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Physiology

- The brain is dependent on a continuous supply of glucose, and its interruption for more than a few minutes leads to central nervous system dysfunction, impaired cognition and eventually coma.




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Classification of hypoglycaemia:




- Mild – Hypoglycaemia is successfully treated by the patient.
- Moderate – Assistance is required from another person, the patient is usually alert or rousable.
- Severe – The person becomes unconscious, which may lead to coma or convulsions. If left untreated the person may die.

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Causes of hypoglycaemia

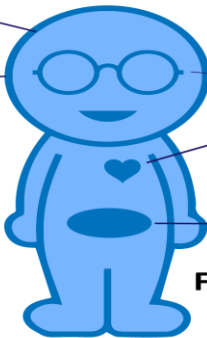
- Drugs: Insulin or insulin secretagogue's, alcohol, illicit drugs.
- Exercise / physical activity.
- Hospitalisation
- Delayed meal / fasting.
- Physical activity: house work, gardening, exercise, sexual activity.
- Illness: Hepatic, renal or cardiac failure. Sepsis.
- Hormonal Deficiency: Cortisol, Glucagon, Epinephrine, Growth hormone or adrenal.



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Sign and Symptoms




- HEADACHE**
- RINGING IN THE EARS**
- TREMBLING**
- IRRITABILITY**
- WEAKNESS OR TIREDNESS**
- SWEATINESS**
- BLURRY VISION**
- INCREASE HEART RATE**
- HUNGER**
- FEELING ANXIOUS**

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Management and treatment of hypoglycaemia



- TATR
- Test patient's BGL – if < 3.9 mmols
- Administer 15g rapid acting carbohydrate
- Time – Wait 10 minutes, ensuring patient is in a safe environment.
- Re-test BGL. If BGL remains < 3.9 mmols administer a further 15 grams of rapid acting carbohydrate & re-test BGL after 10 minutes.
- When BGL is above 3.9 mmols give a small long acting CHO snack (2 biscuits / glass of milk / yogurt / piece of fruit)
- Continue to monitor BGL's regularly due to increased risk for further hypo episodes.


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Case Studies

- Sean – 76 year old gentleman admitted with chest pain.
- Medical history: Occasional migraines, hypertension, Chronic Kidney Disease Stage 4, Hypercholesterolaemia, Type 2 diabetes and Obesity.
- Medications: Atorvastatin 40mgs OD, Ramipril 10 mgs OD, Aspirin 75mgs OD, Glucophage 850 mgs T.D.S, Gliclazide MR 120 mgs, Lantus 62 units OD nocte.
- Sean has experienced 2 hypo episodes 3.5mmols pre breakfast and 3.2 mmols pre lunch
- What are the issues???




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Case Study 2

- Anne 59 year old lady admitted overnight post concussion secondary to fall. Same cause by C₂H₅OH intake approx. 1 bottle (700mls of vodka).
- Past medical / surgical history: Anorexia Nervosa, Type 1 diabetes aged 16 years, appendectomy as a child.
- Medications: Novorapid 5-8units with meals, Toujeo 22 units nocte.
- Recent weight loss of 6 kgs. BMI: 16.8kg/m².
- What are the issues??




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