

T-Level – Preparation for Wyke 2021



Please complete all tasks within the booklet and bring to your first T-Level lesson. The content of the booklet will be used for your **T-Level Adult Nursing course**.

Name: _____

T-Level Preparation Work – Nutrition

Learning Objectives

- **Describe** the importance of a balanced diet
- **Explain** personal preferences needs that need to be considered
- **Demonstrate** your understanding on how nutrition can influence an individual who may need support with dietary advice

Balanced Diet

A balanced diet supplies the nutrients your body needs to work effectively. Without balanced nutrition, your body is more prone to disease, infection, fatigue, and low performance. Children who don't get enough healthy foods may face growth and developmental problems, poor academic performance, and frequent infections.

Research task: complete the table below of key terminology used in nutrition.

Key terms

Write a detailed definition for each of the following terms.

Malnutrition	
Undernutrition	
Deficiency	
Overweight	
Obesity	
Nutritional balance	
Energy balance	
Body mass index (BMI)	
Actual food intakes	

Recommended intakes	
Dietary reference values	
Reference nutrient intakes	
Eatwell plate	
Food groups	

Eatwell Plate

The Eatwell Plate is a simple representation to show the recommended dietary requirements which we should consume throughout the day.

Research task: research into the Eatwell plate and complete/create your own version, filling the segments with the necessary food groups, examples of food in those groups and the recommended percentage we should consume.



Following on from the Eatwell plate, it is important that we consume plenty of vitamins minerals, as they have a very important role in our body.

Research task: complete the table below, researching into the importance of them for adults' diets.

Nutrient	Using the adult life stage, considered why adults need the nutrients - explain your answer.	Food/drink sources	Extension task
Iron			What is the function of iron in the body?
Calcium			Explain why calcium is important through life.
Vitamin D			What is Vitamin D deficiency called and what are the symptoms?
Folate			What is the function of folic acid in the body?
Sodium			What is the importance of sodium for an individual who is physically active?
Vitamin C			What mineral does Vitamin C help the body to absorb?
Extension Nutrient of your choice			

Key Care Workers

Key care workers must understand the functions of different nutrients in the body and the effects of dietary deficiencies, as it will help them understand what foods are particularly important for their patients/service users.

Key care workers must know common sources of particular nutrients to enable them to offer suitable foods to ensure that nutritional needs are met.

Research task: read the case studies below of different groups and suggest improvements to each person's diet.

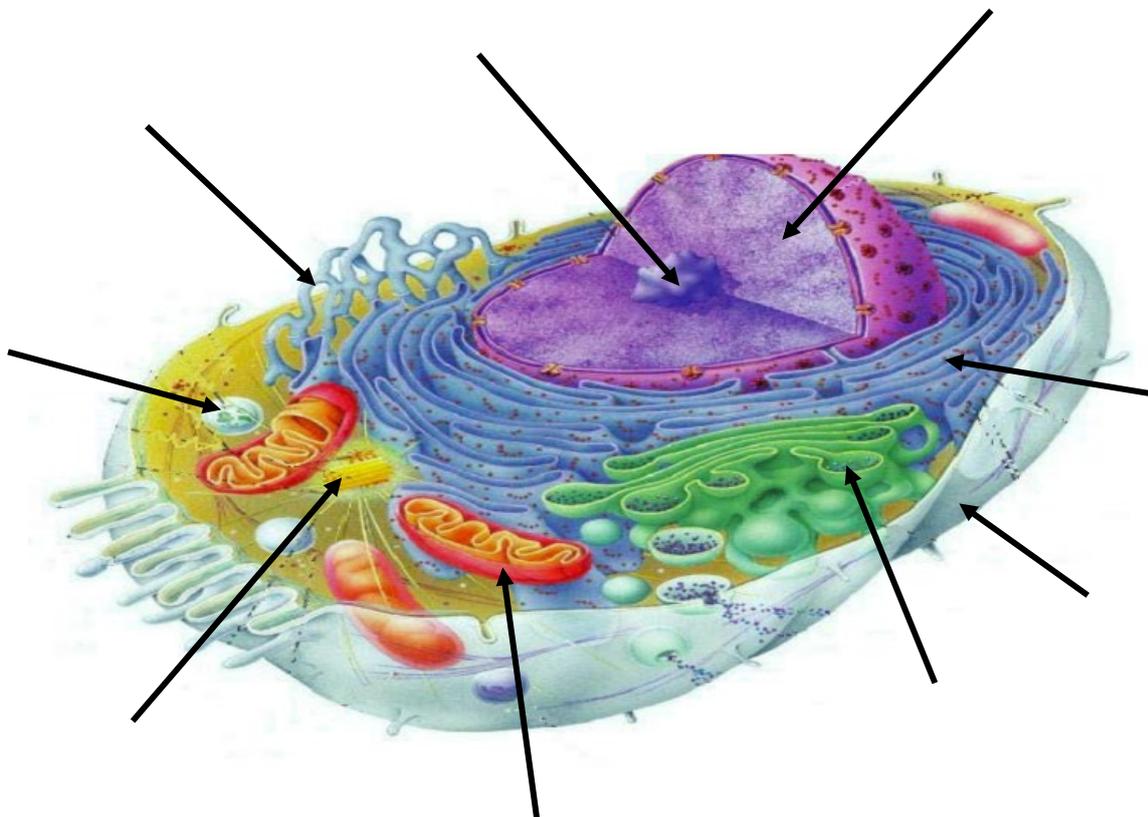
Group	Suggested advice/diet
Adults A man of 40 has high cholesterol and needs to lose about 21 kg in weight. He works in a stressful job and buys food from the works canteen. He also eats a lot of takeaways and ready meals.	
Older people A lady aged 67 has come into a residential care home for a short period as she has not been looking after her health. She has diabetes and is slightly overweight, but loves chocolate and sweets.	
Pregnant women A pregnant woman has dropped into her local health centre to ask about the right type of diet she should be on.	
Breastfeeding mothers At an antenatal class breastfeeding mothers are asking what would be the best diet for them to be on to ensure they and their babies get the right amount of nutrients.	

Preparation work – Science

The study of cells at Level 2 is based round the features that can be seen inside cells using an ordinary light microscope (the type you would use in a school science laboratory). At Level 3 cells are studied in a new level of detail (the detail seen with a more powerful type of microscope called an electron microscope).

Human cells have a nucleus surrounded by a nuclear envelope, so that the genetic material is separated from the rest of the cytoplasm. In the cytoplasm, there is a complex system of internal membranes and membrane-bound organelles. Human cells vary widely in their structure and functions. You will be expected to be able to recognise and identify the structure of these cells as revealed by electron microscopy.

Complete some research into the structure of an animal cell to add labels to the diagram shown below:



The structure of a human cell revealed by the electron microscope:

Questions

1. Name the organelles in a cell which are involved in the synthesis and modification of proteins.

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2. Which organelle in an animal cell possesses small ribosomes and circular DNA?

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3. Research a typical bacterial cell, draw and fully label a diagram of a bacterial cell below. (At least 4 labels)

4. Complete the table below to describe the function of each organelle mentioned, and identify if it is found in an animal cell, plant cell, or both.

Organelle	Function	Plant / Animal / Both
Nucleus		
Cell membrane		
Cell wall		
Mitochondria		
Ribosome		
Chloroplast		
Rough endoplasmic reticulum		
Smooth endoplasmic reticulum		
Golgi Body		