

Year 10 Curriculum Content: Hospitality and Catering. Unit 2 Nutrition

ASSESSMENT OBJECTIVES

2.1.1

Describe the functions of nutrients in the human body

Balanced diet

A balanced diet provides the right amount of nutrients for a person's needs. Good nutrition helps you to stay healthy. Good sources are usually 'nutrient-dense'; they contain a range of different nutrients eg. wholemeal flour. Nutrient rich foods contain a large amount of a particular nutrient eg. papaya are a rich source of vitamin C.

Different age groups have different nutritional needs eg. 5-12 years and older adults.

Fibre

- ❖ Absorbs water so improves hydration
- ❖ Reduces risk of constipation
- ❖ Increases feeling of fullness for longer as it is harder to digest
- ❖ Improves gut health

Water

- ❖ Controls body temperature
- ❖ Needed for 1000's of chemical reactions
- ❖ Removes waste
- ❖ Keeps mucus membranes healthy
- ❖ Needed for body fluids
- ❖ Found in all body cells
- ❖ Drink 1-2 litres per day

Macronutrients (large amounts)



Carbohydrates are the main source of Energy in the body.

Group 1 Sugars

Glucose in ripe fruit and veg,
Fructose in fruit, veg, honey,
Maltose in malt extract, **Sucrose** in sugar cane / beet

Group 2 Complex carbs

Starch in cereal, veg, seeds
Pectin some fruit eg. lemons
Dextrin in baked starchy foods
Dietary fibre / non starch polysaccharides wholegrain cereals, , bread, pasta, flour, fruit, veg, esp with skins on

Fats provide **energy, insulate** from cold, **protect** from physical damage and provide 'fat soluble' vitamins ADEK.

Essential fatty acids -oily fish, seeds, eggs, plant oils
 Solid fats - meat, coconut
 Liquid plant oils - olive, avo, nuts, seeds

Visible fats -meat fat, tuna oil
 Invisible fats and oils - crisps, pastries, biscuits, fried foods

Protein provides **growth, repair and energy.**

High Biological Value HBV

Meat, fish, poultry, eggs, milk, cheese, yoghurt, soya, quinoa,
Low Biological Value LBV

Beans, peas, lentils, cereals like wheat, rye, barley, oats, bread, pasta, nuts, gelatine, seeds

Micronutrients (small amounts)



Fat soluble Vitamins = ADEK

Water soluble vitamins = B group, C

Vitamins are destroyed by heat

Minerals originally from soil, rocks are absorbed by plants. Minerals are not easily destroyed by heat. Calcium, Iron, Sodium, Fluoride, Iodine, Phosphorus, Zinc, Potassium, Selenium, Manganese



Year 10 Curriculum Content: Hospitality and Catering. Unit 2 Nutrition

ASSESSMENT OBJECTIVES

2.1.2 How cooking methods can impact on nutritional value

Key terms

Coagulated

The heat causes lots of denatured proteins to join together and change the appearance and texture of food. Eg. when an egg is cooked, the white changes from clear liquid to white solid and the yolk changes from a liquid to a solid.

Denatured

The heat has caused the protein to change its chemical nature

Gelatinised

The heat causes the starch granules in the food eg. in a white sauce, to swell with the water they have absorbed, and the sauce starts to thicken. When the sauce reaches boiling point, the granules burst and release the starch- this is called gelatinisation

Storing, preparing and cooking to retain nutrients

Storing: Store away from heat and light, in airtight container

Preparing : Avoid buying damaged fruit and veg, cut, grate and chop just before cooking and serving. Keep the peel if possible.

Cooking: use as little water as poss. Cook veg for minimum time, steaming saves vitamins, serve food straight away, hot holding destroys nutrients. Save stock for gravy/soup. Cook meat and fish for the shortest time possible so that the protein they contain is tender and not overcooked. Frequently change oil that is used for frying



Cooking methods

BASIC

MEDIUM

COMPLEX

| | | |
|-------------|--------------|---------------------|
| Basting | Blanching | Baking Blind |
| Boiling | Braising | Caramelising |
| Chilling | Deglazing | Deep fat frying |
| Cooling | Frying | Emulsifying |
| Dehydrating | Griddling | Poaching |
| Freezing | Pickling | Tempering |
| Grilling | Reduction | Making choux pastry |
| BBQing | Roasting | Spinning sugar |
| Skimming | Sauteing | |
| Toasting | Setting | |
| | Steaming | |
| | Stir Frying | |
| | Water - bath | |

How nutrients are affected by cooking

| | |
|------------|--|
| B1, B2, B3 | Damaged by heat and dissolve in water eg. boiling, poaching. U to 40 destroyed in grilling |
| C | Destroyed by high heat. Up to 50% lost when boiling but only 15% lost in steaming. |
| Starch | Carbs are gelatinised in liquid making it easier to absorb by the body. Eg. soup |
| Protein | Denatured and coagulated by heat, which makes it easier for the body to use. Overcooked protein is more difficult for the body to use. |