How to Give an Insulin Injection to Your Diabetic Child

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How to Give Insulin to a Child

Insulin is the key hormone that controls the amount of blood sugar and is produced in the pancreas. Without adequate levels of insulin in the body, the glucose levels in the blood will rise and affect various major organs (i.e. heart, kidney, eyes, and the nervous system).

In type 1 diabetes, the pancreas can't make insulin and therefore insulin replacement is needed for the entire life. If your child suffers from type I diabetes, you should know about the different types of insulin and devices available for this condition.

What Are the Different Types of Insulin?

Usually, your child will receive so-called "human insulin," which is created in laboratories (not natural insulin from humans as the name may suggest).

Knowing the different types of insulin will help you understand when the best time to administer them is, when to repeat the dose, and the relation between meals and insulin shots.

- **Rapid-acting analog insulin:** (analog insulin means that the chemistry of this drug was slightly changed, so the drug will act quicker or slower than the regular insulin). This type of insulin should be used right after a meal and its effects will last a short period of time (about four hours), with a peak action at two hours post-injection.
- **Short-acting insulin:** as the name indicates, the effects of this insulin are relatively short (6-8 hours), with peak action around two to four hours post-injection. These shots have to be administered half an hour before a meal (or anywhere between 15 to 45 minutes).
- **Medium/long-acting:** insulin is given once or two times daily, its effects last up to 24 hours, with a peak action at 12 hours.
- **Long-acting analog insulin:** this type of insulin is recommended once or twice daily, and the benefits of it will also last 24 hours. Unlike medium/long-acting insulin, the long-acting analog will not have a peak action at a specific time but will remain at the same concentration in the blood through the entire period.
- Finally, there is **mixed insulin**, which includes a combination of rapid-acting analog (or short-acting) and medium/long insulin. Mixed insulin is recommended twice a day (for example before breakfast and dinner), and will have a peak action at two to eight hours.

The Different Types of Insulin Devices

Many insulin devices are now available on the market.

Insulin pens contain a cartridge with insulin, are easy to carry and will provide the right amount of medication (accurate dosage). You just need to add a needle (and then remove it after the shot).

Small syringes can also be used. The needle is tiny and can be used if your child has to take two types of insulin (and the mixture is not available).

The insulin pumps are ideal for older children who need multiple injections to control diabetes. In this case, a small catheter is inserted under the skin and is attached to a pump that is kept close to the body.

How to Give an Insulin Injection to a Child

For children, the best insulin injection sites include the abdomen, the thigh, or the back of their arms. It's important to rotate between the three insulin injection sites because injecting in the same spot continously may cause a condition called lipodystrophy – a condition that causes lumps or dents in the skin that can interfere with insulin absorption.

To help your child manage their diabetes, here is a step-by-step guide on how to give insulin to a child correctly:

1. Wash your hands with soap and warm water.
2. Twist on a fresh needle onto your child's insulin pen. Be sure to remove the needle cap.
3. Turn the bottom of the insulin pen to a small dosage (i.e. three to five units) to ensure the needle is working correctly and/or not broken. You should see a tiny stream come out of the needle.
4. Turn the bottom of the insulin pen to your child's proper insulin dosage amount.
5. At a 90-degree angle, insert the insulin needle into the child's abdomen, thigh, or the back of their arm.
6. Gently push the bottom of the insulin pen all the way down until the pen is at "0" units, and wait 10 seconds.
7. Remove the needle and safely dispose of it.
8. Store the insulin pen based on the instructions provided.

That's all there is to it on how to injection insulin properly. If you need additional help, reach out to either a diabetes educator or your physician for more tips and information.

Helping Your Child Manage Their Diabetes

Regardless of the type of insulin or device your child will need, it is important to monitor the blood sugar levels regularly and keep track of the results. Write down the time of the day when your child has the test, if he had a meal before (and how long ago he had that meal). Bring the results to the doctor when you have follow-ups and when you visit the pediatrician to determine how to adjust the drugs or dosage appropriately.