Treating diabetes in children is different from treating diabetes in adults.

June 2012
For all people with type 1 diabetes, including children, it is essential to understand some facts about the disease and the treatment.

These materials have been developed to support healthcare professionals in communicating vital information to previously and newly diagnosed children with type 1 diabetes and their families.

While these materials aim to address some of the short term information needs of children with diabetes, there is much more that can be learned about diabetes and its treatment. The content of these posters should be regarded as basic survival information.

The dialogue posters and their use

There are 16 dialogue posters to support dialogue with the child and the child’s family members.

It is suggested that the posters are used over a span of visits, concentrating on vital information at the first visit and repeating as well as adding more information at subsequent visits.

Hereewith a suggested plan for progression and introduction of the dialogue posters:

1st visit
- Poster 1: Injecting human insulin
- Poster 2: Why I need insulin
- Poster 3: Some of the different types of insulin
- Poster 4: How often should I inject insulin
- Poster 5: How much insulin should I take?
- Poster 6: What should I eat?

2nd visit
- Poster 7: Low blood sugar (hypoglycaemia) and how to recognise it?
- Poster 8: Why do I get low blood sugar (hypoglycaemia)?
- Poster 9: How to treat low blood sugar (hypo
- Poster 10: How often should I inject insulin
- Poster 11: How much insulin should I take?
- Poster 12: What should I eat?
- Poster 13: Measuring my blood sugar
- Poster 14: How to use my glucometer

3rd visit
- Poster 15: Taking care of my feet
- Poster 16: Living with diabetes

The development of these materials has been facilitated by Novo Nordisk A/S (Global Stakeholder Engagement) and Roche Diagnostics in consultation with local country Changing Diabetes in Children (CDiC) programme partners and the International Society for Pediatric and Adolescent Diabetes (ISPAD).

An online version of these patient education materials are available free of charge at: www.changingdiabetesaccess.com

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- Poster 6: How to treat low blood sugar (hypoglycaemia)

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- Poster 11: Measuring my blood sugar
- Poster 12: How to use my glucometer

**4th visit**
- Poster 13: High blood sugar (hyperglycaemia) and how to recognise it
- Poster 14: Why do I get high blood sugar (hyperglycaemia)?
- Poster 15: How to treat high blood sugar (hyperglycaemia)

**5th visit**
- Poster 16: Taking care of my feet
- Poster 17: Living with diabetes

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Injecting human insulin

My body does not make insulin, so I need to inject it.

1. Wash your hands.
2. Have insulin, syringe, cotton wool and alcohol ready.
3. Roll the vial of insulin 15-20 times between your hands.
4. Clean the top of the vial with alcohol.
5. Clean the injection site with alcohol.
6. Draw air into the syringe.
7. Push air into the vial and then draw insulin into the syringe.
8. Make sure there is no air in the syringe.
9. Inject insulin in the appropriate place.
10. Throw away the syringe.
11. Put insulin back in a cool place.
12. Remember to eat 30 minutes after injecting your insulin.

Eat 30 minutes after injecting your insulin.
Why I need insulin

We all need energy to grow and be strong.

The food we eat is broken down into glucose.

Glucose needs to enter the cells in your body before it can be used as energy.

If the glucose cannot enter the cells, you will get tired.

We get energy from the food we eat.

Insulin opens the doors to the cells in your body, so that glucose can enter the cells and be used.

Glucose

Stomach

Glucose

Insulin

Glucose

Glucose

Glucose
3 How much insulin should I take?

I must adjust the insulin amounts to what I do and what I eat.

Your doctor or nurse will help you find out how much insulin you should inject each time.

Adjust the dose of insulin according to your activities and how you feel.

If I will be more physically active than normal.

If I have eaten more than usual.

Talk to your doctor or nurse about which insulin you need to adjust and by how much.

Your insulin dose needs to be adjusted if you have signs of low blood sugar.

Your insulin dose needs to be adjusted if you urinate more than usual.
4 Low blood sugar (hypoglycaemia) and how to recognise it

If my blood sugar gets very low I can get hypoglycaemia. Most people call it low blood sugar or hypos.

- Difficulty talking
- Irritability
- Dizziness
- Tiredness
- Blurred vision
- Crying without reason
- Trembling

Sweating
Extreme hunger
Itchy lips

Sometimes low blood sugar can get very serious and you can lose consciousness or have convulsions.
5 Why do I get low blood sugar (hypoglycaemia)?

When you have diabetes and take insulin your blood sugar level can get very low, this is called hypoglycaemia.

You can get low blood sugar when:

- You have taken too much insulin at once.
- You have taken an extra insulin injection.
- You have been more physically active than usual and have not adjusted your insulin dose.
- You have taken your insulin but have not eaten enough, or soon enough or have thrown up.
How to treat low blood sugar (hypoglycaemia)

1. **STOP all activity**

2. **MEASURE your blood sugar if possible**

3. **If your blood sugar is low**
   - **STOP** all activity
   - **MEASURE** your blood sugar
   - **EAT** something

Severe low blood sugar

If your blood sugar is very low it can quickly become serious and you can go into a coma.

- **Your family and friends must act quick**.
- They should **insert a cube of sugar into your mouth**.
- They must **NOT give you anything else to eat or drink**.

It’s important that you are taken to a clinic!
Some of the different types of insulin

Short Acting Insulin:
- FAST
  - Short acting - 30 minutes
  - Short lasting - up to 8 hours

NPH Insulin:
- SLOW
  - Slow acting - 2 hours
  - Long lasting - up to 18 hours

Mixed Insulin:
- FAST & SLOW
  - Short acting - 30 minutes
  - Long lasting - up to 18 hours

You can use a combination of Short Acting Insulin and NPH Insulin

The insulin types depicted here aren’t representative of all the types of insulin available.

1. Mixed Insulin
2. Mixed Insulin

OR

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How often should I inject insulin?

The doctor or nurse will help you work out how often you must take insulin.

How often I need to inject insulin depends on which insulin I use.
9 Where should I inject insulin?

On the front of my body there are three places I can inject my insulin: the top of my thighs, my upper arms and my abdomen.

Ensure that each injection is about 2 finger widths from the one done before.

Avoid injecting too closely to your belly button.

On the back of my body there is one place where I can inject my insulin - the top outer area of my buttocks.

Remember to rotate injection sites.

Front

Back
What should I eat?

I work with my nurse to make my own food pyramid.

I eat more from the groups at the bottom of the pyramid and avoid foods from the top.

REMEMBER: You should always drink a lot of water.

Sweets

Dairy

Meat & Fish

Vegetables

Fruit

Starches
Measuring my blood sugar

You always need to know if you have too much or too little sugar in your blood.

1. When you wake up, before breakfast.
2. 2 hours after you eat breakfast.
3. In the evening, before you eat dinner.
4. Before you go to sleep.

A healthy blood sugar level is between 4.5 and 10 mmol/l (80 and 180 mg/dl).*

You must use your glucometer at least 4 times a day and write down the number you get.

You must always bring your glucometer and diabetes diary when you go to the clinic.

How to use my glucometer

Testing my blood sugar is important and easy.

1. Wash your hands with soap
2. Insert the strip into the glucometer
3. Prick your finger with the lancet
4. Put a small drop of blood on the strip

To test my blood sugar, I need to get some things ready. I need: soap, a lancing device and lancet, glucometer and strips and my diabetes diary.

Less than 30 seconds later the glucometer will show a number. This is my blood sugar level. I must write this number down in my diabetes diary.

I must always remember to take my glucometer and diabetes diary with me to the clinic and give it to the nurse. This helps her help me!
High blood sugar (hyperglycaemia) and how to recognise it

You probably have hyperglycaemia if you:

- are very thirsty all the time
- need to urinate a lot
- have blurry vision
- are very tired all the time
- have a dry mouth

Check your blood glucose level to confirm high blood sugar (hyperglycaemia).

If it is a serious case of high blood sugar you might also experience:

- nausea
- stomach pains
- abnormal breathing
- breath that smells like alcohol
- loss of consciousness
- if you have any of these signs - you should go to the clinic!
14 Why do I get high blood sugar (hyperglycaemia)?

When you have diabetes your blood sugar level can get too high, this is called hyperglycaemia.

You can get high blood sugar when:
- You have taken too little insulin or missed an injection.
- You have taken insulin that was bad because it was too old or not stored correctly.
- You have eaten too much food.
- You have been less physically active than usual.
- You have an infection or fever.
- You have taken too little insulin or missed an injection.
- You have taken insulin that was bad because it was too old or not stored correctly.
- You have eaten too much food.
- You have been less physically active than usual.
- You have an infection or fever.
How to treat high blood sugar (hyperglycaemia)

Most cases of high blood sugar are easily treated.

1. **Measure your blood glucose**
2. **Take short acting insulin**
3. **Measure your blood glucose again after 2 hours**

**HIGH BLOOD SUGAR**

If my blood glucose is between 11 and 22 mmol (200 and 400mg/dl)

- I must take extra insulin.
- You must measure your blood sugar after 2 hours.
- If your blood sugar is still high:
  1. repeat the extra dose
  2. contact your doctor or nurse

**SEVERE BLOOD SUGAR**

If your blood glucose is more than 22 mmol (400mg/dl)

- Ask you doctor or nurse how much extra insulin you should take.
- I must take insulin immediately - 10% of my total daily dose.

**REMEMBER:**

- You should always drink a lot of water.
- WATER

If you are not sure of what to do, contact your doctor or nurse quickly.

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16 Taking care of my feet

It is important to take care of my feet - not doing so can lead to complications.

I check my feet everyday.

Cuts

Red spots

Swelling

Infected toenails

Check your feet for: cuts, sores, red spots, swelling and infected toenails.

Keep your nails short and clean

Put your feet up to rest

Wash your feet everyday

Dry your feet properly

Put lotion on your feet

Always wear shoes

Be active

Ask your nurse or doctor to check your feet with you.

1

2

3

4

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Living with diabetes

Even with diabetes, I can still take part in all normal activities.

Reduce your insulin if you will be more active than usual.
Reduce your insulin if you will be walking long distances.
Reduce your insulin if you eat less food or no food.

Increase your insulin if you will be eating more than usual.

Activities are not always planned, and if you are more physically active than normal, without planning for it, you should eat foods or drink liquids that are rich in sugar.

You also have to make sure that you always have your medicine and equipment with you, if you are away from home for more than 6 hours.

You should always carry some sugar with you in case of low blood sugar.