



More Wit and Wisdom for kids with diabetes  
(and their parents)

# Insulin Delivery Devices

## Syringes.

Check.

## Pumps.

Check.

## Pens.

Check.

## Jet injectors.

Check.

## Infusers.

Check.

## Equipment list ready.

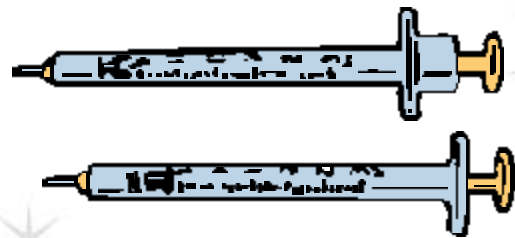
Now -- it's time to choose your piece of equipment. With so many to choose from, it might seem pretty hard to decide. But remember, even though each one is different from the others, they all do the same thing. Send insulin where it needs to go. Inside you.

With that in mind, there's probably not a right or wrong choice to make. But depending on your age, how active you are, and when and where you take insulin, some of these choices might work better for you than others. Read about

each one, talk it over with your health care team, and choose the best for you and all the things you do everyday.

## The Straight Story On Syringes

Not so many years ago, syringes were the only choice for people with diabetes. And they weren't anything like the syringes you see today! They were big and made of glass. People boiled them so they would be germ-free for the next injection. Yep, they used them over and over. Tiny, slick-coated needles? No way. They were thick, long. People would often sharpen the needles with steel wool when they got dull.

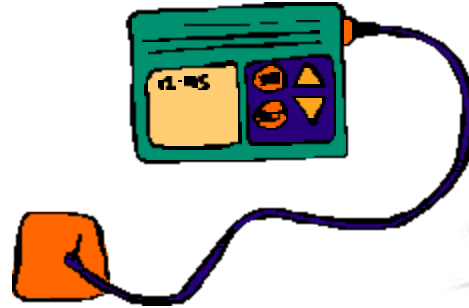


People with diabetes said "Hey! There's gotta be something better than this." So, doctors, scientists, and engineers got together and invented plastic syringes. Use 'em and throw 'em away. Then they made tiny needles with special coatings to make

injections relatively painless. (That means that they hardly ever hurt.)

Today there are many different kinds of syringes to choose from. Here are some things to think about when you make your choice.

- Syringes and insulin need to match. Not in color or style. But in strength and dosage. If you take U-100 insulin, use U-100 syringes. And make sure the dosage lines on the syringe match your dose of insulin so you can measure as close as possible. Different syringes measure in different ways. On some syringes, each line is one unit. On others each line is two units. So be **very** careful if you switch syringes!
- Make sure it's easy for you to draw your insulin into the syringe and read the markings. If you can't tell how much insulin you have in the syringe because the lines are too close together, ask someone on your health care team if there is a different kind you can use. A syringe with a different color plunger might make it easier to read.
- Some syringes have shorter needles. This might make injections easier. But it also can change how fast your body absorbs (soaks up) the insulin. So, ask your doctor or diabetes educator whether these would work for you.
- Last but not least, there's the cost. Shop around for the pharmacy with the best prices. But remember if you start traveling long distances to save just a couple of bucks, the money you save on syringes will be spent on gas or bus fare.



### Pumps That Have Nothing To Do With Flat Tires

When a pancreas works like it should, it dribbles out small amounts of insulin all the time. And at mealtimes it gives a big squirt of insulin to turn the food you eat into energy. This is pretty much how an insulin pump works, too.

Pumps are computerized and are about the size of a pager or a cell phone. It's usually clipped to the waistband. Insulin is stored in the pump and travels to your body through a thin plastic tube called a catheter (KATH-eh-ter). On one end the tube is hooked to the pump. With the help of a very small needle, the other end is pushed through your skin into fatty tissue and is taped into place. A pump is constantly dribbling insulin. This is called basal delivery since it forms the "base" of the insulin you need. You wear the pump all the time. You can take it off for about an hour for things like swimming or wrestling or taking a bath, but otherwise it's always on.

With the help of your health care team, you program the pump so it knows how much insulin to dribble and how much to squirt at meal or snack time. (This is called a bolus - it's like an insulin booster). It's important to check your blood sugar several times a day to make sure the pump and the catheter are working okay. And, of course, to

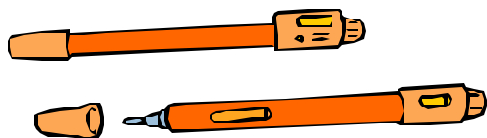
make adjustments for hypoglycemia (low blood sugar) or hyperglycemia (high blood sugar).

Pumps can help some people better control their diabetes. With a pump, you don't have to be quite so strict about exactly when you eat. Or exactly when you get up on Saturday morning. And you can cut back on insulin when you decide to join an after-school basketball game.

But... you have to be willing to check your pump and infusion site (where it goes into your body) **at least** once every day. You have to remember to make adjustments for changes in your schedule and activity level. And then to re-adjust when you return to normal. In other words, it's a big responsibility.

If you are interested in an insulin pump, talk it over with your health care team. See if they think it would work for you. The adults in your life will also want to check with your insurance company to see if it will pay for pumps and all the supplies. Pumps cost a lot. And the supplies aren't cheap either.

Some people get the benefit of a pump without the pump. They do this by using both short acting and long-lasting insulins. You may want to ask your doctor about doing this if you decide against a pump.



### Pens that Don't Write

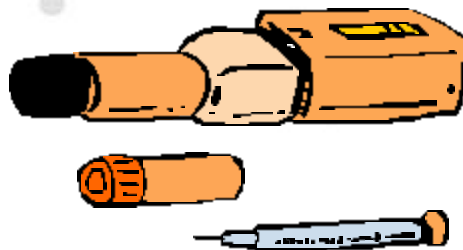
When you have diabetes, you get used to carrying around stuff. Stuff like your glucose meter, test strips, lancet, syringes, and insulin. It's all important but it still takes up space in your backpack.

So how about combining a couple of these things and lightening your load?

Insulin pens combine insulin and a syringe in one piece. You'll never guess what it looks like -- a pen. Instead of a writing point, this pen has a needle. And instead of an ink cartridge, there's an insulin cartridge. All in one. You just turn a dial to measure out your dose.

Pens have disposable needles and some have disposable insulin cartridges that you replace when empty. With some insulin pens, you just throw away the whole thing when it's empty.

A lot of kids use them to take either regular or lispro insulin before lunch or dinner. And some mixtures of long and short acting insulin are available in pens. Though you may not find a pen that has your particular mix. Ask your health care team if an insulin pen might be a good piece of equipment for you.



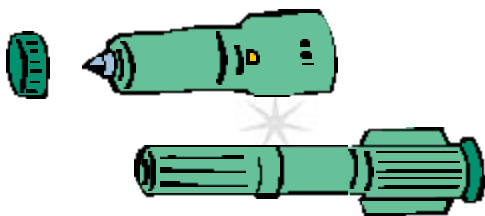
### Jet Injectors—a New Way to Avoid Crowds at the Airport?

Jet injectors do the same thing as syringes and pens. They give you your dose of insulin. But they do it without using a needle to make a tiny hole.

But if there's no hole, how does the insulin get through your skin? That's where the jet part comes in. Insulin is forced through the skin with pressure. Kind of like the pressure in a squirt gun

that sends the water out. Just a lot more pressure.

If you are interested in this piece of equipment, talk it over with your health care team. They can help you learn how to use it, how to clean it, and what problems to watch for. The adults in your life will probably want to check with insurance to see if it will pay for jet injectors.



### Automatic Injectors

Some people have trouble actually pushing the syringe through their skin. If that sounds like you, try an automatic injector. Automatic injectors shoot the needle into you at the touch of a button. Some will even release the insulin automatically. It's not a jet injector, and it does use a needle to make a hole in your skin. But if pushing in the plunger gives you the heebie-jeebies, an automatic injector may be right for you.

### Infusers. In-what-sers?

An infuser makes an opening in your skin where you can inject insulin. A tiny needle or tube is inserted right under the skin. It's taped so it will stay in place for two or three days. Then you change to a new one. Instead of using the needle on a syringe or insulin pen to inject insulin, you just squirt it through the infuser and right into your body.

Your health care team can help you decide if an infuser would be a good choice for you.

## Make A Choice and Take Control

You've checked the equipment list. You have information on each alternative. You have smart people on your health care team to help you make a decision. Now's the time. Choose the equipment that's best to help manage your diabetes. The equipment that will work with all your everyday activities. And that will also cover those special events like parties, camping, and out-of-town trips. It's an important choice because it can make things a lot easier. For you and your diabetes.

### To Learn More:

- ★ If you don't already have it, order the American Diabetes Association *Wizdom™* kit for your family. They're free to kids with diabetes and are available by calling us at 1-800-DIABETES (800-342-2383).
- ★ Diabetes Forecast is published by the ADA for people with diabetes and their families. It's free to members of the American Diabetes Association. Get Diabetes Forecast and become an ADA member by calling us at 1-800-DIABETES.
- ★ This piece is one in a series about kids and diabetes. We have titles about school, family, discrimination, and more. Call us at 1-800-DIABETES (800-342-2383) or download from our Web site at <http://www.diabetes.org/wizdom/pod.asp>
- ★ Parents! Subscribe to our *Wizdom Parents' E-newsletter* by sending an e-mail to [wizdom@diabetes.org](mailto:wizdom@diabetes.org).
- ★ Questions or comments? Send us an e-mail at [wizdom@diabetes.org](mailto:wizdom@diabetes.org)