

Answers to questions on principles of nutrition for healthcare



Omega-3 (linolenic acid) is a type of essential polyunsaturated fat. Like the omega-6 fatty acids are unsaturated because it contains in its molecule double bonds between carbon atoms and are essential (EFA) because the body can not produce it and therefore must be obtained through food. There are three omega -3 fatty acids: Alpha-linolenic, Eicosapentaenoic acid and Docosahexaenoic acid.

These essential fatty acids can be obtained from the following sources: The Blue Fish, Food Plant: The purslane, lettuce, soy, spinach, strawberries, cucumbers, Brussels sprouts, cabbages, pineapples, Almonds and Walnuts.

The body needs omega-3 fatty acid to work properly. The main functions of linolenic acid include: The formation of cell membranes, the formation of hormones, the immune system to functioning correctly, the correct formation of the retina, the functioning of neurons and chemical transmissions.

Besides the basic functions, there is evidence that ingestion of omega-3 fatty acids represents a number of benefits for the body. Beneficial effects on the circulatory system, the intake of linolenic acid-rich foods or supplements that contain this principle lowers triglycerides, lowers cholesterol, prevents blood clots in the arteries by preventing platelet aggregation and arterial pressure decreases slightly. In general thins blood and protects against heart attacks, strokes, stroke, angina pectoris, Raynaud's disease, etc. Moreover, the cardioprotective role is further enhanced by the ability of these oils to increase the transmission power of the heart muscle as rhythm regular and prevent disease and arrhythmias. This component protects against the

development of certain cancers like colon, prostate and breast cancer. They can also prevent the growth of cancer cells. In breast cancer these acids inhibit the action of estrogens that are responsible for the development of breast tumors.

There is evidence that omega-3 has anti-inflammatory joint diseases.

Therefore food or supplements especially can be very appropriate to reduce swelling and relieve pain in diseases such as rheumatoid arthritis, psoriasis and lupus. The use of supplements containing omega-3 may be a natural alternative to conventional treatment for rheumatoid arthritis. It appears that this component increases the levels of PG3 prostaglandins have anti-inflammatory properties. Inflammatory properties of omega-3 can be used for the treatment of inflammatory bowel disease Crohn's disease or ulcerative colitis.

In the same way can help reduce the pain caused by menstruation. The intake of these acids can help maintain mental balance and avoid depression or to improve or assist in the treatment of diseases such as schizophrenia. These acids have a positive action in the maintenance of healthy skin, making them suitable for preventing or ameliorating diseases affecting this organ, such as eczema, psoriasis, etc., Intake of foods rich in omega-3 is very appropriate during pregnancy to ensure that the fetus has a right brain development. Mothers who eat foods with these components have had children with a higher learning capacity and less impaired. Similarly it has been shown that omega-3 favored the motor coordination of premature babies.

2. The client brings the results of recent cholesterol screening with him to see the nurse. The client is confused about what the results mean and asks what the total cholesterol number should be. Which of the following statements could the nurse make about interpreting the results of the cholesterol screening test?

a.

Total blood cholesterol should not exceed 150 mg/dl

c.

Total cholesterol should not exceed 150 mg/ml

b.

Total cholesterol should not exceed 200 mg/dl

d.

Total cholesterol should not exceed 200 mg/ml

Answer: b) Total cholesterol should not exceed 200 mg/dl

3. The nurse is teaching a group of clients in a cardiac rehabilitation class about food sources of proteins. In what foods will the nurse say protein is found?

a.

in foods derived from both plant and animal foods

c.

only in foods derived from plants

b.

only in foods derived from animals

d.

only in fortified foods

Answer: a) in food derived from both plant and animal foods.

4. The school nurse is making a presentation to parents of teenage students. One parent is concerned that their child is not getting adequate high quality dietary protein because the child has stopped eating meat. The nurse tells the parent that certain diets that do not contain meat can still provide adequate protein. Which of the following statements could the nurse make about vegetarian diets and protein?

a.

all vegetarian diets deliver adequate high quality dietary protein

c.

lacto-ovo vegetarian diets deliver adequate high quality dietary protein

b.

fruitarian diets deliver adequate high quality dietary protein

d.

vegan diets deliver adequate high quality dietary protein

Answer: d) Vegan diets deliver adequate high quality dietary protein.

Explain why.

Get adequate protein on a vegan diet presents no problem at all. Both nuts and seeds such as legumes, whole grains and soy products provide protein.

Previously it was believed that plant proteins were of lower quality than animal proteins in which amino acid content is concerned. However, this belief has become outdated and that if you follow a diet based on balanced vegetable products, will receive all the necessary amino acids in adequate

amounts. The vegan diet has several incomplete proteins to make a complete one, but that should be eaten the same day, the essential amino acids can also be found in soy products and tofu.

5. A pregnant client tells the nurse that she is taking megadoses of vitamin A in the hopes that it will keep her complexion clear throughout the pregnancy. What could the nurse say about the client's use of this vitamin supplement?

a.

Consuming megadoses of vitamin A may cause permanent night blindness.

c.

Taking megadoses of vitamin A are a good idea during pregnancy because vitamin A supports a healthy immune system.

b.

Consuming megadoses of vitamin A may result in birth defects.

d.

Taking megadoses of vitamin A will neither help nor hurt her or the fetus during the pregnancy.

Answer: b) Consuming megadose of vitamin A may result in birth defect.

Explain your answer.

Birth defects can occur if the supplement that has high doses of retinol ingested for a while, several days or weeks and especially during the first trimester of pregnancy.

Vitamin A is an essential micronutrient for growth of the human body, the tissue tropism of epithelial organogenesis, epithelial differentiation and embryonic development. Intake, acute or chronic high amounts of vitamin A can cause various clinical manifestations such as headache, vomiting, diplopia, alopecia, dry mucous membranes, skin peeling, bone abnormalities and liver damage.

Vitamin A and retinoids are teratogens classics. Malformations that are generated depend on the doses used and timing of organogenesis in which they are provided. During early organogenesis result in abnormalities of the central nervous and cardiovascular system, while a later provision gives rise to genetic defects in the upper and lower genitourinary tract and palate. Retinoids derived from the catabolism of vitamin A mother's diet are transferred to the embryo-fetal compartment.

6. A family member of an elderly client contacts the nurse and asks why the client is receiving B12 injections. Which of the following answers could the nurse give?

a.

The injections of B12 are given to prevent blindness.

c.

The injections of B12 are given to prevent pellagra

b.

The injections of B12 are given to prevent beriberi

d.

The injections of B12 are given to prevent pernicious anemia

Answer: d the injections of B12 are given to prevent pernicious anemia

Explain why.

Pernicious anemia is a decrease in red blood cells that occurs when the body can not properly absorb vitamin B12 from the digestive tract. This vitamin is necessary for the proper development of red blood cells. The body needs vitamin B12 to produce red blood cells. In order to provide vitamin B12 in their cells, you should eat enough foods that contain this vitamin, such as beef, poultry, seafood, eggs and dairy products (AC Antony, 2008).

To absorb vitamin B12, your body uses a special protein called intrinsic factor, secreted by cells in the stomach. The combination of vitamin B12 attached to intrinsic factor is absorbed in the latter part of the small intestine. When the stomach does not produce enough intrinsic factor, the intestine can not absorb the vitamin properly. The disease begins slowly and

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may take decades to fully establish. Although the congenital form occurs in children, pernicious anemia usually does not occur before age 30 in adults and the average age at diagnosis is 60 years. Monthly injections of vitamin B12 are prescribed to correct the deficiency of the vitamin. This therapy treats the anemia and may correct the neurological complications if taken soon enough. In people with a severe deficiency, injections are given more frequently at first(Medlineplus).