

Type 1 Diabetes Sick Day Rules What to do if unwell

Patient information Leaflet

October 2020

Importance of ketones and avoiding Diabetic Ketoacidosis in Type 1 Diabetes

If you have forgotten to take your insulin either your background and / or meal time, or not had enough insulin this will result in your blood glucose levels rising. Without enough insulin in the blood stream your body is unable to get the energy it needs and starts to breakdown your body fat to use as fuel.

Using fat stores can produce breakdown products known as **KETONES** which are acidic and toxic.

If this process continues, then it can lead to a serious condition known as **Diabetic Ketoacidosis (DKA)**.

Ketones are measured on a finger prick blood test- using a ketone strip (preferred method in patients with Type 1 Diabetes), however they can be detected in urine.

Ketones can develop very quickly even if your blood glucose levels are only slightly above your targets. Acting quickly when you are unwell, staying hydrated and taking your insulin can help you avoid developing DKA.

Be mindful of the following:

Do you have?

- An underlying illness that may be developing
- Could you have missed your insulin doses
- Raised blood glucose levels above 13 mmol/l

Symptoms of DKA :-

- Abdominal pain
- Passing less urine
- Nausea or vomiting
- Increased thirst
- Breathlessness
- Smell of ketones in the breath (pear drop smell)
- Feeling tired

Attend hospital urgently if:

- You feel you have any of the above symptoms
- You have persistent vomiting
- You are unable to eat/keep fluids down
- You have moderate to large ketones in your blood/urine 1.5-3.0 mmol/l

Making sense of Ketone Testing and how to adjust your insulin

Blood Glucose BG	Blood Ketones	Insulin Changes / BG frequency
BG 8 mmol/l or less	Less than 1.5 mmol/l Trace	Continue with same doses of your long acting / basal insulin (BI) Use the same meal time ratio/doses of meal time insulin – Quick Acting Insulin (QA) Test your BG and ketones every 4 hours
BG 8-13 mmol/l	1.5- 3.0 mmol/l Moderate	Continue with same doses of your long acting / basal insulin (BI) Give 10 % of your Total Daily Dose (TDD) of your Quick acting insulin every 2 hours Test your BG and ketones every 2 hours If no improvement in 4-6 hours – seek urgent assistance
BG 13 mmol/mol or more	Above 3.0 mmol/l High	Continue with same doses of your long acting / basal insulin (BI) Give 20 % of your Total Daily (TDD) of your quick acting insulin every 2 hours Test your BG and ketones every 2 hours If no improvement in 4-6 hours seek urgent assistance

Working out your Total Daily Dose – please use a normal day for this calculation

Total amount of Meal Time insulin (QA)

Total amount of Background Insulin (BI)

Total Daily dose (TDD)

10 % TDD

20% TDD

TDD	20 units	25 units	30 units	35 units	40 units
10%	2 units	2.5-3 units	3 units	3.5-4 units	4 units
20%	4 units	5 units	6 units	7 units	8 units

Action Plan

- **Never** stop taking your long acting insulin (BI) – ie Lantus,Levemir, Toujeo, Tresiba, Humulin I **My dose of BI is**
- If not eating still monitor your BG levels and correct with your Quick acting insulin to correct high readings
- If unable to eat solid food,consider replacing with liquid foods ie soup,milk, yoghurts & ice cream
- Ensure you stay well hydrated – drink 100 mls sugar free fluids hourly
- Know your insulin sensitivity ie 1 unit of insulin usually drops BG levels by 2-3 mmol/l. **My correction factor is 1 unit of insulin reduces my BG by**
- Know your insulin - carbohydrate ratio i.e. 1 units of insulin for g carbohydrate or dose of meal time insulin.**My meal time ratio is 1 units of QA insulin forg carbohydrate**
- Know your contact details for help

Contact us:

Diabetes Specialist Nurse – 0161 922 4888 option 3

Diabetes Email – integrated.diabetes@tgh.nhs.uk

If you have any questions you want to ask, you can use this space below to remind you

If you have a visual impairment this leaflet can be made available in bigger print or on audiotape. If you require either of these options please contact the Patient Information Centre on 0161 922 5332

If you require an interpreter, please ask an appropriate person to contact our central booking office between Monday to Friday 8am to 5pm on 0161 922 6991 to arrange this for you.

語言翻譯及病者支持服務 (LIPS):

如果閣下需要翻譯員在您的預約當日幫助您的話 請找一名合適的家庭成員 **0161 922 6991** 聯絡本中央預約辦事處來您您安排 我們的辦公時間是星期一至星期五 上午 8 時至下午 5 時

Językowo Tłumaczeniowa Usługa Pomocy dla Pacjenta (Language, Interpretation and Patient Support Service LIPS):

Jeśli potrzebujesz pomocy tłumacza w trakcie swojej wizyty, proszę poprosić odpowiedniego członka rodziny o skontaktowanie się z Centralnym Biurem Zamówień (Central Booking Office), w celu zorganizowania tłumacza pomiędzy poniedziałkiem a piątkiem w godzinach od 08:00 - 17:00 pod numerem **0161 922 6991**.

لینگویج، انٹرپرائٹیشن اینڈ پیسٹنٹ سپورٹ سروس (Lips)

اگر آپ کو اپنی اپائنٹمنٹ کے لئے مترجم کی مدد کی ضرورت ہو تو براہ مہربانی اپنے خاندان کے کسی موزوں فرد سے کہیں کہ وہ ہمارے سنٹرل بنگ آفس سے پیر سے جمعہ 8.00 بجے صبح سے 5.00 بجے شام کے دوران 0161 922 6991 پر فون کر کے اس کا بندوبست کریں۔

Document control information

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Date Created: October 2020
Version: 1.0