

# Level 1/2 Hospitality and Catering: Unit 2-2.1.1 - Nutrition at different life stages & special dietary needs



## Nutrition at different life-stages

### Adults:

- **Early** – Growth in regard to height of the body continues to develop until 21 years of age. Therefore, all micro-nutrients and macro-nutrients especially carbohydrates, protein, fats, vitamins, calcium and iron are needed for strength, to avoid diseases and to maintain being healthy.
- **Middle** – The metabolic rate starts to slow down at this stage, and it is very easy to gain weight if the energy intake is unbalanced and there isn't enough physical activity.
- **Elderly** – The body's systems start to slow down with age and a risk of blood pressure can increase as well as decrease in appetite, vision and long-term memory. Because of this, it is essential to keep the body strong and free from disease by continuing to eat a healthy, balanced diet.

### Children:

- **Babies** – All nutrients are essential and important in babies, especially protein as growth and development of the body is very quick at this stage. Vitamins and minerals are also important. You should try to limit the amount of salt and free sugars in the diet.
- **Toddlers** – All nutrients remain very important in the diet at this stage as growth remains. A variety of foods are needed for toddlers to have all the micro-nutrients and macro-nutrients the body needs to develop.
- **Teenagers** – The body grows at a fast pace at different times at this stage as the body develops from a child to an adult, therefore all nutrients are essential within proportions. Girls start their menstruation which can sometimes lead to anaemia due to not having enough iron in the body.

## Special Dietary needs

### Different energy requirements based on:

- Lifestyles / Occupation / Age / Activity level  
The amount of energy the body needs is determined with each of the above factors e.g. active lifestyle or physical activity level would need more energy compared to a person being sedentary.

### Medical conditions:

- **Allergens** – Examples of food allergies include milk, eggs, nuts and seafood.
- **Lactose intolerance** – Unable to digest lactose which is mainly found in milk and dairy products.
- **Gluten intolerance** – Follows a gluten free diet and eats alternatives to food containing wheat, barley and rye.
- **Diabetes (Type 2)** – High level of glucose in the blood, therefore changes include reducing the amount of fat, salt and sugar in the diet.
- **Cardiovascular disorder** – Needing a balanced, healthy diet with low levels of salt, sugar and fat.
- **Iron deficiency** – Needing to eat more dark green leafy vegetables, fortified cereals and dried fruit.

### Dietary requirements:

- **Religious beliefs** – Different religions have different dietary requirements.
- **Vegetarian** – Avoids eating meats and fish but does eat dairy products and protein alternatives such as quorn and tofu.
- **Vegan** – Avoids all animal foods and products but can eat all plant-based foods and protein alternatives such as tofu and tempeh.
- **Pescatarian** – Follows a vegetarian diet but does eat fish products and seafood.

# Level 1/2 Hospitality and Catering: Unit 2-2.1.1 - Understanding the importance of nutrition



## The importance of nutrition

Listed below are the macro-nutrients and micro-nutrients. You need to know their function in the body and know examples of food items for each. You need to know why they are needed in the diet and why there is a need for a balanced/varied diet.

### Macro-nutrients

**Carbohydrates** - Carbohydrates are mainly used in the body for energy. There are two types of carbohydrates which are:

- **Starch** - Examples include bread, pasta, rice, potatoes and cereals.
- **Sugar** - Examples include sweets, cakes, biscuits & fizzy drinks.

**Fat** - This is needed to insulate the body, for energy, to protect bones and arteries from physical damage and provides fat soluble vitamins. There are two main types of fat which are:

- **Saturated fat** - Examples include butter, lard, meat and cheese.
- **Unsaturated fat** - Examples include avocados, plant oils such as sunflower oil, seeds and oily fish.

**Protein** - Protein is mainly used for growth and repair in the body and cell maintenance. There are two types of protein which are:

- **High biological value (HBV) protein** - Includes meat, fish, poultry, eggs, milk, cheese, yogurt, soya and quinoa.
- **Low biological value (LBV) protein** - Includes cereals, nuts, seeds and pulses.

### Micro-nutrients

#### Vitamins

- **Fat soluble vitamin A** - Main functions include keeping the skin healthy, helps vision in weak light and helps children grow. Examples include leafy vegetables, eggs, oily fish and orange/yellow fruits.
- **Fat soluble vitamin D** - The main function of this micro-nutrient is to help the body absorb calcium during digestion. Examples include eggs, oily fish, fortified cereals and margarine.
- **Water soluble vitamin B group** - Helps absorb minerals in the body, release energy from nutrients and helps to create red blood cells. Examples include wholegrain foods, milk and eggs.
- **Water soluble vitamin C** - Helps absorb iron in the body during digestion, supports the immune system and helps support connective tissue in the body which bind cells in the body together. Examples include citrus fruits, kiwi fruit, cabbage, broccoli, potatoes and liver.

#### Minerals

- **Calcium** - Needed for strengthening teeth and bones. Examples include dairy products, soya and green leafy vegetables.
- **Iron** - To make haemoglobin in red blood cells to carry oxygen around the body. Examples include nuts, beans, red meat and green leafy vegetables.
- **Sodium** - Controls how much water is in the body and helps with the function of nerves and muscles. Examples include salt, processed foods and cured meats.
- **Potassium** - Helps the heart muscle to work correctly and regulates the balance of fluid in the body. Examples include bananas, broccoli, parsnips, beans, nuts and fish.
- **Magnesium** - Helps convert food into energy. Examples include wholemeal bread, nuts and spinach.
- **Dietary fibre (NSP)** - Helps digestion and prevents constipation. Examples include wholegrain foods (wholemeal pasta, bread and cereals), brown rice, lentils, beans and pulses.
- **Water** - Helps control temperature of the body, helps get rid of waste products from the body and prevents dehydration. Foods that contain water naturally include fruits and vegetables, milk and eggs.

# Level 1/2 Hospitality and Catering: Unit 2-2.1.2 - How cooking methods can impact on nutritional value



## Boiling

- Up to 50% of vitamin C is lost when boiling green vegetables in water.
- The vitamin B group is damaged and lost in heat.

## Poaching

- The vitamin B group are damaged in heat and dissolve in water.

## Roasting

- Roasting is a method of cooking in high temperatures and so this will destroy most of the group C vitamins and some of the group B vitamins.

## Frying

- Using fat whilst frying increases the amount of vitamin A the body can absorb from some vegetables
- Cooking in fat will increase the calorie count of food e.g deep fat frying foods.

## Stir-frying

- The small amount of fat used whilst stir-frying increases the amount of vitamin A the body can absorb from some vegetables.
- Some vitamin C and B are lost due to cooking in heat for a short amount of time.

## Steaming

- Steaming is the best cooking method for keeping vitamin C in foods.
- Only up to 15% of vitamin C is lost as the foods do not come into contact with water.

## Grilling

- Using this cooking method can result in losing up to 40% of group B vitamins.
- It is easy to overcook protein due to the high temperature used in grilling foods.

## Baking

- Due to high temperatures in the oven, it is easy to overcook protein and damage the vitamin C and B group vitamins.



### Sustainability

Many diners are interested in hospitality and catering provisions that provide sustainable dining.

The aim of the three Rs of sustainability is to conserve natural resources and prevent excess waste. By following the rules of reduce, reuse, and recycle, hospitality and catering provisions can save money at the same time as attracting more diners and bringing in more profit.

Sustainability also means buying local produce, using organic ingredients, buying meat and poultry from farm assured producers who guarantee better welfare for the animals, using Marine Stewardship Council sustainable fish and offering meat-free versions of favourite dishes.

### Reduce

**Food waste:** If food and waste were its own country, it would be the third largest producer of greenhouse gas in the world! If it cannot be used to make new dishes or given away, then as much food waste as possible should be composted.

**Energy use:** Hospitality and catering provisions can save energy in many ways including using low-energy lighting, maintaining and upgrading equipment, putting lids on saucepans, batch baking and cooking.

**Food miles:** Using local suppliers means that the food does not have to travel as far from 'field to fork'.

**Water usage:** Use less in cooking by only just submerging vegetables or using a steamer. Use an energy and water efficient dishwasher.

### Reuse

Food that is past its best, for example a brown banana, or scraps such as bones can be used to create new dishes which in turn will decrease food waste. [www.lovefoodhatewaste.com](http://www.lovefoodhatewaste.com) has a vast range of recipe ideas for using surplus food.

- Bread: breadcrumbs, bread and butter pudding, bread sauce and croutons.
- Meat and poultry: bones can be used to make stocks.
- Fruit: banana muffins, apple crumble, fruit coulis, smoothies.
- Vegetables: bubble and squeak, vegetable stock, vegetable bakes, omelettes.
- Eggs: whites can be used to make meringue; yolks can be used to make mayonnaise.

### Recycle

Many hospitality and catering provisions have separate bins for recyclable materials. Professional kitchens should also have areas to separate waste into recyclable, non-recyclable and compostable materials. All staff should be trained to know how to dispose waste correctly.

Coffee grounds can be composted. Compost can be used to grow fruit, vegetables and herbs for use in the kitchen.

Jars and plastic containers can be used for storage in the kitchen. Glass bottles can be used to hold flowers or candles as table decorations.

*Too Good To Go*, *Karma* and *Olio* are apps used by restaurants and supermarkets. Customers can buy discounted food which would otherwise go into landfill.

You need to be able to plan dishes for a menu as well as know, understand and include the following:

### Commodity list with quantities

This means naming all the ingredients needed to make all dishes and how much of each one e.g. grams (g), ounces (oz), millilitres (ml), etc.

### Contingencies

This means stating, in the plan, what you would do to deal with a problem if something were to go wrong.

### Equipment list

Naming all pieces of equipment you would need to cook the dishes, which also includes specialist equipment such as pasta machines and ice cream makers as well as saucepans, chopping boards, knives, etc.

### Health, safety and hygiene

Stating in the plan, points regarding the health, safety and hygiene. The use of temperature probes to ensure foods are cooked, correctly using colour coded chopping boards or washing hands after handling raw meat are a few examples.

### Quality points

These include naming any quality points to consider in the preparation, cooking and serving stage of the plan. Examples could include checking foods are in use by/best before dates, dishes are cooked to minimum temperatures, ingredients stored in correct places and correct temperature, etc.

### Sequencing or dovetailing

This means you fit together the different steps and activities in logical order when planning to cook more than one dish.

### Timing

You need to state realistic timings of how long each step is likely to take throughout your plan to give accurate information of how long your dishes take to complete.

### Mise en place

This is all the preparation you undertake before cooking. Examples of this include weighing out ingredients, collecting equipment and washing hands.

### Cooking

Throughout your plan, you will need to state how you ensure food is cooked correctly, e.g. chicken is white in the middle, using a temperature probe, etc.

### Cooling and hot holding

Cooling dishes correctly within 1.5hrs to 8 degrees and keeping hot dishes for service at 63 degrees should be mentioned in your plan for relevant dishes, as well as how you would ensure these temperatures are met, e.g. by using temperature probes.

### Serving

Once you have finished cooking your dish or dishes, you need to state how you would present your dish/dishes, e.g. on plate, bowl, etc., as well as what decoration, garnishes and sauces you include before serving.

### Storage

In your plan, you should state where different kinds of ingredients need to be stored, e.g. raw chicken in the fridge or frozen fruit in the freezer and at what temperatures these pieces of equipment need to be (fridge needs to be 0–5 degrees and freezer needs to be -18 degrees).



## Creativity

It is said that 'we eat with our eyes'. Creativity in plating dishes enhances the diner's experience – diners want to be 'wowed' when their meal appears!

**Serving dishes:** Start with the plate – varied sizes, shapes and colours can add immediate impact to your dish. Dishes served in bowls or dessert glasses should be placed on a plate to aid serving.

**Elements:** Each dish will consist of several elements – the main protein, accompaniments, garnish and decoration.

**Volume:** Do not overcrowd the plate – leave some space so that the diner can see each element of the dish. The rule of thumb is that only two-thirds of the plate should be full.

**Height:** Food can be stacked to add height to the overall dish, but each element should be visible.

**Colour:** Accompaniments, garnishes and decoration can add colour to dishes where the main elements are similar in colour. An example is fish and chips: bright green peas and a slice of yellow lemon will enhance the overall appearance of the meal.

**Functionality:** The dish should be beautiful to look at, but easy for the diner to eat.

**Temperature:** Hot food should be served on hot plates. Cold food should be served on chilled plates.

## Accompaniments

Accompaniments should be chosen to complement the main part of the dish. Examples include:

### Carbohydrate accompaniments:

- Savoury: bread, dauphinoise potatoes, pilau rice.
- Sweet: shortbread, brandy snaps, macaron.

### Fruit and vegetable accompaniments:

- Savoury: pea purée, roasted root vegetables, griddled asparagus.
- Sweet: berry compote, fruit kebabs, grilled peaches.

### Sauces:

- Savoury: gravy, red wine jus, parsley sauce.
- Sweet: custard, salted caramel sauce, chocolate sauce.

## Portion control

It is important that the customer is satisfied with their portion without the plate being overcrowded. Keeping portion control accurate allows hospitality and catering provisions to order adequate supplies of ingredients. Accurate portion control will also help prevent food waste.

## Garnish

Garnishes are additions to a dish which both add to the overall taste and enhance the overall appearance.

**Savoury:** parmesan crisps, crispy onions, caviar, watercress, lemon wedges, fresh herbs, salsa, edible flowers.

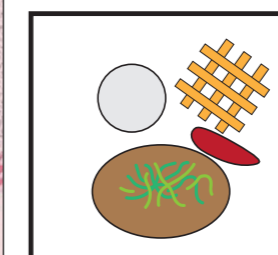
**Sweet:** chocolate dipped strawberries, tuile biscuits, chopped nuts, tempered chocolate work, spun sugar work, edible flowers.

## Decoration

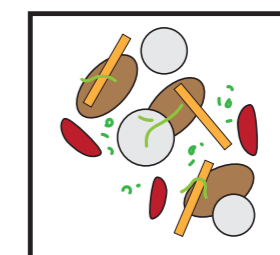
Decoration adds drama to the finished dish but it is not meant to be eaten or add to the overall flavour of the dish. Examples include:

- whole spices added to pilau rice
- gold leaf
- hollow eggshell as serving dish.

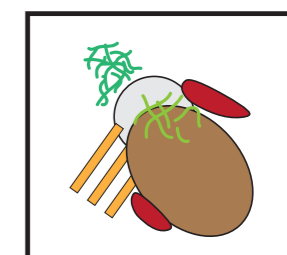
## Plating styles



Classic



Freeform



Landscape



## Food safety practices

During your practical session, you must demonstrate that you can work safely and hygienically. Your plan should show that you have thought about food safety and hygiene during all parts of your practical session. Your personal safety and hygiene practices will be observed during your practical session.

### Personal safety and hygiene practices

#### Hands:

- Wash before, during and after preparing food especially after touching raw meat, dirty vegetables and fridge handles.
- Wash after going to the toilet.
- Wash after sneezing or blowing your nose.
- Wash after disposing of waste.

#### Clothing and hair:

- Clean apron and/or chef's whites.
- Non-slip closed-toe shoes.
- Tie hair back.
- Wear a bandana or hair net.

#### Cuts:

- Cover with a blue, waterproof plaster.

#### Equipment:

- Handle knives safely.
- Use oven gloves when carrying hot items.
- Keep electrical equipment away from water.
- Clean spills immediately.

### Food safety and hygiene practices

#### Ingredients:

- Check use-by and best before dates.
- Check ingredients for freshness; no bruises on fruit, fish should not smell.
- Store correctly until needed.

#### Cleaning:

- Clean worktops before preparation.
- Clean workstation and equipment after preparing high-risk foods.
- Wash up throughout the session – do not leave it all until the end!

#### Temperatures:

- Keep high-risk foods in the fridge (0°C – 5°C) until needed.
- Use a temperature probe to check core temperature of high-risk foods.

#### Waste management:

- Keep waste separate from ingredients during preparation, cooking and serving.
- Recycle and compost waste if possible.

### Management of accidents

- Ensure that you know the location of the First Aid box.
- Ensure that you know how to use a fire blanket or fire extinguisher.



## Dish production

- Were you able to keep to your time plan?
- Did you have any problems during the practical? How did you resolve them?

## Dish selection

- Did your dishes contain the right nutrients for your two groups?
- Were they expensive or cheap to produce?
- Did they contain seasonal or local produce?

## Organoleptic

How did your dishes:

- Look (appearance)?
- Taste (flavour and texture)?
- Smell (aroma)?

## Hygiene

- Did you follow all hygiene guidelines?
- Did you wear correct PPE?
- Did you wash up between jobs?

## Reviewing of dishes

### PEE: Point, Evidence, Explain

You need to write a self-reflection of how you performed during your practical session. There are 8 areas to consider when you write your review of your dishes.

## Presentation

- Were the portions the right size for your two groups?
- How did you add colour to your dishes?
- Were your garnishes and decorations appropriate?

## Health and safety

- Were you able to use equipment safely?
- Did you store ingredients correctly?

## Waste

- Did you separate your waste into categories? (Food waste, recyclable materials, general waste.)
- Did you buy the right amount of ingredients?

## Improvements

- If you made your dishes again, what would you do differently?
- If you had to do the task again, would you change your choice of dishes?
- Would you add additional accompaniments?



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### Decision making

- What were your strengths in completing the written tasks?
- What were your strengths in choosing dishes?
- How could you improve weak decisions?
- Were the dishes easy to make together?
- What were the disadvantages of the chosen dishes?
- Did your dishes meet the needs of the provision?
- Did your dishes meet the needs of your two groups (nutrition and cost)?

### Planning

Was the practical session plan in a logical order?

- Discuss your strengths.
- Discuss your weaknesses.
- Suggest improvements.

Were you able to keep to the plan during the practical session?

- Discuss your strengths.
- Discuss your weaknesses.
- Suggest improvements.

### Organisation

How did you organise your written tasks?

- Discuss your strengths.
- Discuss your weaknesses.
- Suggest improvements.

How did you organise your workstation during the practical session?

- Discuss your strengths.
- Discuss your weaknesses.
- Suggest improvements.

### Time management

How did you manage your time when completing the written tasks?

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- Discuss your weaknesses.
- Suggest improvements.

How did you manage your time during the practical session?

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- Discuss your weaknesses.
- Suggest improvements.



### Factors affecting menu planning

You need to be aware of the following factors when planning menus:

- **cost** (ingredients as well as business costs)
- **portion control** (value for money without waste)
- **balanced diets/current national advice**
- **time of day** (breakfast, lunch, and dinner menus as well as small plates and snacks)
- **clients/customers** (a menu with prices that will suit the people who visit your establishment).

### Equipment available

You need to know and understand the type of equipment needed to produce a menu. The choice of dishes will be influenced by the equipment available to the chef.

This includes kitchen equipment such as:

- hobs, ovens, and microwaves
- fridge, freezer and/or blast chiller
- specialist equipment, for example a *sous vide* or pizza oven
- hand-held equipment, for example electric whisks or hand-blenders
- other electric equipment, for example food processors.

### Skills of the chef

The skills of the chef must be suited to the type of provision and the menu offered.

A Michelin starred restaurant will require a chef who has complex skills in preparation, cooking and presentation of dishes.

A café will require a chef who has a range of medium and complex skills to produce a suitable menu.

A large restaurant will normally have a full kitchen brigade while a smaller establishment may only have a single chef with one or two assistants.

### Time available

The type of provision will influence the amount of time a customer may be willing to wait for their dish to be prepared. Can the chef prepare, cook, and present more than one dish at the same time? Can some items be made in advance?

### Time of year

The time of year can affect menu choices. Light and cold dishes such as salads are better suited to the summer months. Hearty dishes such as stews are more suited to the winter. Special dishes linked to holidays such as Christmas and Valentine's Day may also be included. The availability of **seasonal** produce can also affect menu choices as certain commodities, for example strawberries, are less expensive when in season.

### Environmental issues

The chef will need to think about environmental issues when planning a menu. Can the chef **reduce** the amount of ingredients bought as well as reducing food waste? Can the chef **reuse** ingredients to create new dishes for example stale bread made into bread-and-butter pudding? Can the kitchen **recycle** waste wherever possible? Running the kitchen sustainably will save money.

### Organoleptic properties

Organoleptic properties are the sensory features of a dish (**appearance, aroma, flavour, and texture**).

The chef will need to think about how the dish will look and taste. Is there a range of colours? Do the flavours go well together? Are there a variety of textures?



### Skills and techniques

You need to be able to identify the different types of skills you need to produce your selected dishes. Some dishes will require the use of more complex skills. You will need to demonstrate a range of skills when producing your chosen dishes.

Preparation and cooking skills are categorised as follows: **basic**, **medium**, and **complex**.

### Presentation

You should know and understand the importance of using the following appropriate presentation techniques during the production of dishes:

- creativity
- garnish and decoration
- portion control
- accompaniments.

### Basic preparation skills and techniques

Blending, beating, chopping, grating, hydrating, juicing, marinading, mashing, melting, peeling, proving, sieving, tenderising, trimming, and zesting.

### Medium preparation skills and techniques

*Baton*, *chiffonade*, creaming, dehydrating, deseeding, dicing, folding, kneading, measuring, mixing, puréeing, rub-in, rolling, skinning, slicing, spatchcocking, toasting (nuts/seeds) and weighing.

### Complex preparation skills and techniques

*Brunoise*, crimping, de-boning, filleting, *julienne*, laminating (pastry), melting using *bain-marie*, mincing, piping, and segmenting, shaping, unmoulding and whisking (aeration).

### Basic cooking skills and techniques

Basting, boiling, chilling, cooling, dehydrating, freezing, grilling, skimming, and toasting.

### Medium cooking skills and techniques

Baking, blanching, braising, deglazing, frying, griddling, pickling, reduction, roasting, sautéing, steaming, stir-frying, and using a *sous vide* (water bath).

### Complex cooking skills and techniques

Baking blind, caramelising, deep fat frying, emulsifying, poaching, and tempering.