MA-215 Medical Assisting Lab

Critical Thinking Week 6

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1. Explain the difference between minerals and electrolytes and which body systems do either greatly affect?- Minerals are inorganic substances such as iron, zinc and calcium. These substances can be broken down into two different categories, major minerals and trace minerals. Major minerals, also called macrominerals, are needed in larger quantities. Trace minerals, also called microminerals are needed in smaller quantities. Major minerals affect teeth and bones, stomach acids. They also affect muscle and nerve functions, and the immune system. Trace minerals however, affect teeth and bones as well, metabolism, growth and development. Zinc, which is a trace mineral alone affects the development of proteins, healing process of wounds, immune system and sperm count. Electrolytes on the other hand, are minerals as well, but they contain an electrical charge. Electrolytes are found in bodily fluids. These come from foods and water. If the body has too much or too little electrolytes, you may vomit, sweat, or have diarrhea. Kidney problems will also affect the electrolyte levels in the body.

2. How would you explain the difference between water-soluble and fat-soluble vitamins to your patient?- First I would explain that vitamins are organic substances that are needed by the body to carry-out specific functions, and are needed in small amounts. Water-soluble vitamins are those that dissolve in water. Examples of these vitamins include vitamin B and C. There is however an exception for vitamin B12, because B12 is stored in the liver and can stay in the liver for years. When water-soluble vitamins are not used, they are excreted by voiding. Fat-soluble vitamins are absorbed by the presence of fat in the patient's diet. An example of these vitamins include vitamin A, vitamin D and vitamin E. Because fat-soluble vitamins can build up causing toxicity, it usually is not necessary to take supplements.

3. Explain the importance of Antioxidants and where do we find them?- Our body uses oxygen to aid in the burning of food to create energy, we also inhale pollutants from our environment, and these are called free radicals. When the body contains an excessive amount of free radicals, the DNA that is contained in cells and blood vessels is attacked. Antioxidants are made of vitamins A, C and E, along with beta-carotene, lycopene, lutein and selenium, and these a in protecting our cells. When the DNA in our cells is attacked, we are at a higher risk of stroke, heart disease, cataracts and other degenerative diseases.

4. Discuss the difference between serving size and portion.- Portion size is the amount of food consumed by one person. Meaning this is how much we consume every time we sit down and eat. Serving size, however, is the amount of a food that is suggested to eat. An example is roman noodles, now it is packaged as two squares of noodles. Now, when you cook the noodles, you put both of the squares into

the water, but really the serving size is one of the squares. The package contains two servings, so if you eat the whole package, you're eating two servings. Food, such as chips, are served in multiple serving sizes, but it is up to you to control your portion size. Food, such as chips, is packaged as multiple servings, but it is up to you to control your portion size.