King Saud University
College of Applied Medical Sciences
Community Health Sciences

CHS 431

Enteral and Parental Nutrition
Quiz

Student Name: ........................
Student Number: ........................
Total Mark: ..............................
Q1: Choose one answer for each of the following MCQ: (4 marks)

1. All of the following statements concerning enteral formula are false **EXCEPT**:
   a. Disease specific formula is cheaper than standard formula.
   b. Elemental formulas are used for normal digestive capacity patient.
   c. Blenderized formula needs aseptic technique to prevent bacterial contamination.
   d. ProMod as a modular product consider a good source for carbohydrate.

2. Calorie Disease formula:
   a. It’s a type of standard formula.
   b. Suitable for fluid restriction disease.
   c. Concentrated to provide more Kcal.
   d. All of the above.

3. All of the following statements concerning **pulmocare** are true **EXCEPT**:
   a. It's an example of disease specific formula.
   b. Can be used for respiratory and diabetic diseases.
   c. High in carbohydrate and low in fat.
   d. Help in reduce excess Co₂ production.

4. Crucial is:
   a. A complete intact formula for fluid restriction patient.
   b. It is an example of modular product.
   c. Used for immune support, wound healing and major surgery.
   d. All of the above.
5. All of the following statements concerning Human Milk Fortifiers are true

EXCEPT:

a. For preterm infant to support their increase nutrient needs.

b. It is a fluid that is mixed with human milk.

c. Iron-containing HMF has 1.4 mg / 4 packets.

d. It is an isotonic formula.

6. Soy- Based Formula for infant patient:

a. Indicated for infant with galactosemia or hereditary lactose deficiency.

b. Not effective for treatment colic.

c. Hypotonic formula.

d. All of the above.

7. Similac PM 60/40:

a. For renal disease, hypocalcaemia & hyperphosphatemia patient.

b. Hypertonic formula, whey protein concentrate.

c. High in iron.

d. All of the above.

8. Neocate infant:

a. It is peptide based formula.

b. Used for extreme protein hypersensitivity.

c. Designed for children from 1-10 years of age.

d. All of the above.
Q2: Put (T) for True OR (F) for false statements of the following: (4 marks)

1. Enteral formula can be used as oral supplement and tube feeding. (T
2. Polymeric formula contain hydrolyzed nutrient. (F
3. Free Amino Acid formula is better than peptide based formula in promoting greater nitrogen absorption. (F
4. Thicken up used for individuals with dysphagia. (T
5. Reduced Fat formula is used for chylothorax. (F
6. Children who require enteral nutrition (EN) support are those who are unable to obtain more than 50% of caloric needs by moth. (F
7. Start enteral feeding with full rate (F
8. Harris –Benedict equation is the most accurate method for determining resting energy expenditure (REE) for hospitalized individuals. (F
Q3: Calculate total kcal, protein, carbohydrate and fat in 1000 ml Jevity + 50 gm calogen. (2 marks)

**Answer:**

<table>
<thead>
<tr>
<th>Formula</th>
<th>Volume</th>
<th>Energy</th>
<th>Protein</th>
<th>FAT</th>
<th>CHO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jevity</td>
<td>1000ml</td>
<td>1060 kcal</td>
<td>44 gm</td>
<td>35 gm</td>
<td>154 gm</td>
</tr>
<tr>
<td>calogen</td>
<td>50 gm</td>
<td>225 kcal</td>
<td>0</td>
<td>25</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1000 ml</td>
<td>1285 kcal</td>
<td>44 gm</td>
<td>60 gm</td>
<td>154 gm</td>
</tr>
</tbody>
</table>
**Q4:** 84 y/o male known case of DM, admitted to hospital with poor oral intake, he start NGT feed. He is 100 kg and 155 cm

a. Calculate his nutritional need.

b. Give the most appropriate feed to him.

(5 marks)

**Answer:**

**Age:** 84 y/o  
**HT:** 155 cm  
**Wt:** 100 Kg  
**Male**

**BMI = wt/ (Ht)^2 = 100/ (1.55)^2 = 41.6 kg/m^2 (morbid obesity)**

**IBW = 24 x (1.55)^2 = 57.6 kg = 58 kg**

**% IBW = Awt/IBW = 100/58 = 172.4% (obese)**

**Adj BW = ((ABW – IBW) x 0.25) + IBW = 68.5= 69 kg**

**Nutritional requirement:**

1- **Energy requirement:** 20 – 22 kcal/Adj BW/ day  
   = 1380 - 1518 kcal/day

2- **Protein requirement :** 0.8 - 1 gm/Adj BW/day  
   = 55.2 – 69gm/day

3- **Fluid requirement :** 25 x 69 = 1725 ml/day
We will give him Glucerna as a formula because he is a diabetic pt.

Glucerna will provide him with:

<table>
<thead>
<tr>
<th>Formula</th>
<th>volume</th>
<th>Energy</th>
<th>protein</th>
<th>Fat</th>
<th>CHO</th>
<th>K</th>
<th>Na</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glucerna</td>
<td>1500 ml</td>
<td>1500 ml</td>
<td>63 gm (17%)</td>
<td>84 gm (50%)</td>
<td>141 gm (38%)</td>
<td>60 mmol</td>
<td>60 mmol</td>
</tr>
<tr>
<td>H₂O</td>
<td>225 ml flushing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N₂ (gm) = 63/6.25 = 10.08 gm

NPC = 1500 – (63x4) = 1248 kcal

NPC: N = 1248/10.08 = 123.8: 1

Flow rate: 1500/ 24 = 62.5 = 63 ml/hr

Plan:
1- Start the pt on half the volume 750 ml / day, 31 ml / hr and gradually increase it to reach the total volume 63 ml / hr + 40 ml / 4h flushing H₂O as the pt tolerate
2- Monitor feeding tolerance.
3- Monitor glucose, albumin, TG, cholesterol,
4- Check with the speech therapist whenever the pt can start oral feeding, if he starts orally; start with liquid then soft then solid as tolerated.
5- F/u : 7/7