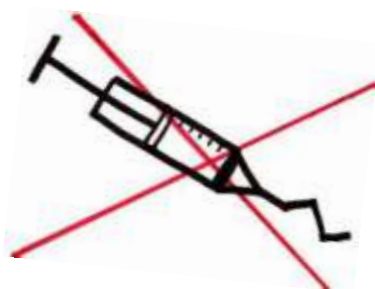


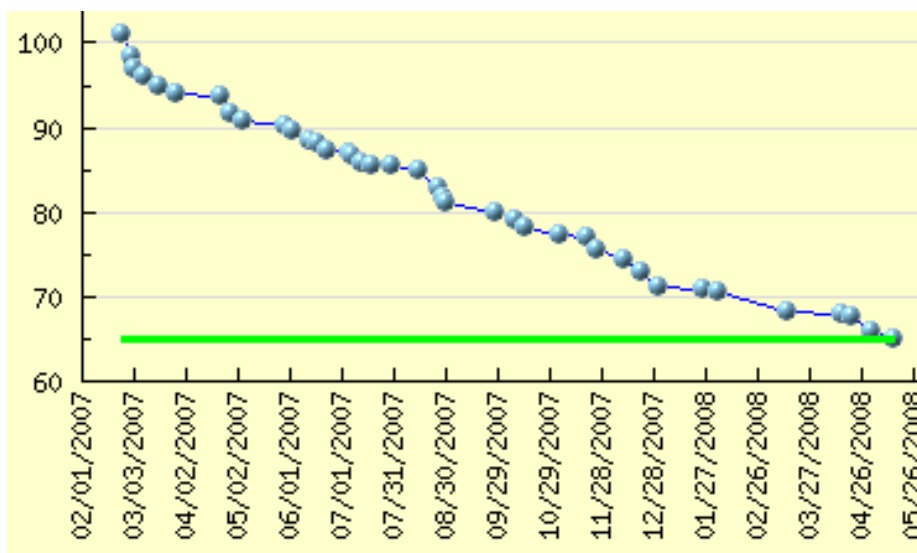
FROM DIABETES TYPE TWO TO DIABETES TYPE ZERO OR HOW I QUIT INSULIN

By Helena Hesselmark,
diabetic type 0



Diabetes type 0 is my own definition of my present condition. I have no symptoms of diabetes type 2 as long as I eat LCHF, low carb-high fat. In fact, I eat very, very little carbs, almost none; you might call my diet NOCARB-HIGHFAT, NCHF.

My weight has gone from 101 kg to 65kg, 223 to 143 pounds in 15 months.
My BMI has changed from 38.8 to 24.8.



Graph 1 showing weight loss from February 24th 2007 to May 15th 2008

In May 2003 I was diagnosed with diabetes type 2. I was already overweight and was prescribed insulin to keep my blood sugar down. The "Natural Progress" when taking insulin injections is to gain weight. Which I did. That was "natural" according to my doctor, special diabetes nurse and dietician. As natural was to prescribe cholesterol lowering statins that gave me muscle pains. For the muscle pains I was prescribed cortisone that made me put on still more weight. From the beginning I had also been prescribed blood pressure lowering medication. But this I had to quit after few days as I almost could not stand up, due to my very natural low blood pressure. My blood sugar was quite satisfactory. Kept down with injected insulin. My diet was the standard "Western diet", low-fat, low calories. A starvation diet. I did my best but the dietician never, ever believed that I really ate what I said. She believed I was a standard non-compliant patient eating twice as much as I admitted. I could not do a lot of exercising because of a knee replacement operation in 1995.

In February 2007 I did not recognize my face in the bath room mirror. I was terrified. I decided to take care of my health situation myself. I really had no idea how to do that, but for a few lines in the manual of my blood sugar metre, I would still have been ignorant and very sick.

Earlier I had read in the manual that you could record the amount of carbohydrates you ate. I had asked my doctor and dietician about that and got the reply: **That is not something we do in Sweden.**

Up to that moment I had followed all advice they had given me. The result was frightening. The face in the mirror was unknown to me; my weight was 101 kg (223 pounds), and I had to inject 70 IE of insulin every day. Despite medication I had muscle pains. OK, my HbA1c was acceptable. But for what? Statistics?

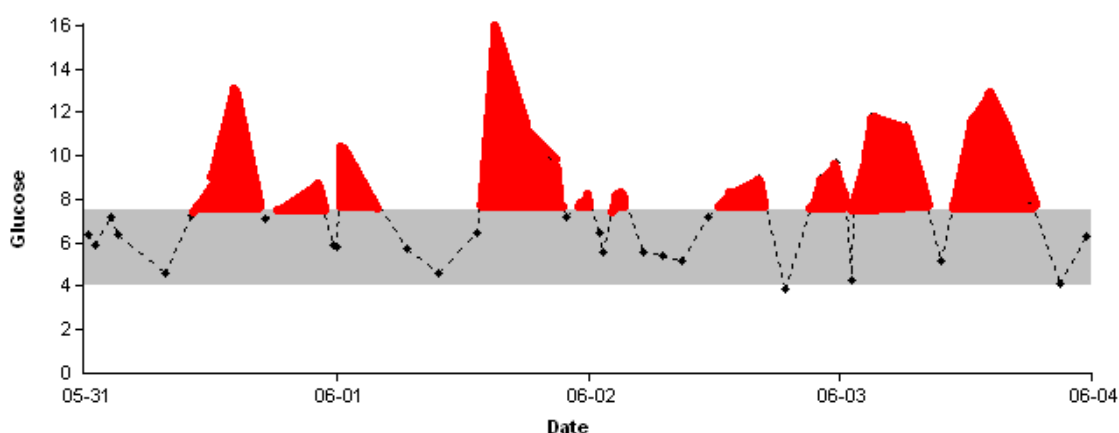
In January 2007 my HbA1c was 6.2%. Quite good for a diabetic type 2. If you calculate the average blood sugar from this formula

Average blood sugar= $2 \times \text{HbA1c} - 3,6$

My average blood sugar was then 8.8 mmol/l (158 mg/dl). Illnesses such as neuropathy, damage to eyes and kidneys start when your blood sugar are above 7.5 mmol/l (135 mg/dl)

In fact my graph for blood sugar for three days in May-June 2006 looked like this.

But almost no doctor is interested in the particulars of blood sugar graphs as long as the HbA1c is satisfactory.



Graph 2 showing blood sugars for 3 days from the period long before LCHF, May 31st-June 2nd 2006.

Red areas above the grey zone indicate high risk for damage to organs.

I searched the Internet for information on” **lowcarb and diabetes**”

First I found Jonathan Christie and studied what he had written. I then wrote him an e-mail and he was fantastic in answering at once. He advised me about dr Bernstein and then followed one site after the other.

This is how I downsized the amount of the insulin I injected.

If you are considering starting on a lowcarb diet and if you are presently taking insulin injections, be aware, the method I used might not be right for you. You may want to consult your doctor first.

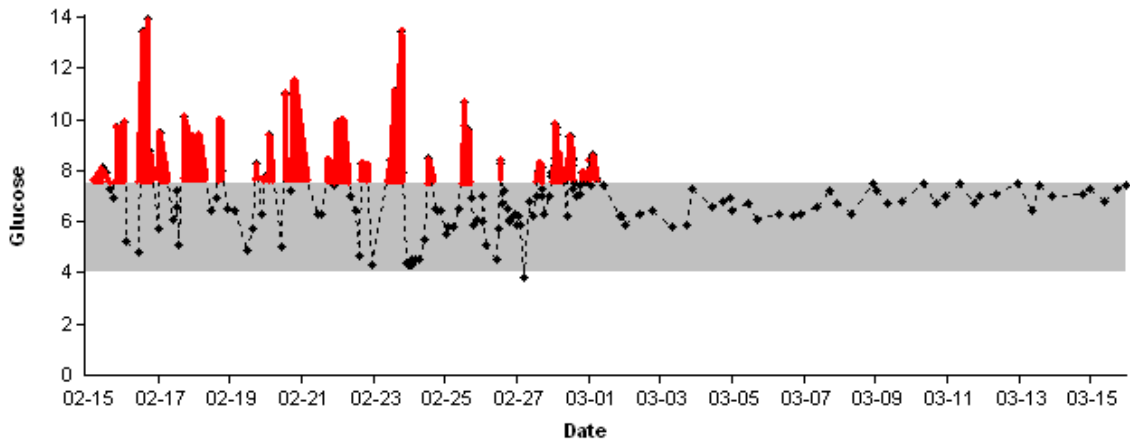
My prescription at the time of transition was 70 IE of insulin, 2*20 IE Lantus that is a basal long lasting type of insulin and 3*10 IE of NovoRapid that is a mealtime short lasting insulin.

Day 1 (February 24th) I cut out the 10 IE Lantus in the morning and injected 10 IE of NovoRapid. I had my lowcarb – or rather NOCARB-meal and frequently checked my blood sugar. Before lunch I took another 10 IE of NovoRapid. The blood sugar looked good and I decided to take just 5 IE of NovoRapid in the evening. I did not inject the Lantus. During the night I checked a few times. I must admit my sleep was not too good. But in the morning my fasting blood sugar was very good. I decided to take just 5 IE NovoRapid insulin.

That was the last time I took a scheduled injection of insulin. That was 15 months ago.

Date Range: 2007-02-15 - 2007-03-15

Doctor:



Graph 3 shows blood sugar values for 2 weeks before and 2 weeks after the day I started on LCHF, lowcarb-high fat and a life not dependant on insulin injections.

After March 1st 2007 my blood sugar rarely, if ever, has been above the dangerous level of 7.5 mmol/l (135 mg/dl).

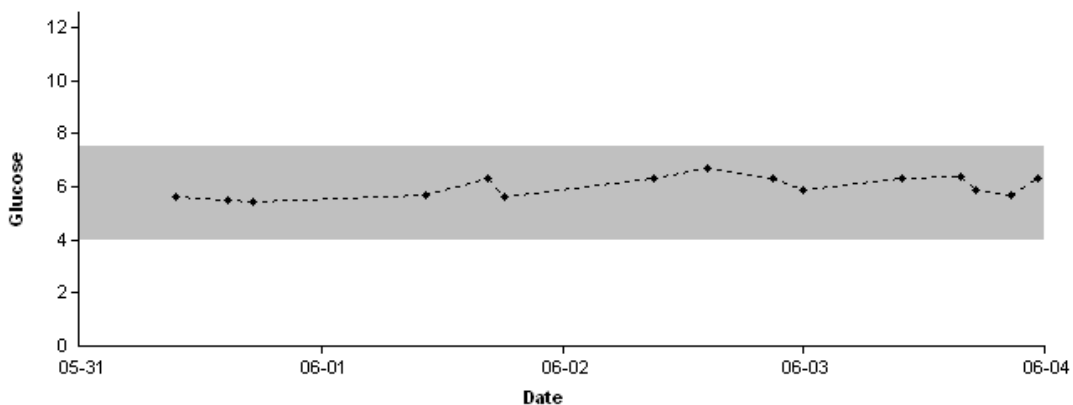
My lowcarb food consisted of roughly 80% fat, mostly saturated animal fat, 15% protein and 5% carbohydrates. These measures are energy per cent, counting 1 gram of fat to 9 kcal, 1 g of protein to 4 kcal and 1 g of carbohydrates to 4 kcal. There is plenty of information on the Internet on how to best to compose a lowcarb-high fat meal plan.

Present situation - straight blood sugar line

Most days after the transition to LCHF, lowcarb food, and my blood sugar do not form a curve. The pattern is, more or less, just a straight line.

Date Range: 2008-05-31 - 2008-06-03

Doctor:

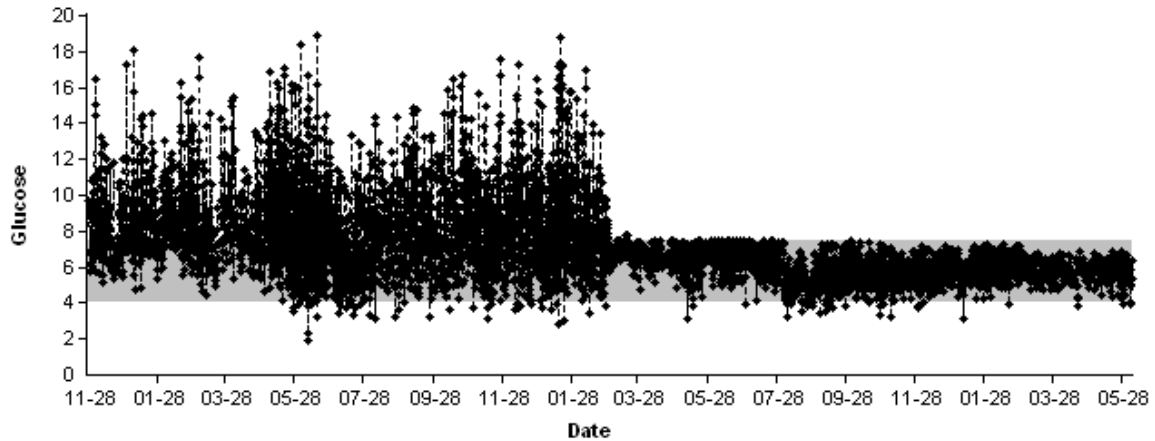


Graph 4 showing blood sugars for 3 days with LCHF, May 31st -June 2nd 2008.

There are no dangerous red values - all are in the safe grey area.

Date Range: 2005-11-28 - 2008-06-06

Doctor:

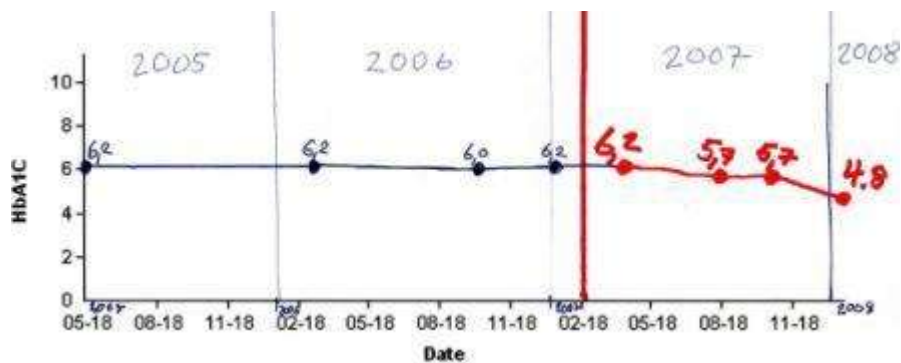


Graph 5 showing overall blood sugar from November 2005 to May 2008.

Transition to LOW CARB was around March 1st 2007.

Note the threshold at the end of February 2007.

After March 1st 2007 almost no blood sugar values are above 7.5 mmol/l (135 mg/dl). That is the critical value for damaging effects, like neuropathy, that can lead to amputations and blindness.



Graph 6 showing my HbA1c development. The red vertical line indicates my transition to lowcarb food, quitting insulin injections.

Black line and numbers, with insulin.

Red line and numbers, without insulin.

This HbA1c graph is very important. Maybe you should show it to your doctor together with graph 5? HbA1c is the parameter most doctors rely on for their decisions how well or how badly your diabetes is managed.

The graph shows that I had almost the same HbA1c **after** my transition to LCHF, low carb food, without insulin, as I had **before**, with 70 IE of insulin.

As you can notice the value of HbA1c also keeps going down the longer I keep to lowcarb.

In January 2008 my HbA1c was 4.8% - indicating an average blood sugar of 6 mmol/l (108 mg/dl)

The important difference is that although the HbA1c was the same before as after my change of life, **the dangerous high blood sugar is gone**. This cannot be seen by simply using HbA1c. You need to record your blood sugar several times daily to get a guarantee that you will not come above the very dangerous level of 7.5 mmol/l (135 mg/dl). This can be seen from graph 5.

The risks that I will ever get the life threatening illnesses, which are supposed to be a "Natural Progress" for the future life of a diabetic, are no more.

As long as I stick to eating lowcarb, my life is that of a normal person, I am a diabetic type 0. I am looking forward to a healthy, long, happy life with my children and grandchildren.