



The Low-down on Hypos

with the Diabetes 101 team



Hypos? Who is at risk?

Blood glucose
level less than
4 mmol/l

Not everyone
living with
diabetes will have
hypos

Those on insulin
MDI/Pumps

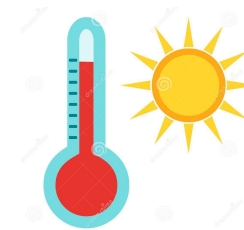
Also known as:
Hypoglycaemia
Low blood glucose
Low blood sugar



Certain tablets
used in Type 2
Diabetes

Why do hypos happen?

- *Mis-match between insulin & carbs*
- *Certain tablets in Type 2 diabetes*
- *Missed or delayed meals*
- *Certain exercise or activity*
- *Hot weather, baths or showers*
- *Alcohol*
- *Lumpy injection sites*
- *Sometimes there is no obvious reason*



Common Hypo Symptoms...

Light-headed

Shaking

Sweaty

Feeling
weak

Hungry

Unsteady

Slurred speech

Looking pale

Dizziness

Behaviour
changes



Not everyone will have the same hypo symptoms & some people will have reduced hypo awareness and sometimes even hypo unawareness

Hypo treatments

- *Fast acting carbohydrate (sugar)*
- *Needs to be something that works quickly*
- *High fat sugary foods such as biscuits, chocolate and cakes take much longer to work. The fat content slows down how quickly the sugar (glucose) gets absorbed into the blood stream*



Babies hypo treatments:

Babies and toddlers up to 10kg body weight, generally only need 5g of fast acting carbohydrates...



1-2 tablets



1/2 tube Glucogel



1 Jelly Baby



60ml fresh orange juice

50ml non diet fizzy drink such as Coke/Sprite



1/3 of the bottle or 20ml

Children's hypo treatments:

Young children (Nursery and primary school aged) up to 30kg body weight, generally need 10g of fast acting carbohydrates...



2-3 tablets



1 tube Glucogel



2 jelly babies



120ml fresh orange juice

100ml non diet fizzy drink such as Coke/Sprite



2/3 of the bottle or 40ml

Young peoples hypo treatments:

Older children (High school age) up to 50kg body weight,
generally need 15g of fast acting carbohydrates...



3-4 tablets



1 1/2 tubes Glucogel



3 jelly babies



180ml fresh
orange juice

150ml non
diet fizzy
drink such as
Coke/Sprite



1 full
bottle
(60mls)

Adult hypo treatments:



1 bottle (60 mls)
Lift Glucose shot



1 ½ - 2
tubes Glucogel



3-4 Bassetts
Jelly Babies
(different brands may vary)



5-6 Dextro energy
sweets



4-5 Lift Gluco
tabs/chews



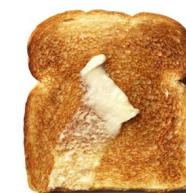
200-250 mls
fresh orange
juice

What to do next?

- Re check glucose after 10 mins following appropriate treatment with fast acting carbs
- If glucose still less than 4 mmols/l repeat hypo treatment
- Recheck in a further 10 mins



- Once glucose above 4 mmols have a starchy snack or meal (if due) containing starchy carbohydrates



Hypos and Insulin Pumps

Initial Treatment

- The treatment of a hypo is slightly different for those PWD using insulin pumps
- You will need 10 - 15 grams of fast-acting carbohydrate and then recheck your blood glucose after 15 minutes
- Repeat above if your blood glucose is still below 4 mmols

Follow-up treatment

This is where it is different

- You do not need the long-acting carbohydrate HOWEVER remember you need to think about what caused the hypo:
- Insulin on board - do you need to eat to cover this?
- Exercise/Alcohol - do you need to put a lower temporary basal rate on?

Hypos specific to pumps

as well as the usual suspects you may want to consider some factors that are unique to pumps...

Pump settings

- Basal rates - if greater than 60% of your total daily dose then this may cause hypos
- Bolus - if greater than 60% of TDD then this may indicate your insulin-to-carbohydrate ratios are too high or your insulin sensitivity ratio is too strong
- Consider reviewing these with your local diabetes team

Timing of hypos

- Early night - could be correction or bolus done late evening or before bed, consider reviewing your evening ratios
- Or was it that dual wave bolus? Too much up front or extended for too long?
- Late night - could be inadequate reduction of basal for exercise or alcohol

For more information please go to

<https://abcd.care/resource/using-cgm-reduce-hypoglycaemia>

P.S. It's Prof Choudhary telling you everything you need to know about hypos and CGM!

Hypos and Sensors (very briefly)

Remember

- Sensor lag
- Check with finger pricks when monitoring recovery from hypos as you may overtreat due to false lows

Arrows

- Use the direction of the arrows to predict and prevent hypo
- For example
- BG 6 mmols ↓ 1 jelly baby
- BG 6 mmols ↓↓ 2 jelly babies

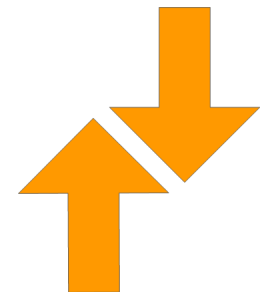
Using CGM & Flash wisely

- The first 24 hours of a sensor can have variable accuracy, therefore may need to rely more on blood glucose monitoring
- To improve sensor accuracy, you could insert sensor the day before you start it
- Try avoid being over ambitious with alarms. We would all love levels between 4-7 mmols/l but this is not always possible.
- Be realistic where you want to be alerted to avoid alarm fatigue!!



Using CGM & Flash wisely

- Observe your trend arrows, if you are in range but have a directional arrow down, this could mean a hypo is on the way allowing you to pre-treat this hypo with reduced intake
- Try not to be too aggressive with correction doses, this can cause over correction
- Calibrate only when glucose is not moving rapidly
- When calibrating, ensure hands are clean & you have a reliable sample of blood
- Paracetamol can affect CGM value for 8-12 hours



Fear of Hypos (FoH)

- *Wanting to avoid hypos is completely normal, but sometimes worrying about hypos can develop into a significant fear*
- *People with FoH might run their blood glucose very high. They might also avoid exercise and worry excessively about potential hypo situations (e.g. being alone at night).*
- *If people are running their BGs high for extended periods of time, they risk development of long-term diabetes complications. They also risk acute complications like DKA.*



Common FoH Triggers

- Severe hypo incident
- Embarrassing hypo
- Life changes (e.g. starting high school or living alone for the first time)
- Going through a period of time with lots of hypos
- Losing hypo awareness



What can help with FoH?

- Talk to your diabetes team for management advice
- Attend a structured education course (e.g. DAFNE)
- Think about technology (e.g. Libre or CGM)
- Bring BG targets down gradually e.g. aiming for 9 instead of 10
- If you experience a lot of anxiety in general, or you have intrusive memories of previous hypos it might help to talk to a therapist. Your diabetes team can help to signpost you.



Driving

- Check glucose within 2 hours prior to driving
- It is good practice for glucose to be 5 mmols/l or above before driving
- Re check glucose every 2 hours on longer trips or if doing several shorter trips
- Keep hypo treatments in the car
- Carry monitoring equipment with you



Hypo Highway Code

If you have a hypo whilst driving...

- Stop the car as soon as safe to do so
- Turn engine off
- Remove keys from ignition
- Move to passenger seat if safe to
- Treat hypo with 15-20g fast acting carbs
- Follow with starchy snack once glucose above 4 mmols/l
- Do not drive for at least 45 mins following the hypo & ensure glucose is above 5 mmols/l



That's all Folks...

Thanks for joining us, we hope you found it useful?

Remember, If you are experiencing issues with frequent unexplained hypos please contact your local team for advice

