**Under-consumption of Fruit & Vegetables**

1. Explain the following key terms:

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| Nutrient dense | Food that contain a large amount of nutrients such as vitamins and minerals. |
| Antioxidants | Compounds in foods that neutralize free radicals. |
| Free radicals | Molecules formed when oxygen is metabolized. Free radicals can damage healthy body cells and increase the risk of diseases such as cardiovascular disease and cancer. |
| Energy dense | Foods that contain significant amounts of fat, carbohydrates and/or protein, therefore contributing large amounts of energy to the diet. |

1. Vegetables and fruits contain the following nutrients. Research their functions:

|  |  |
| --- | --- |
| **Nutrient** | **Function** |
| Vitamin A | Important for good vision, healthy skin and supporting the immune system. |
| Vitamin C | Changes the chemical make-up of iron from non-meat sources and increases the amount that is absorbed. Vitamin C should be eaten if iron absorption needs to be maximized. Essential for immune system functioning. |
| Fibre | Type of carbohydrate. Found in all foods of plant origin, fibre is not absorbed by the body. Rather, it travels through the digestive system, acting like a cleaner as it moves. Absorbs water, which adds to bulk to the faeces. This assists in regular bowel movements, which decreases the likelihood of constipation. |
| Magnesium | Important for many processes in the body including, regulating muscle and nerve function, blood sugar levels, blood pressure and making protein bones and DNA |
| Folate | B-group vitamin. Plays an important role in DNA synthesis and is therefore required for cells to duplicate during periods of growth. Also plays a role in the development of red blood cells. |

1. Explain 3 ways that under consumption of fruits & vegetables can contribute to **Burden of Disease** in Australia:

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| YLL associated with high BMI, including cardiovascular disease, type 2 diabetes and some cancers. |
| DALY for infants associated with neural tube defects. |
| YLD associated with high BMI, including cardiovascular disease, type 2 diabetes and some cancers. |

1. Explain 3 ways that under consumption of fruits & vegetables can contribute to **Health Status** in Australia:

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| Increased levels of morbidity and mortality due to cardiovascular disease and some cancers. |
| Higher infant and under-five mortality rates. |
| Lower life expectancy and HALE. |

**Under-consumption of Dairy**

1. Explain the following key terms:

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| Dairy | Foods which are high in calcium, such as yoghurt, milk and cheese. |
| Dairy Intolerance | Reduced ability to digest lactose (a sugar in dairy products.) |
| Fortified | When a nutrient has been artificially added to food to increase its nutritional value. |
| Osteoporosis | A condition characterized by a reduction in bone mass that makes bones more likely to break and fracture. |

1. The main nutrient in dairy? What is its function?

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| Nutrient | Function |
| YLD | Calcium is one of the key nutrients required for the building of bone and other hard tissue (teeth and cartilage) |

1. Explain 3 ways that under-consumption of dairy can contribute to **Burden of Disease** in Australia:

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| Contributes significant YLD as a result of osteoporosis, especially among older females. |
| DALY associated with cardiovascular disease, colorectal cancer and type 2 diabetes. |
| YLD due to dental caries. |

1. Explain 3 ways that under-consumption of dairy can contribute to **Health Status** in Australia:

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| --- |
| Morbidity due to osteoporosis. |
| Morbidity and mortality due to cardiovascular disease, colorectal cancer and type 2 diabetes. |
| Incidence of dental caries. |

Complete Test your Knowledge questions 3 & 4 and Apply your Knowledge questions 1-4 from section 3.5 in your textbook.

3. Antioxidants reduce free radicals, therefore also reducing damage to body cells, and reducing risk of disease and cancer lowering morbidity.

4. Whole fruits contain fibre whereas most fruit juices take out the fibre contained in it. Juice is basically concentrated sugar from the fruit rather than all the minerals and fibre that is inside it.

1a. 83.5%  
1b. Mouth and pharyngeal cancer.  
1c. Stroke.  
1d. 61.9%

2a. Coronary heart disease.  
2b. Low fibre diets, increased risks, lack vitamin C, lack antioxidants.

3. People start dying, fruits have lots of sugars and old people find it hard to control their blood sugar levels.

4a. 34.9%  
4b. Stroke.