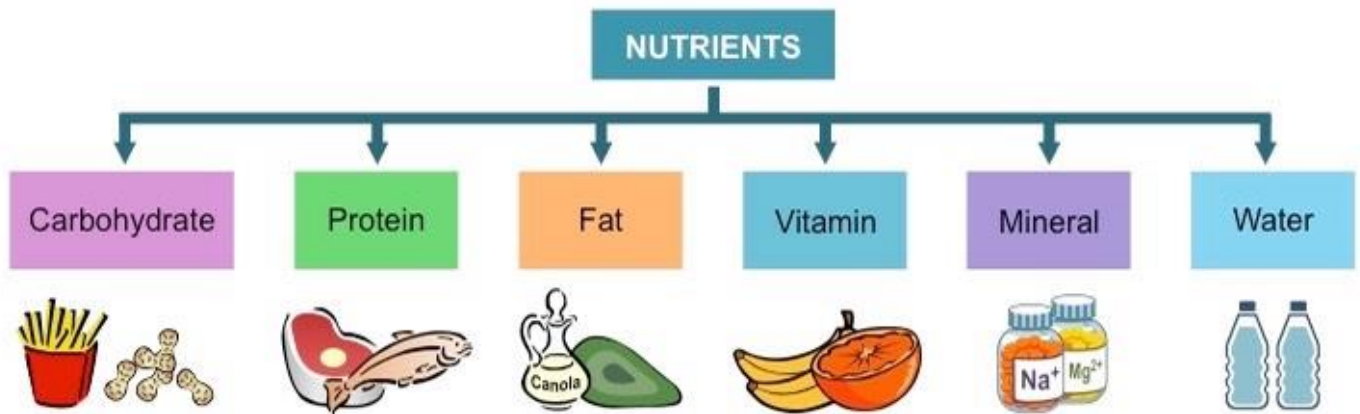


# Learning Outcome 3

## Understand the relationship between nutrients and the human body



3.1 Describe the functions of nutrients in the human body

3.2 Explain characteristics of unsatisfactory nutritional intake

3.3 Analyse nutritional needs of specific groups

3.4 Assess how different situations affect nutritional needs

Name .....	Form.....
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### Describe the functions of nutrients

Nutrients have 3 major functions in the body:

- Growth and development

- Production of energy
- Regulating metabolism

### Macronutrients:

Name	Functions	Sources	Deficiency	Excess
Protein				
Fats				
Carbohydrates				

### Micronutrients: minerals

Name	Functions	Sources	Deficiency	Excess
Calcium				
Iron				
Sodium				
Potassium				
Fluoride				

### Micronutrients: Vitamins

Name	Functions	Sources	Deficiency	Excess
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Vitamin A Retinol/Carotene				
Vitamin B1 Thiamin				
Vitamin B2 Riboflavin				
Vitamin B3 Niacin				
Vitamin B6 Pyridoxine				
Vitamin B9 Folic Acid				
Vitamin B12 Cobalamin				
Vitamin C Ascorbic acid				
Vitamin D Cholecalciferol				
Vitamin E				
Vitamin K				

Explain the nutritional basis for the following conditions

<p>Make sure that you</p> <ul style="list-style-type: none"><li>• Describe what the problem is caused by</li><li>• What are the current and future problems that could be caused</li><li>• How could the problem be solved by adjusting the diet</li><li>• Foods to be eaten/avoided etc</li></ul>	<p>Obesity</p>
<p>Digestion Problems (IBS and Crohns)</p>	<p>Anaemia</p>
<p>Skin conditions</p>	<p>Dental problems</p>
<p>Coeliac Disease</p>	<p>Rickets</p>

How needs change through life stages

<p>For each of the life stages</p> <ul style="list-style-type: none"><li>• Say what the major nutritional needs are, what nutrients are particularly in demand</li><li>• What are the main nutritional problems</li><li>• Which foods should be eaten/ avoided to maintain good health</li></ul>	<p><b>Infant</b></p>
<p><b>Child</b></p>	<p><b>Adolescent</b></p>
<p><b>Female adult</b></p>	<p><b>Pregnant female</b></p>
<p><b>Male adult</b></p>	<p><b>Older adults</b></p>

Medical conditions: How do they affect nutritional intake?

Type 1/2 Diabetes	Hypercholesterolemia
Anaemia	Lactose intolerance

### Religious beliefs

Religion	Religious practices in relation to food	Foods avoided
Hindu		
Jewish		
Muslim		
Buddhist		
Christian		
Sikh		
Rastafarian		

# Vegetarianism

List 3 main reasons for people deciding to become a vegetarian

- .....
- .....
- .....



List 3 types of vegetarian and explain what foods they eat/don't eat

- .....
- .....
- .....

What are the environmental arguments for someone deciding to become a vegetarian? .....

.....  
.....  
.....

List 3 good sources of protein for a

- Lacto vegetarian .....
- Vegan .....

How could the following menu be adapted to make it suitable for a lacto vegetarian and a vegan?



What would be the health arguments for adopting a vegetarian diet?

.....  
.....  
.....  
.....

## Exam Style Questions

1. Name 1 food rich in vitamin B 12
2. Name 1 group of people who may suffer a deficiency of vitamin B12
3. State 2 functions of sodium in the body
4. List 2 possible effects of a diet high in salt
5. List 2 functions of calcium in the diet
6. What disease is caused by a lack of vitamin D
7. List 2 sources of retinol and 2 sources of carotene
8. State 2 different functions of iron in the diet
9. Explain why pregnant women need to include some vitamin A in their diet but shouldn't exceed the recommended amount
10. List 2 functions of fat in the diet
11. List 3 good sources of protein for vegans
12. Give 2 reasons why foods are fortified
13. List 3 food rules that Jewish people would follow
14. What foods would be avoided in a Muslim diet
15. Assess how different life stages affect the nutritional needs of an individual (8marks)
16. Outline 2 diet related causes of obesity
17. Explain why many children in the UK are overweight (8 marks)
18. Discuss how 2 different medical conditions impact on nutritional needs
19. How could shift work affect a person's diet and eating patterns
20. Look at the following menu and say how it could be adapted for:
  - a. A vegan
  - b. Jewish people
  - c. A person who is trying to reduce the fat in their diet
  - d. A coeliac

<p>Menu</p> <p>Cream of tomato soup</p> <p>Beef lasagne</p> <p>Lemon Cheesecake</p>
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