

INVESTIGATION OF SPONTANEOUS HYPOGLYCAEMIA: 20 HOUR FAST

- Time the onset of the fast as of the last ingestion of calories.
- Ask the patient to fast from 8pm the previous evening
- Allow the patient to drink calorie-free and caffeine-free beverages.
- Ensure the patient is active during waking hours.
- Measure capillary blood glucose (BM) and ask the patient to complete a hypoglycaemia symptom score sheet every 1 hour.
- If the patient develops symptoms suggestive of hypoglycaemia, or the BM is < 2.5 mmol/l, take a venous blood sample for glucose (YELLOW TUBE), insulin and c-peptide (ORANGE TUBE) estimation.
- Usually, the fast should only be ended if the venous blood glucose level is < 2.5 mmol/l AND the patient has signs or symptoms of hypoglycaemia. Record the patients symptoms on the testing sheet. Take venous bloods, as above, at this stage. Clearly, if the patient is experiencing intolerable or unpleasant symptoms, but the blood glucose is > 2.5 mmol/l, the fast should also be ended.
- If the patient is asymptomatic and the blood glucose is less than 2.5 mmol/l take venous bloods hourly for glucose, insulin and c-peptide until either the patient develops symptoms of hypoglycaemia or the blood glucose is < 2.0 mmol/l. At that stage the fast should be discontinued.
- At the end of the fast, the patient should be given a sugary drink and some long-acting carbohydrate e.g. sandwich, bowl of cereal. Monitor BMs every 10 minutes until blood glucose is > 4 mmol/l, and then 2 hourly for the next 6 hours.
- If the patient does not become hypoglycaemic by 4pm discuss with metabolic registrar to determine whether the patient should be admitted for a full 72hr fast

Symptoms of hypoglycaemia

Palpitations (pounding heart)	Headache
Sweating	Nausea
Tremor	Difficulty concentrating
Hunger	Tiredness
Anxiety	Drowsiness
Blurred vision	Confusion

NB This is not a definitive investigation, i.e. failure to develop hypoglycaemia does not exclude a hypoglycaemic disorder.