

HCP Education Module – ‘An Introduction to KDT as a Management Option for Complex Epilepsy’

Post Course Learning Evaluation – Questions

Name: _____

Date: _____

Q1: What is the ILAE definition of epilepsy?

Q2: Name 4 management options for reducing seizures?

Q3: What is meant by the term ‘intractable or complex epilepsy’?

Q4: What % of patients with epilepsy have inadequate control of their seizures with medication?

Q5: What is the definition of ‘drug resistant epilepsy’?

Q6: A Cochrane review in 2016 found what % of patients experience what % reduction in seizures after starting a ketogenic diet?

Q7: A meta-analysis by Henderson et al in 2006 showed what % of patients experienced complete seizure freedom?

Q8: What are the recommendations of NICE guideline 137 regarding referral to a tertiary centre for KDT?

Q9: Name 4 diagnoses recommended by Kossoff's International Ketogenic Diet Study Group in 2018 to be offered KDT earlier?

Q10: What % energy comes from fat in the Classical KD?

Q11: In the MCT KD what % fat comes from MCT?

Q12: In the Modified KD carbohydrate intake is restricted to what range in grams?

Q13: What are the 2 dietary aims of the Low Glycaemic Index Treatment?

Q14: In basic terms how is KDT thought to work?

Q15: Name one contraindication for KDT?

Q16: What is the term given to the symptoms of nausea, fatigue and headache that may be experienced for the first few days of KDT?

Q17: Name 2 side effects of KDT that can be easily managed?

Q18: What is an uncommon side effect of KDT and how can it be prevented?

Q19: List 2 ways KDT is monitored on a daily basis?

Q20: List 3 ways KDT is monitored on an ongoing basis?

Q21: In addition to seizure control list 3 quality of life benefits KDT can offer?

Q22: Name 4 common aims for those trialling KDT?

Q23: Generally, how long is a trial of KDT?

Q24: After what period of time is weaning off KDT considered?

Q25: What is the key consideration for medications such as antibiotics and pain relief?

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Post Course Learning Evaluation - Answers

Q1: What is the ILAE definition of epilepsy?

- A disease of the brain whereby at least 2 unprovoked (or reflex) seizures have occurred >24h apart

Q2: Name 4 management options for reducing seizures?

- Anti Seizure Medication (ASMs)
- Epilepsy Surgery
- Vagal Nerve Stimulation (VNS)
- Ketogenic Diet Therapy (KDT)
- Deep Brain Stimulation (DBS)
- Transcranial Magnetic Stimulation (TMS)

Q3: What is meant by the term ‘intractable or complex epilepsy’?

- epilepsy is a seizure disorder in which a patient's seizures fail to come under control with AEDs

Q4: Approximately what % of patients with epilepsy have inadequate control of their seizures with medication?

- 36%

Q5: What is the definition of ‘drug resistant epilepsy’?

- the failure of adequate trials of 2 tolerated, appropriately chosen ASMs

Q6: A Cochrane review in 2016 found what % of patients experience what % reduction in seizures after starting a ketogenic diet?

- >50% of patients experience >50% reduction in seizures after starting a KDT

Q7: A meta-analysis by Henderson et al in 2006 showed what % of patients experienced complete seizure freedom?

- 25%

Q8: What are the recommendations of NICE guideline 137 regarding referral to a tertiary centre for KDT?

- Refer children and young people with epilepsy whose seizures have not responded to 2 or more appropriately prescribed ASMs to a tertiary paediatric epilepsy specialist for consideration of the use of KDT

Q9: Name 4 diagnoses recommended by Kossoff's International Ketogenic Diet Study Group in 2018 that could benefit from being offered KDT earlier?

- Glut 1 deficiency syndrome
- Pyruvate dehydrogenase deficiency (PDHD)
- Infantile spasms
- Lennox-Gastaut syndrome
- Dravet syndrome
- Doose syndrome (myoclonic-astatic epilepsy)
- Status Epilepticus
- FIRES (febrile infection-related epilepsy syndrome)
- Angelman syndrome
- Ohtahara syndrome
- Tuberous sclerosis complex
- Rett syndrome
- Children receiving only formula (infants or enterally fed patients)
- Mitochondrial disorders

Q10: What % energy comes from fat in the Classical KD?

- 80-90%

Q11: In the Medium Chain Triglyceride (MCT) KD what % fat comes from MCT?

- 45%

Q12: In the Modified KD carbohydrate intake is restricted to what range in grams?

- 10 -30g

Q13: What are the 2 dietary aims of the Low Glycaemic Index Treatment?

- High fibre and high fat

Q14: How is KDT basically thought to work?

- KDT aims to mimic the effect of fasting/starvation whereby our bodies use fat instead of carbohydrate as the main energy source. In the KDT fat is used as the main energy source; and when combined with a low carbohydrate intake will cause your body to produce ketones. Ketones are thought to have an anti-seizure effect

Q15: Name one contraindication for KDT?

- Fatty acid oxidation disorders (FAODs)

Q16: What is the term given to the symptoms of nausea, fatigue and headache that may be experienced for the first few days of KDT?

- Keto Flu

Q17: Name 2 side effects of KDT that can be easily managed?

- Constipation, diarrhoea or reflux

Q18: What is an uncommon side effect of KDT and how can it be prevented?

- Renal stones, encourage adequate fluid intake

Q19: List 2 ways KDT is monitored on a daily basis?

- ketone/glucose readings & seizure diary

Q20: List 3 ways KDT is monitored on an ongoing basis?

- Dietary intake
- Changes in seizure control
- Growth
- Triglyceride and cholesterol profiles
- Blood tests to check vitamin and mineral status
- Bone health scans
- Kidney scans to check for stones

Q21: In addition to seizure reduction list 3 quality of life benefits KDT can offer?

- Improved levels of alertness and concentration
- Improved sleep/better quality sleep
- Improved changes in behaviour or communication
- Increase in energy levels
- Shorter recovery time from seizures
- Less intense seizures

Q22: Name 4 common aims for those trialling KDT?

- To reduce the frequency and severity of seizures and/or to stop seizures
- To reduce or stop medications prescribed for seizures
- To reduce the frequency and need for rescue medication
- To reduce hospital admissions
- To improve cognitive development
- To improve school performance and attendance at school
- To improve sleep
- The older child / young person may have their own aims for trialling KDT e.g.
 - They may hope that the diet will give them some more independence
 - That the diet will improve their concentration and help with their studies

Q23: Generally, how long is a trial of KDT?

- 3 months/12 weeks

Q24: After what period of time is weaning off KDT considered?

- 2 years

Q25: What is the key consideration for medications such as antibiotics and pain relief?

- Ensure sugar/carb free versions are used