk of infection because the needle is no longer sterile

* Photographs from Dieter Look and Kenneth Strauss study: "Nadeln mehrfach verwenden?" Diabetes Journal 1998, 10: S. 31-34.

BD provides this brochure for informational purposes only. It is not intended to be a substitute for professional medical advice, diagnosis or treatment. Always seek the advice of your physician or other qualified healthcare provider with any questions you may have regarding a medical condition. Never disregard professional medical advice or delay in seeking it because of something you have read in this brochure.

Insulin Dose For:

| | |
|-------------------------|-----------------------|
| _____ Name | _____ Today's Date |
| _____ Doctor | _____ Phone Number |
| _____ Nurse Educator | _____ Phone Number |
| _____ Dietitian | _____ Phone Number |

Pen Needle Sizes:

| | Length | Gauge |
|--|-----------|----------|
| <input type="checkbox"/> BD Ultra-Fine™ Pen Needles - Nano | - 4 mm | 32 Gauge |
| <input type="checkbox"/> BD Ultra-Fine™ Pen Needles - Mini | - 5 mm | 31 Gauge |
| <input type="checkbox"/> BD Ultra-Fine™ Pen Needles - Short | - 8 mm | 31 Gauge |
| <input type="checkbox"/> BD Ultra-Fine™ Pen Needles - Original | - 12.7 mm | 29 Gauge |

Insulin: You should take the following dose of insulin at the times listed below

| Type of Insulin | Time of Day |
|-----------------|-------------|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

Contact your Doctor or Healthcare Team:

Educational Information from BD Diabetes Care.

† NOT FOR EMERGENCY OR MEDICAL INFORMATION

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