

NUTRITIONAL SIGNIFICANCE OF FRUIT (20)

<u>Nutrient</u>	<u>Nutritional Content</u>	<u>Significance in the Diet</u>
Protein	<ul style="list-style-type: none"> There are <u>trace amounts</u> of protein present in fruit, it is <u>low biological value</u> protein, even though essential amino acids are present, fruit tends to be low in lysine, methionine 	Fruit should be supplemented with foods high in protein e.g., fresh fruit served with yogurt.
Lipids	<ul style="list-style-type: none"> Fruit <u>is fat free</u> however there are exceptions, <u>avocados</u> are about <u>80% fat</u>, but they contain 71% MUFA, 13% PUFA and 16% SFA. 	Fruit is ideal for low kCal diets as it is 'not fattening' (avoid too many avocados). It is good for those trying to reduce LDL (low density lipoprotein) i.e., Bad Cholesterol.
Carbohydrates	<ul style="list-style-type: none"> There is a high % of carbohydrates in fruit. <u>Sugar</u> - glucose (all fruit), cherries and melon are high in fructose. <u>Starch</u> – unripe fruit (green bananas) <u>Cellulose</u> - (outer skins) e.g. apple, pear, plum. <u>Pectin</u> – high in blackcurrants & apples. NSP 	<ul style="list-style-type: none"> High fiber foods help regulate and level out sugar in the blood e.g., apples, peaches, oranges, strawberries. However, diabetics should avoid mango, pineapple, watermelon as they are high in fructose. Fibre <u>helps prevent constipation</u>, (eat fruit with skin on where possible).
Minerals	<ul style="list-style-type: none"> <u>Iron</u> (non-haem iron) strawberries, raisins & avocados are high in iron. Calcium (Mangos / oranges) <u>Magnesium</u> (bananas, avocados) 	<ul style="list-style-type: none"> Iron for red blood cell formation Calcium for calcification (children/teens) Magnesium for protein synthesis, blood pressure regulation.

	<ul style="list-style-type: none"> - <u>Potassium</u> (grapefruit, dates) 	<ul style="list-style-type: none"> ○ Potassium helps maintain normal levels of fluid outside of cells
Vitamins	<ul style="list-style-type: none"> ○ <u>Folate</u> (Vitamin B9) oranges, avocados ○ <u>Vitamin C</u> - Kiwis, strawberries, oranges, black currants. ○ <u>Beta carotene</u> (pro vitamin A) - mangoes, strawberries, apricots, papaya. 	<ul style="list-style-type: none"> ○ Vitamin A/C/E antioxidants, ideally eat 5 - 7 servings a day to reduce oxidative stress on cells, reducing risk of cancer. ○ Vitamin C is good for immune system, healthy skin, bones. ○ folate needed to make RBC with iron, B₆ & B₁₂.

NUTRITIVE/ DIETETIC VALUE OF FRUIT (2012)**(20 marks)****○ Carbohydrates (N):**

- The carbohydrate content of fruit varies depending on the type of fruit but generally there is a high % of carbohydrates in fruit.
- It is present in a variety of forms:
 - Sugar**: Glucose (monosaccharide) is in all fruit – melons, papaya and cherries are high in fructose.
 - Starch**: Mainly present in unripe fruit e.g., green bananas
 - Fibre**: Found in the outer skins of pears, apples, also in the pulp of fruit e.g., oranges.
 - Pectin**: Ripe fruit e.g., blackcurrants, cooking apples.

○ Minerals: (N)

- Pomegranates and black currants are rich sources of non haem iron (ferric iron).
- Calcium is found in oranges, mangoes, and figs.
- Magnesium - bananas, avocados, raspberries.
- Potassium - grapefruit, dates, guava.

○ Vitamins: (N)

- Folate is naturally occurring and rich in content in oranges, avocados, and papaya.
- fruits are a rich source of water-soluble Vitamin C (blackcurrants, strawberries, Kiwis, citrus fruits e.g., oranges)
- Beta Carotene (pro-vitamin A) is found in cantaloupe, melon, apricots.

○ Healthy Heart: (D)

- Fruit is good for a healthy heart, and it is rich in antioxidants, vitamins A/C/E. They 'mop up' free radicals in the body reducing the risk of certain cancers.
- Fruit is 'fat free' therefore can help lower 'LDL', low density lipoproteins (bad cholesterol) in the blood.

- **Healthy Bowel: (D)**
 - Current dietary guidelines as recommended by the food pyramid (December 2016) indicates 5 – 7 servings of fruit and vegetables should be consumed daily. They are a rich source of fibre which when drank with enough water can stimulate peristalsis and help remove waste feces from the colon daily reducing the risk of diverticulitis.