**Vitamins and Minerals Questions**

**Complete this question sheet to about vitamins and minerals and the role they play in your health. Read over all of the information within the Nutrition course content notes and follow all the links provided to you within those notes.**

**Part A**

1. Vitamins are organic whereas minerals are inorganic. What is the difference?
2. Do vitamins and minerals provide food energy?
3. How do antioxidants aid in health?
4. Name three vitamins that are examples of antioxidants.
5. Compared to carbohydrates, fats and protein, are vitamins and minerals required in smaller or larger amounts?
6. Vitamins B and C are water-soluble and vitamins A, D, E and K are fat-soluble. Explain why knowing which vitamins are water-soluble and which vitamins are fat-soluble can affect consumption of these vitamins.
7. Are all vitamins obtained from food? Explain. Include a discussion of “precursors” in your response.
8. Trace minerals, although vital to your health, are needed in very small amounts. How much, generally? What amount of the major minerals do we require daily? Give an example of each type.
9. What is meant by the words “enriched” or “fortified”? Name some common “enriched” foods and identify what they are enriched with.
10. Who regulates dietary supplements such as vitamins and minerals in Canada?
11. Identify the vitamin or mineral that may be necessary in the prevention or treatment of the following disease or illness:
	1. Neural tube defects in babies
	2. Anemia
	3. Osteoporosis
	4. Scurvy
12. To what main categories of nutrients are each of the following food groups the best sources? (See unit 1, page 4, first paragraph... link to “Eating Well with Canada’s Food Guide”; <http://www.hc-sc.gc.ca/fn-an/pubs/res-educat/res-educat_3-eng.php#a1>)
	1. Milk and alternatives
	2. Meat and alternatives
	3. Grain products
	4. Fruit and vegetables

**Part B**

Using the links provided , complete the following table presenting the various sources and functions of important vitamins. Comment also on the deficiency and toxicity symptoms of each.

Some of the information on the various websites is very detailed. As much as possible, use your own words, that is, **paraphrase the technical vocabulary** as best as you can. The whole point of this exercise is to have an understandable vitamin reference table to study with for an upcoming test!

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Water-soluble Vitamins**  | **Food Sources**  | **Primary Function(s)** | **Deficiency Symptoms** | **Toxicity Symptoms** |
| **Thiamin** |  |  |  |  |
| **Riboflavin** |  |  |  |  |
| **Niacin** |  |  |  |  |
| **Folacin (folate)** |  |  |  |  |
| **Vitamin B12** |  |  |  |  |
| **Vitamin C** |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Fat-soluble Vitamins** | **Food Sources** | **Primary Function(s)**  | **Deficiency Symptoms** | **Toxicity Symptoms** |
| **Vitamin A** |  |  |  |  |
| **Vitamin D** |  |  |  |  |
| **Vitamin E** |  |  |  |  |
| **Vitamin K** |  |  |  |  |

**Part C**

Again, using the links provided in the course, complete the following table presenting the various sources and functions of important minerals. Comment also on the deficiency and toxicity symptoms of each. Remember to paraphrase the technical vocabulary as best as you can.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Major Minerals** | **Food Sources**  | **Primary Function(s)** | **Deficiency Symptoms** | **Toxicity Symptoms** |
| **Calcium (Ca)** |  |  |  |  |
| **Magnesium (Mg)** |  |  |  |  |
| **Sodium (Na)** |  |  |  |  |
| **Potassium (K)** |  |  |  |  |
| **Phosphorus (P)** |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Trace Minerals** | **Food Sources**  | **Primary Function(s)** | **Deficiency Symptoms** | **Toxicity Symptoms** |
| **Iron (Fe)** |  |  |  |  |
| **Zinc (Zn)** |  |  |  |  |
| **Iodine (I)** |  |  |  |  |
| **Fluoride (F)** |  |  |  |  |