<table>
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<tr>
<th>Podcast Series</th>
<th>Reynolds Geriatrics Series • USMLE Step 1 Prep 2012</th>
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<tbody>
<tr>
<td>Episode Title</td>
<td>A Fast Fasting</td>
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<td>Personnel</td>
<td>Back: James Deal, Blake Werner, Lane Aiena, Joseph Holman, John Frankel, John Ngo Front: Lela Ruck, Jill Fadal, Nic Thompson, Tiffany Lock (from left to right)</td>
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<tr>
<th>Group Number</th>
<th>Group 2</th>
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<td>USMLE Step 1-Style Question and answers</td>
<td>A 72 year old man was found unconscious at his home by his daughter and was brought to the emergency department by paramedics. On physical exam he had a distended abdomen, pitting edema of the extremities, thinning hair, and an enlarged liver. He has a history of chronic alcoholism. Biopsy of the liver reveals fatty infiltration and bridging portal fibrosis. Serum analysis revealed the following: Sodium: 140 mEq/L Potassium: 2.9 mEq/L HCO3: 16 mEq/L Albumin: 2.0 g/dL Hemoglobin: 10 g/dL BUN: 3 mg/dL Ammonium: 90 µmol/L (normal: 35-65) Creatinine: 1.0 mg/dL The patient’s condition is most associated with which of the following nutritional deficiencies? A. Protein-calorie deficiency B. Fat-calorie deficiency C. Carbohydrate-calorie deficiency D. Total caloric deficiency Correct answer: A. Protein-calorie deficiency</td>
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Learning Objectives
The listener should be able to:

1. Describe the symptoms of protein-calorie malnutrition.
2. Differentiate protein-calorie malnutrition from total calorie malnutrition.
3. Explain how alcohol abuse can cause protein-calorie malnutrition.

Key Teaching Points
- Protein-calorie malnutrition (also known as kwashiorkor) occurs when there is adequate carbohydrate intake but insufficient protein intake. Decreased protein intake leads to decreased synthesis of many proteins and enzymes made by the liver including apolipoproteins and albumin.
- Hypoalbuminemia, due to decreased albumin synthesis by the liver, leads to edema while decreased apolipoprotein synthesis can cause fatty infiltration of the liver and hepatomegaly.
- Although both total calorie malnutrition and protein-calorie malnutrition are common in chronic alcoholics, total calorie malnutrition commonly presents with generalized muscle wasting and emaciation which are not present in the patient presented in this scenario.
- Fat calorie deficiency and carbohydrate calorie deficiency are not associated with chronic alcoholism.

Comments
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Keywords
Geriatrics, USMLE step exam, protein-energy malnutrition, chronic alcoholism and nutrition

References
