My assignment

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College; medicine and health sciences

Department; human anatomy

Course; general biochemistry 2- bch 204

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Question

1a. What are coenzymes
b. Differentiate between fat and water soluble vitamins
c. Describe niacin in relation to its coenzymic function

Answers

1a. Coenzymes are organic non-protein compound that binds with an enzyme to catalyze a reaction. Coenzymes are often broadly called cofactors, but they are chemically different. A coenzyme cannot function alone, but can be reused several times when paired with an enzyme.

1b.

Fat soluble vitamins	**water soluble vitamins**
1.Fat-soluble vitamins are dissolved in fats.	1.Water-soluble vitamins are those that are dissolved in water
2.They are absorbed by fat globules	2.readily absorbed into tissues for immediate use.
3.excess fat-soluble vitamins are stored in the liver and fatty (adipose) tissues	3.they are not stored in the body.
4. They do not need to be replenished as much as water soluble	4. They need to be replenished regularly
5.they can accumulate to toxic levels if taken in excess.	5.certain types of water-soluble vitamin, such as vitamin c can cause diarrhea if taken in excess.
6. Examples of fat soluble vitamins are, vitamin A,D,E,K.	6. Examples of water soluble vitamins are, vitamin B1, 2, 3, 6, 12, folate , biotin, vitamin c, pathogenic acid.

1c. Vitamin B3, generally referred to as **niacin,** is a water-soluble vitamin.
This vitamin can generally be found in two distinctive forms, namely **nicotinic acid** and **nicotinamide.** These substances are used by the body to form the **coenzymes NAD and NADP.** Niacin coenzymes degrade carbohydrates, fats, proteins and alcohols and synthesize fatty acids and cholesterol. They play a role in cell signaling.