Free essay about cholesterol

Health & Medicine, Obesity

Why are lipids important?

Lipids are a form of organic molecules, which are categorized together based on their solubility in non-polar solvents. There are four key lipid groups, which include fatty acids, glycerides, nonglyceride lipids and Complex lipids. Lipids are important since they serve different biological functions, which include storage of energy, source of energy, structural components of the cell membrane, adsorption of vitamins, protection, as well as insulation.

Can the body produce essential fatty acids (EFA's)? If not, how does thebody obtain these needed lipids?

Essential fatty acids (EFAS) include omega-6 also known as linoleic acid and omega-3 also known as alpha-linolenic acid. The body does not produce them, but they are needed and are used to make other fatty acids. They are, therefore, obtained from sources like shellfish, fish, soya oil, pumpkin seeds walnuts, leafy vegetables among others.

What are the benefits of Omega-3 and Omega 6 fatty acids?

Omega-6 fatty acids serve an important function in normal growth and development, as well as brain function. They also aid in the stimulation of the growth skin and hair, maintenance of bone health, regulation of metabolism, as well as maintenance of the reproductive system. Omega-3 fatty acids, on the other hand, aid in a reduction of inflammation.

What is cholesterol? Research cholesterol more in depth.

Cholesterol is an organic molecule, a sterol, which is a molecule of lipid that is biosynthesized by each animal cell since it is an important structural

component of cell membranes, of animals, needed in maintenance of membrane structural fluidity, as well as integrity.

What are LDL and HDL?

Low-density lipoprotein abbreviated as LDL, is a form of cholesterol that transports particles of cholesterol all over the body. It accumulates in the arteries' walls, rendering them firm and narrow. High-density lipoprotein abbreviated as HDL is among the five key lipoproteins groups, which include low-density lipoprotein, chylomicrons, intermediate-density lipoprotein, very low-density lipoprotein, as well as HDL.

Where is cholesterol produced?

80% of the cholesterol in the human blood stream is produced by the body whereas 20% is obtained from the food taken. The liver is the primary organ that is responsible for making cholesterol in the body. A small portion of cholesterol is, however, made by the small intestines' lining, as well as the body's individual cells (Andrew, 2008).

What are the causes of high cholesterol?

Factors like obesity, an unhealthy diet, and inactivity cause high LDL cholesterol together with low HDL cholesterol. Other factors may as well play a role, including the genetic makeup, which may prevent cells from efficiently getting rid of LDL cholesterol from the blood or result in the production of too much cholesterol by the liver.

What are the treatments for reducing high cholesterol?

Changes in lifestyle like working out and taking a healthy diet are the first line of protection against high cholesterol. The specific selection of medication or combination of medications is based on a number of factors, which include the individual risk factors, age, current health, as well as possible side effects. Common selections are statins, which lower cholesterol, bile-acid-binding resins, which trigger the liver to use excess cholesterol, cholesterol absorption inhibitors, which limit the dietary cholesterol absorption, among others (MayoClinicStaff, 2013).

What options exist for a person to try and reduce his/her cholesterol without taking medication?

Options for reducing cholesterol without medication include taking a healthy diet, which has a low load of glycemic, high in fiber, and phytonutrient and rich in omega-3. This diet ought to be plant based, and plenty of good quality protein should be taken, for instance, nuts, beans, seeds, as well as lean animal protein. Exercise should also be practiced. A person should get good quality Sleep since it is important in healing the body, maintaining balanced sugar in the blood, as well as the overall health.

Explain cholesterol homeostasis

Cholesterol homeostasis can be referred to as any mechanism, which leads to the process of maintenance of a balanced internal cholesterol state in a living organism. Cholesterol, which is an important biological molecule in the body system of humans, plays a number of physiological functions for instance serving as a precursor for the steroid hormones, vitamin D and bile acids production. It is also important as a critical structural element in the

cell membrane of each cell in the body. In spite of the beneficial, as well as the necessary roles of cholesterol, a disturbance of the balance of cholesterol homeostasis may result in a raised risk of heart disease as well as disturbing other feedback systems of homeostasis linked to the metabolism of cholesterol. Among the most fundamental systemic dysfunctions of imbalance of cholesterol can be apparent within the cell membrane since the ratio of polar lipid to cholesterol affects mobility of protein, as well as the membrane permeability itself (Espenshade & Hughes, 2007).

Do the benefits of lowering cholesterol outweigh the risks of taking medication?

The benefits of long-term intake of statin drugs for lowering cholesterol significantly outweigh the dangers. A number of experts have a fear that people may overuse statins, but these new results could provide reassurance to over 200 million people globally who take these drugs, according to a review (HealthDay, 2014). Common medications of statin include Zocor, Crestor and Lipitor. In this review, data was analyzed from research studies carried out in 1994, which had over 150, 000 middle-aged, as well as elderly men and women who were taking statins and were observed for approximately five years. The findings demonstrated that use of statin for a long time marginally raised the risk of a number of side effects though did not raise the risk for others. For instance, there was small proof of muscle pains and aches and just a slight rise in the danger of inflammation of muscles. A severe condition featuring the fast muscle tissue breakdown was primarily linked to high statins doses, which are not recommended anymore

(HealthDay, 2014).

Long-term use of statins was linked to a modest rise in the type 2 diabetes risk, though just among individuals who had other risk factors for diabetes. Individuals who took statins for a long period had low raised risk for dementia, cataracts, fatigue, as well as blood clots. It was also demonstrated that use of statin provided some protection for individuals at risk for pancreas inflammation, as well as for kidney disease resulting from the dye applied in a number of procedures of medical imaging.

Low fat/reduced fat Lays® potato chips versus regular Lays potato chips(e. g., Lays brand)

Serving size of 1 oz of Lays Potato Chips contains 150. 0g of Calories and 10. 0 g of Total Fat. Chips Ahoy, on the other hand, has 160g of Calories, 72 g of Calories from Fat and 8g of total Fat.

Based on the data you have gathered, do you think the reduction in fat wassignificant?

There was a significant reduction in fat.

Would you choose to eat the reduced fat product or the regular product? Why orwhy not?

I would take the regular product since it has low calories and low fats, which would reduce any chance of raising cholesterol in the blood.

Reference List

Andrew, B. (2008, October 28). Where is Cholesterol Produced in the Body? Retrieved October 2, 2014, from http://www. disabled-world. com/artman/publish/body-cholesterol. shtml

Espenshade, P. J., & Hughes, A. L. (2007). Regulation of sterol synthesis in

eukaryotes. Annu. Rev. Genet., 41, 401–27.

HealthDay. (2014, August 5). Cholesterol Drugs' Benefits Far Outweigh Side Effects, Review Finds. Retrieved October 2, 2014, from http://consumer. healthday. com/diabetes-information-10/type-ii-diabetes-news-183/statin-benefits-far-outweigh-side-effects-review-finds-690441. html

MayoClinicStaff. (2013, February 12). High cholesterol. Retrieved October 1, 2014, from http://www. mayoclinic. org/diseases-conditions/high-blood-cholesterol/basics/treatment/con-20020865