



Danielle Drachmann.

Denmark

Non-diabetic ketotic hypoglycemia

Hypomom
Navigating the hypo rollercoaster



Literature review provided by professor Henrik Thybo Christesen

Hans Christian Andersen Children's Hospital, Odense,
Denmark

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Navigating the hypo rollercoaster

Fact 1

Hypoglycemia is seen in 1-10% of newborns in Denmark.

Lower after the introduction of a national prevention program



The birth of a Shaking baby

Noah

Noah

- Born shaking
- 0.8 mmol/l (14 mg/dl)
- An i.v glucose need of 12 mg/kg/min - indicate of hyperinsulinism
- Diazoxide for 5 days, good effect
- Spontaneous resolution → discharged
- Nursed night and day until 12 months
- Seizure at 17 months old
- One year later, diagnosed with Idiopathic Ketotic Hypoglycemia



Fact 2

A small group of children with neonatal hypoglycemia has prolonged or persistent hypoglycemia as consequence of congenital metabolic diseases or congenital hormone disorder

The birth of a hyper-nursing baby

Savannah



Savannah

- BG dropped to 2.2 mmol/l (39 mg/dL) but stabilized with nursing. Milk was running from day 1.
- Nursed 24/7. Nursed all night, with short breaks in the daytime.

17 month old: BG 3.7 (66 mg/dl), ketones 3.3, admitted.

- Doctors believed it was due to malnutrition
- **2nd opinion from professor Christesen:**

Gave her a Dexcom CGM, cut down the nursing at night: **Admitted and diagnosed with severe ketotic hypoglycemia.**





ADHD, bulimia and a bad memory

Danielle

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Danielle

ADHD

- Extreme bad memory

Bulimia

- Low blood glucose after glucose tolerance test
- Ice cream while giving birth
- Suspected low blood glucose during both pregnancies
- Diagnosed with non-diabetic ketotic hypoglycemia at 26-year-old
- Dexcom and cornstarch
- "Cured" from ADHD and bulimia

Fact 3

Non-diabetic ketotic hypoglycemia can be seen in children without diabetes because of growth hormone deficiency, adrenocortical deficiency or fatty acid metabolism, and glycogen storage diseases

Fact 4

When these diagnoses are ruled out, non-diabetic ketotic hypoglycemia can be categorised as unexplained or idiopathic (IKH), otherwise known as accelerated starvation.

Genetics and treatment

Genetics

- GSD panel: for all known GSD types normal
- Exome Sequency: No clear genetic cause.

However: A novel disturbance in the metabolism of glycogen is suspected

Treatment

- Octreotide and Diazoxide tried with no success.
- Current treatment: Continuous feeding with maltose infusions in g-tubes during sleep.
- Emergency regime: Cornstarch and juice





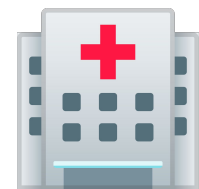


Clowns and ambulances



Ambulance trips

30+



Hospital visits

100 - 110

Very strong bond to the hospital clowns

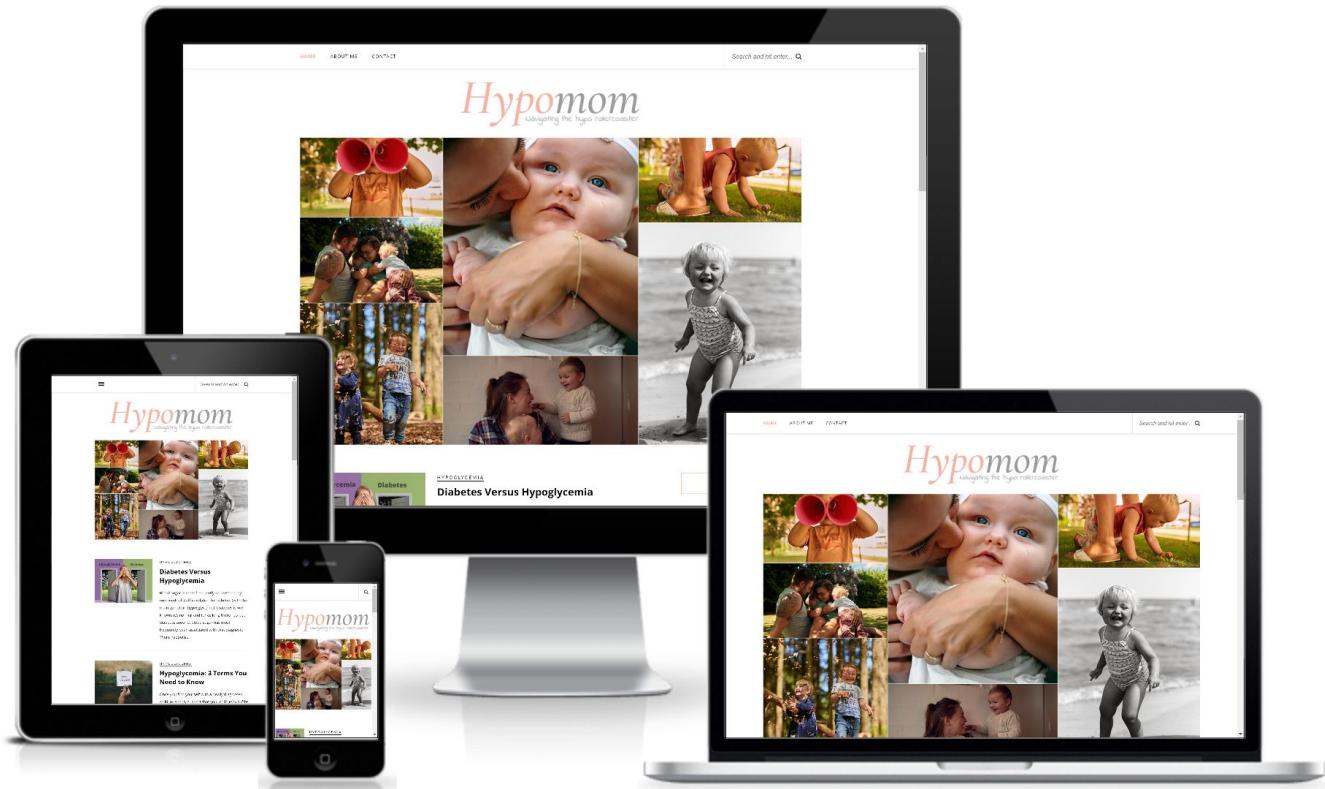
Fact 5

IKH is the most frequent state with low blood sugar in preschool kids. However the incidence is unknown. Most commonly it debuts around **18 months** with spontaneous normalization around 6-7 years of age, but this does not account for all.

Our development

- **Normal** psychomotor development
- Ketone bodies as **alternative** fuel
- Blood glucose levels not as extremely low as some CHI patients
- EEG normal (Savannah and Danielle)
- Normal daycare with medical support staff





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Grab your free copy of the Blood Sugar Guide

Help those around you easily understand diabetes and hypoglycemia by teaching them to interpret the numbers into actionable insights!

DIABETES

KETOTIC HYPOGLYCEMIA

CONGENITAL HYPERINSULINISM

 Microsoft Word Document



KETOTIC HYPOGLYCEMIA

BLOOD SUGAR GUIDE

Read this guide whenever the symptoms of hypoglycemia or a low response check blood glucose and call 911

3.0 - 10.0
Slightly high. Call 911, give juice if he is not responsive use the glucose, check blood glucose, control insulin, be ready for seizure

1.5 - 2.9
Very high. Call mom and give juice, check blood glucose

0.6 - 1.4
High. Call mom and give juice, check blood glucose

0.0 - 0.5
Normal 0.5-0.5 after 1st food or give carbohydrates before through glucose

Blood Sugar

10.0 and above
Call mom and check ketones

4.5 - 9.9
Fine

4.0 - 4.4
Give 1st food

3.5 - 3.9
Give 1st carbohydrate through glucose

3.0 - 3.4
One juice and carbohydrate through glucose, call mom, watch him closely until next gets drunk, check ketones

2.5 - 2.9
One juice and carbohydrate through glucose, call mom, check ketones every 5 minutes until next gets drunk, be ready for seizure, check ketones

LO - 2.4
Call 911, call mom, be ready for seizure, give juice through glucose, check ketones

Symptoms of hypoglycemia

- Rash colored or pale skin
- Sweating profusely, such as pants or clothing becoming wet/dampness or a starting sweat
- Irritability after followed by behavior issues or floppy muscles
- Poor feeding or vomiting
- Irritability despite the high count
- Tremor, shakiness, swelling or edema.

Parents Info
Mom, Jennifer 916-637-0108
Dad, James 916-637-0108

Personal info
Huck is known with idiopathic lactic hypoglycemia.

Emergency section
Huck is cared by professor Robert Taylor Chutkan at Children's University Hospital

Any doctor must drive to our emergency hospital directly

Huck needs to Chicago. Be alert on when Huck 30 min after Chicago is given

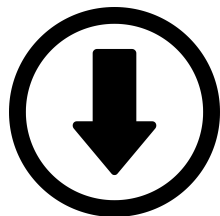
Huck has a glucose

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