

Prepare & Cook Meat and Offal



Prepare and cook meat and offal

Introduction

This unit looks at quality, preparation, storage, cooking and finishing of different types of meat and offal products. As well as studying this in the unit, you will have practical cooking sessions when you will practise and demonstrate all the skills you have learned to prepare and cook meat and offal.

This unit has two sections:

Section 1: Prepare meat and offal

Section 2: Cook and finish meat and offal

What will I learn?

When you have completed this unit you will be able to:

- Identify types of meat and offal.
- Assess the quality of meat and offal.
- Select tools and equipment required for cold preparation and cooking of meat and offal and use them safely.
- Carry out cold preparation and know the portion yield of meat and offal.
- Store meat and offal.
- Describe appropriate cooking methods, temperature and time control at all stages of the cooking and holding process.
- Finish and garnish meat and offal dishes.
- Evaluate finished dishes.

Assessment

There are assessment questions you should attempt when you have worked through the unit and the learning activities. When you have completed the assessment, submit it to your assessor/tutor who will mark it and give you feedback on your progress. Your assessor/tutor will tell you if there are other practical assessments relevant to this unit.

Prepare and cook meat and offal

Section Introduction

This section examines the types and quality of meat and offal. It will look at types of tools and equipment you need to prepare meat and offal. It will also look at preparation methods, portion yield and safe storage of meat and offal.

You will look at three main areas:

- **Types and quality of meat and offal**
- **Preparation methods and portion yield**
- **Storage of prepared meat and offal**

Learning required

When you have worked your way through this section you should know how to:

- Identify types of meat and offal.
- Assess the quality of meat and offal.
- Select the correct tools and equipment for the safe preparation of meat and offal.
- Carry out cold preparation, basic butchery and know the portion yield of meat and offal.
- Store meat and offal.

Prepare and cook meat and offal

Types and quality of meat and offal

For many people in the UK, meat is a major part of their diet. Offal is generally less popular but is still an important source of protein in the diet. There are a wide variety of different meats and offal.

We refer to the parts of animals used as food as meat and offal. Meat is the flesh of an animal, comprising muscle tissue, fat and sinew; offal is the edible organs from the insides of an animal.

Activity 1

List all the meats and offal you can think of:

Check your answer on page 35.

The main meats and offal you will cover in this unit are:

Meats:

- beef
- lamb
- mutton
- veal
- pork
- bacon.

Offal:

- liver
- kidney
- sweetbreads

Prepare and cook meat and offal

The tenderness of meat varies according to the cut of the meat and the age of the animal. Meat from major working muscles of the animal will have more sinew and less flesh and will be tougher.

Younger animals (lamb and veal) have had less time for these sinews to develop so the meat is more tender. Cooking a cut of meat in the right way can improve the texture and make a tough or fatty piece of meat edible.

When cooking meat it is important to be aware of the cuts and suitable cooking methods for them.

If you are going to prepare and use meat and offal for recipes, you will need to check that your chosen cut meets the requirements of the chosen dish.

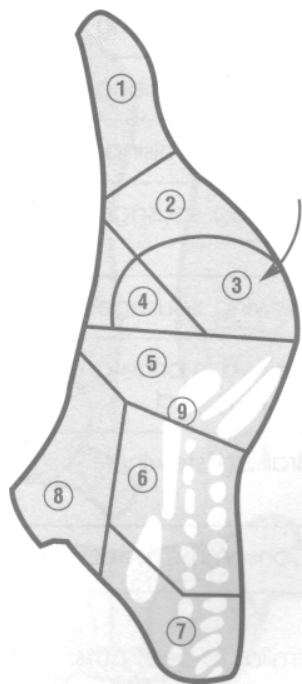
Checking that meat and offal meets requirements will involve checking:

- The quality and freshness of the meat.
- The cut required for the dish.
- The quantity required for the dish (you will look at this later under Preparation methods and portion yield).

Cuts of meat

The following charts will help you to identify the different cuts of meat and ways of cooking them.

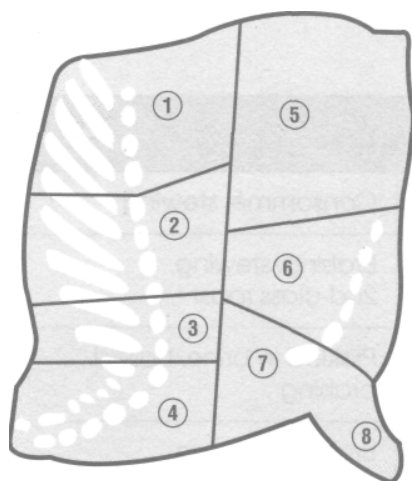
Beef and Veal



Key	English	Weight	Uses
1	Shin	7kg (14lb)	Consommé, stewing
2	Topside	10kg (20lb)	Braising, stewing, 2 nd -class roast
3	Silverside	14kg (28lb)	Pickled in brine, boiled, braising
4	Thick flank	12kg (24lb)	Braising, stewing
5	Rump	10kg (20lb)	Grilling, frying, braised in a piece
6	Sirloin of the bone	9kg (18lb)	Roasting, grilling, fried (steaks)
7	Wing ribs	5kg (10lb)	Roasting, grilling, fried (steaks)
9	Thin flank	10kg (20lb)	Stewing, boiling, sausages
10	Fillet	3kg (6lb)	Roasting, frying, grilling, sauté

Prepare and cook meat and offal

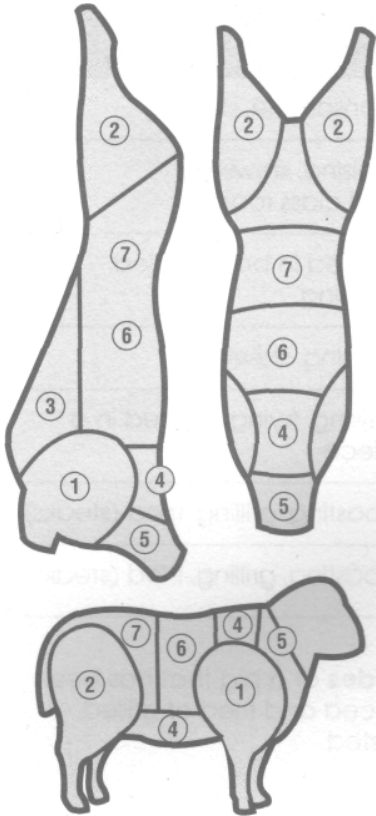
Beef forequarter cuts



Key	English	Weight	Uses
1	Fore rib	8kg(16lb)	Roasting, braising
2	Middle rib	10kg(20lb)	Roasting, braising
3	Chuck rib	15kg(30lb)	Stewing, braising
4	Sticking piece	9kg(18lb)	Stewing, sausages
5	Plate	10kg(20lb)	Stewing, sausages
6	Brisket	19kg(38lb)	Pickled in brine and boiled and pressed
7	Leg of mutton cut	11 kg (22lb)	Braising, stewing
8	Shank	6kg(12lb)	Consommé, beef tea

Prepare and cook meat and offal

Lamb and mutton chops

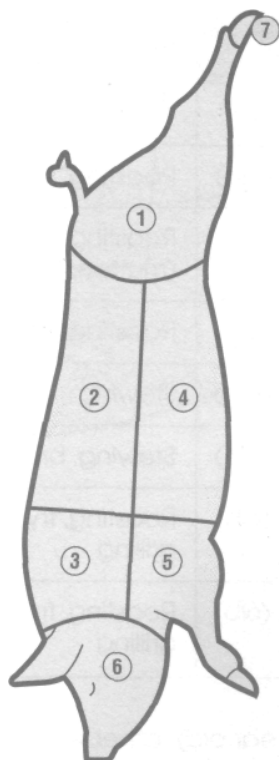


Key	English	Weight		Uses
		Lamb	Mutton	
1	Shoulder	3kg (6lb)	3kg (6lb)	Roasting, stewing
2	Leg	10kg(20lb)	3kg (6lb)	Roasting (mutton: boiled)
3	Breast	14kg(28lb)	3kg (6lb)	Roasting, stewing
4	Middle neck	12kg(24lb)	3kg (6lb)	Stewing
5	Scrag end	10kg(20lb)	3kg (6lb)	Stewing, broth
6	Best end	9kg(18lb)	3kg (6lb)	Roasting, frying, grilling
7	Saddle	5kg(10lb)	3kg (6lb)	Roasting, frying, grilling

Mutton is from a mature sheep (over a year old) rather than a lamb. It is cut similarly, but produces a much tougher, stronger-flavoured meat. It is usually best suited to **long cooking methods**, such as stewing.

Prepare and cook meat and offal

Pork and bacon cuts



Key	English	Weight	Uses
1	Leg	5kg(10lb)	Consommé, stewing
2	Loin	6kg(12lb)	Braising, stewing, 2nd-class roast
3	Spare Rib	1.5kg (3lb)	Pickled in brine, boiled, braising
4	Belly	2kg (4lb)	Braising, stewing
5	Shoulder	3kg (6lb)	Grilling, frying, braised in a piece
6	Head	4kg (8lb)	Roasting, grilling, fried (steaks)
7	Trotter	1.8kg (4lb)	Roasting, grilling, fried (steaks)

Bacon is a cut from the **back and sides** of a pig that has been salted and cured. It is usually thinly sliced and fried or grilled, though bacon joints can be pot roasted.

Offal

Kidneys - lamb and veal kidneys are the most tender. They can be grilled or sautéed. Pork and beef kidney's are tougher and need to be cooked for longer. They are better braised.

Liver - calves' liver is considered to be the best, but lambs' liver and beef liver are also eaten. Pork liver has a much stronger taste and is less popular. Liver can be grilled, sautéed or braised. Liver is also used to make pates and terrines.

Sweetbreads - these are the thymus glands of young beef, lamb and pork. They are usually soaked and poached before being pan fried.

Prepare and cook meat and offal

The quality of meat

You should only use meat that is good quality and fresh.

Activity 2

What sort of indicators might put you off using a cut of meat?



Check your answer on page 35.

You need to know what to look for to ensure meat and offal is good quality and fresh.

All meat should:

- Smell fresh.
- Be moist.
- Have a clean, smooth appearance.
- Be free from stickiness.
- Be a good even colour.

Prepare and cook meat and offal

Prepare meat and offal

When selecting beef look for:

- Moist, firm flesh.
- Bright red colour (or purple on more mature meat that has been hung).
- Dry, creamy white fat which is odourless.
- Lean cuts without too much fat, but flecked with fat (known as marbling).
- Bones that are not brittle and have a bloody interior when they are cut.

When selecting pork look for:

- Moist, firm flesh.
- Pale pink colour.
- White, firm, smooth fat.
- Smooth, hairless and undamaged skin.
- Fine pink bones.
- A pleasant smell.

When selecting lamb look for:

- Lean, moist, fine grained flesh.
- Dull pink/red colour.
- White, hard, flaky fat.
- Evenly distributed fat.
- Porous bones with a bluish tinge.

When selecting offal look for:

- Kidneys should be firm and smell sweet. Veal or lambs' kidneys should be pink or pale red, calves' kidneys should be a deep rose colour and be evenly coloured without dry or dull spots.
- Calves' liver should be pale pink in colour. Lamb, beef and pork liver are darker, the colour should be bright and the surface should be moist and firm and it should have a fresh smell.
- Veal, beef, lamb and pork sweetbreads should be plump, firm and white.

Prepare meat and offal

You should **always check** meat and offal for freshness and quality before you buy it or on delivery. If meat is delivered, you should also check the quantity is as ordered or you may find you don't have enough for the recipe/number of meals you are making.

If you are unsure about the freshness or quality of any meat or offal, you should not use it. If you are buying meat or offal, you should not purchase it or accept delivery if it is not of acceptable quality.

Preserved Meats

As well as using fresh meat, you may use meat that has been preserved in some way.

Methods of preserving meat include:

- **Chilling or freezing** - if meat is imported it will be chilled or frozen. Chilling and freezing lowers the temperature of the meat and stops bacteria from growing. Chilled meats are stored at 5 °C to 7 °C. Frozen meat is stored at minus 18 °C. Frozen meat must be properly defrosted on a plastic tray in the fridge. Most meats can be chilled or frozen.
- **Vacuum packing** - the meat is sealed into plastic bags and all air is removed. This prevents bacterial growth as most bacteria require oxygen to grow. The vacuum packs also keep the meat moist. Bacon is often vacuum packed when for sale in supermarkets.
- **Salting, pickling or curing** - involves soaking the meat in brine (salt solution) or other chemical solution to preserve it, Meat that has been salted or pickled may need to be soaked in water before use, to lessen the taste of the preservative. Silverside, brisket and pork spare ribs are sometimes pickled in brine.
- **Smoking** - involves drying the food in wood smoke. Chemicals in the smoke help to preserve the food. Smoking gives food a very distinctive taste and colour, for example, smoked chicken or ham.
- **Canning** - sterilised cans are filled and sealed then cooked to high temperatures to destroy any bacteria. Canned meat has a longer shelf life than other meat. Canned meats include cooked ham, corned beef and meat products, such as 'Spam'.

Prepare meat and offal

Activity 3

Have a look round your local supermarket or shops to see what other examples of preserved meat you can find in each of the following ways.

Try to find at least one example of each.

Chilling or freezing:

Vacuum Packing

Salting, pickling or curing:

Smoking:

Canning:

Ask your tutor or manager to check your answers for you.

Preparation methods and portion yield

There are a variety of ways to prepare meat and offal for cooking and you shall explore some of these in this section. It is important that you use the correct equipment and techniques for safety reasons and to prepare meats in suitable ways for the recipes chosen.

Note that in this section on preparation, meat should be taken to include offal.

Skinning - most meats will have had the skin removed prior to purchase and only the fat will remain. Some ham and pork joints may have skin. Skin may be removed with a sharp knife and fingers. Insert the knife between the flesh and the skin and pull the skin away with the fingers. Pork skin is usually removed before cooking. Bacon or gammon joints may be cooked in the skin to reduce shrinkage and have the skin removed after cooking.

Prepare meat and offal

Scoring - scoring the surface of the meat allows seasoning and flavourings to penetrate. Meat fat is often scored. On pork this is used to form crackling. To score meat, you need to use the tip of a sharp knife and make long cuts across the meat or fat. Depending on the recipe, you may score the meat in a criss-cross pattern.

Trimming - meat is trimmed to remove pieces of skin, fat, and sinew that could spoil the meat. It is also trimmed to improve the size and shape of the meat portion. Trimming is done with a cook's knife or boning knife (a boning knife is useful for bigger joints such as a leg of lamb). When trimming you should only remove small pieces of meat. The main meat should be left intact.

Cutting - cutting includes cutting meat into **portions, dicing and slicing**. Remember that raw meat should be cut on a board reserved for that purpose. Large pieces of meat can be cut with a meat cleaver before being portioned, sliced or diced into smaller pieces.

- **Portioning:** portioning meat usually involves cutting the meat into steaks or other single portion sizes. The meat should be cut with a sharp cook's knife. Steaks should be cut evenly so that the meat is the same thickness across the steak or it will cook unevenly. The size and shape of portions will depend on the dish being cooked.
- **Dicing:** dicing involves cutting meat into uniform pieces (often rough cubes). The dice should be uniform to ensure even cooking. The size of the pieces depends on the dish being cooked. Dicing can be done with a cook's knife. Meat can also be diced after cooking for use in hot or cold dishes.
- **Slicing:** meat is sliced when raw or cooked, hot or cold. Slicing can be done with a knife or a slicing machine. A large carving knife and fork is used when slicing hot cooked meats. A cook's knife is used to slice raw meats.

Slicing machines should always be used in accordance with the instructions and cannot be used by anyone under the age of 18. Slices should be of similar thickness and even. The meat must be held firmly and you should concentrate on slicing to avoid injury.

Boning - a boning knife with a straight or curved strong blade can be used to bone meat. The tapered blade of a boning knife is used to separate the meat from the bone, The knife should be kept as close to the bone as possible, and the meat scraped off until the bone can be removed.

Mincing - a mincing machine is used to mince meat. Machines can be electric or manual operation. Meat should be trimmed and cut into pieces before being put into the mincer. How much fat is left on the meat will depend on the recipe. Sausages, for example, have quite a high proportion of fat.

Prepare meat and offal

Seasoning/marinating - basic seasoning is salt and pepper, but many herbs and spices are also used to season and marinate meat. The seasoning will depend on the recipe, but can range from sprinkling a little seasoning on to the meat before cooking, to rubbing spices into the meat and marinating the meat in a mixture of oils, wine, vinegar or other liquids and herbs and spices for a length of time before cooking (this can be several hours).

Marinating allows the flavours to penetrate the meat before cooking and helps to tenderise the meat. Meat is placed in a container with herbs, spices and a liquid and placed in the refrigerator for the required time. Herbs and spices and other seasonings may need to be chopped, ground or crushed before use.

Herbs and other flavourings can be chopped using a sharp knife and chopping board. To crush spices, herbs or other flavourings you may use a pestle and mortar, a pepper grinder or the back of a wooden spoon. A suitable dish will be needed to marinate meat, which is deep enough for the marinade to cover all the meat.

Stuffing - meat can be stuffed with a range of fillings, made up of fruit, vegetables, herbs, spices or other meats. The stuffing is inserted into a cavity in the meat; or under the skin; or the meat can be rolled around the stuffing depending on the recipe. The flavours will then enhance the meat during cooking.

Coating - coating can mean covering with flour, egg and breadcrumbs, with a sauce or glaze. What coating is used will depend on the recipe. Coating should cover the whole meat evenly. Offal is usually coated in flour before cooking. The flour is often placed in a dish large enough for the meat to be placed in for coating.

Tying/securing - some joints of meat, especially those that have been boned, may need tying to prevent them losing their shape and to keep stuffing in place during cooking. Tie around the meat securely with string at intervals along the meat.

Blending - blending will usually be used when making pates from offal. An electric blender may be used. The meat will be placed in the blender with other ingredients and blended until smooth. Some liquid, such as stock or wine, is normally added.

Prepare meat and offal

Activity 4

For each of the preparation methods listed on the previous page, name a recipe that would require the meat to be prepared in that way.

Ask your tutor or manager to check your answers for you.

As well as appearing fresh and of good quality, prepared meat should be ready for the recipe, trimmed, cut and portioned appropriately.

Preserved Meats

Portion size of meat will depend partly on the recipe and whether the dish is a main course or appetiser.

The following is a general guide:

- Boneless roast beef 6 to 8 portions per kg.
- Stewing beef 8 to 10 portions per kg.
- Leg of lamb 6 to 8 portions per kg.
- Stewing lamb 4 to 6 portions per kg.
- Leg of pork 8 portions per kg.

Prepare meat and offal

Knife safety

Knives can be dangerous. It is very easy to injure yourself. Here are a few safety tips for using knives:

- Make sure your **cutting board doesn't slip** while you are cutting. Putting a damp cloth underneath will help it to stay in one place.
- **Only have one knife** on the cutting board at one time -otherwise you could injure yourself on the other knife by catching your hand on it or knocking it off the table.
- **When not using a knife** put it flat on the surface with the blade facing the cutting board.
- **Don't leave knives too near the edge** of the work surface and if you do knock a knife off the surface, don't try to catch it as it falls.
- **Always keep the knife in sight** - don't put a cloth, food peelings or anything else over it.
- Always carry knives **with the point down** and the sharp edge facing backwards and held away from the body.
- **Never** use damaged or blunt knives.

Meat, offal and healthy eating

Everybody needs protein to survive - meat and offal are good **sources of protein** and a healthy diet includes moderate amounts of protein every day. This doesn't just mean meat though; it includes fish and vegetarian alternatives to meat.

Unfortunately meats and meat products can also be fatty and we are advised to **eat less fat** in our diet.

Healthy options are lean meats, cooked with little or no addition of fat. Visible fat should be cut off meat. Lean meat should be grilled or roasted on a wire rack or microwaved. Cheaper cuts and prepared meats, such as minced meat, burgers, pies, salamis and sausages tend to be more fatty and should be limited in a healthy diet.

Offal is a good source of **vitamins and minerals** and liver in particular is high in iron and vitamin A, However, vitamin A can build up in the body and become harmful, so it is recommended that liver is only eaten once a week.

Women who are pregnant should avoid eating liver as the vitamin A can be harmful to the baby.

Prepare meat and offal

Storage of prepared meat and offal

It is important to **store meat correctly** to maintain its quality. Meat should be hung on hooks in a walk-in fridge, or placed on drip trays covered in oiled paper. It should **never be left in a plastic bag** or it would start to sweat.

Meat should be stored at 5 °C to 7.

Frozen meat will be stored at a maximum of minus 18 °C

Raw meat should never be stored so that it comes into contact with cooked meats. **If stored in the same refrigerator**, raw meat should be stored at the bottom, so the juices cannot drip on to cooked foods.

Label chilled and frozen meats that are to be kept with the preparation date, description and use-by date.

Activity 5

Describe how and where prepared meat is stored in your workplace or college kitchen.

Ask your tutor or manager to check your answers for you.

Prepare meat and offal

Summary

In this section you have learned about:

- **How to identify** different types of meat and offal.
- **How to assess** the quality of meat and offal.
- **The correct tools and equipment** for the preparation of meat and offal and how to use them safely.
- How to carry out **cold preparation**.
- **The portion yield** of meat and offal.
- **How to store** meat and offal safely.

Please spend a short time reviewing what you have learned in this section before moving on to Section 2. When you have completed both sections and are happy that you fully understand what you have covered, go on to undertake the assessment.

Cook and finish meat and offal

Section Introduction

This section examines in more detail how to cook meat and offal. It will look at types of tools and equipment you need to cook meat and offal. It will also look at cooking methods, finishing, garnishing and evaluating dishes.

You will look at three main areas:

- **Cooking meat and offal**
- **Finishing, holding and serving meat and offal dishes**
- **Evaluating finished dishes**

Learning Required

When you have worked your way through this section you should know how to:

- Select the correct tools and equipment for the cooking method chosen.
- Cook meat using a variety of cooking methods and understand temperature and time control at all stages of the cooking and holding process.
- Finish and garnish meat and offal dishes.
- Hold and serve meat and offal dishes.
- Evaluate finished dishes.

Cook and finish meat and offal

Cooking Meat & Offal

Now you will look at the different cooking methods that can be used to cook meat and offal, and the tools and equipment required to use the different methods. You will also learn how to tell when meat is cooked.

Sealing meat

Before you look in more detail at the different cooking methods, look at the idea of **sealing meat**. Many meat recipes begin with the meat being 'sealed'. Sealing is achieved by putting the meat in hot fat (oil or oil and butter) for a short time on each side; or brushing the meat with oil and searing it in a dry, hot, non-stick frying pan/It is sealed when the surface of the meat has changed colour all over.

Sealing is a bit of a misleading term. It used to be believed that 'sealing' the meat kept in the juices, but if you have ever sealed meat you will know that it causes the juices to start flowing.

However, sealing meat does have benefits:

- **It kills any bacteria** on the outside surface of the meat.
- **It generates flavour** - above 140 °C the proteins and sugars start to react together and produce new molecules, which produce the meaty smell. It is this that generates the flavour

Cooking methods

Now look at the main ways to cook different types of meat and offal and the equipment you need.

Grilling

Grilling is a **quick method** of cooking and so is only suitable for better cuts of meat. Because it is done at high heat, there is minimum loss of juices and nutrients and the meat needs little additional fat, which makes it a healthy way to cook meat.

Cook and finish meat and offal

Cuts most suitable for grilling are shown in the table below:

Meat	Cut
Beef	Rump, sirloin, wing rib, fillet
Lamb	Best end, saddle
Veal	Loin, best end
Pork	Loin
Bacon	Collar, hock, gammon
Offal	Liver, kidneys

Prepared meats, such as hamburgers and sausages can also be grilled.

There are three main methods of grilling:

1. **Under heat** in a gas or electric grill or salamander.
2. **Over heat** on charcoal, a barbecue or gas or electric grill.
3. **Between heat**, using electrically heated grill bars or plates.

Tips for grilling:

- Apart from the grill itself, you may **need tongs or slices to** turn the meat and skewers are useful for cooking smaller chunks of meat, for example, kebabs.
- The grill should be **greased** before cooking and foods should be brushed with oil.
- Depending on the recipe, the grill or meat **may need more** oil during cooking, to stop the meat drying out or sticking to the grill pan.
- **For thicker cuts of meat**, you may need to lower the grill tray on an 'under heat' grill to avoid drying out or burning the meat before it is properly cooked.
- Grilling should be done **quickly** to avoid the meat drying out.
- Sometimes the meat is **charred or seared** using hot grill bars or a hot iron - this gives it criss-cross markings and a smoky, charred taste.
- Meat may be **coated** with egg and flour or breadcrumbs before being grilled, such as, veal escallops.

Cook and finish meat and offal

Activity 6

Describe one recipe for grilled meat and say how you would grill the meat.

Ask your tutor or manager to check your answers for you.

Griddling

Griddling meat is very similar to grilling over heat. A griddle pan gives a criss-cross pattern to the meat in the same way as a hot iron or grill bars, and the same smoky flavour.

Griddle pans are generally square in shape, very heavy and they have raised ridges running along them, which come into contact with the food and conduct the heat from the base of the pan,

Griddling is another **healthy** way to cook, as you don't need to use much fat. Griddling can be used for the same cuts of meat as grilling (see table on the previous page) plus it is good for hamburgers and sausages.

Tips for griddling meat:

- The griddle pan should be hot before the meat is placed on it.
- Brush oil on the meat.
- To get the criss-cross effect, turn the meat at right angles once on each side.

Cook and finish meat and offal

Shallow frying, stir-frying and sautéing

Shallow frying involves cooking in a small amount of fat or oil in a frying pan or sauté pan. The presentation side of the meat or offal should be cooked first to give it a more attractive appearance.

Sautéing is similar, but involves using a very small amount of oil and is only suitable for very tender cuts and smaller pieces of meat. Sauté recipes often involve glazing the meat and/or adding a sauce after sautéing. The meat should be kept moving in the pan to prevent burning.

Stir-frying is usually done in a wok. It involves cooking thin strips of meat very quickly in hot oil.

For any of these methods you should use a slice or similar utensil to turn the meat while cooking.

Any cuts that can be grilled can also be fried. Sautéing is particularly good for offal dishes. Beef or pork are most often stir-fried.

Activity 7

Describe one meat dish and one offal dish that involves one of the cooking methods described here. Explain how you would fry or sauté the meat.

Ask your tutor or manager to check your answers for you.

Cook and finish meat and offal

Boiling

Boiling involves cooking the meat or offal in a sufficient amount of liquid. This might be water or stock. Boiling breaks down the tough fibres in the meat and is suitable for cheaper, tougher cuts.

It is also suitable for larger-scale catering as it allows larger amounts to be cooked together. The juices will be released into the liquid, which can then be used for sauces or stock. Fat will float to the surface of the liquid, so it can be skimmed off to make the dish healthier. Some meats, such as salted joints, may be soaked before boiling to remove some of the salt.

Meat should be placed in a large enough pan so that liquid can be added to cover. The pan should have good handles for lifting or moving if necessary. Some dishes may require stirring with a spoon during cooking and you will need a skimming ladle or other utensil to skim the fat from the stock.

Food can be added to cold liquid that is then brought to the boil or to boiling liquid, which is then brought back to the boil (known as simmering).

Examples of meats most suitable for boiling are:

Meat	Cut
Beef	Silverside, brisket
Lamb	Leg of mutton, thin flank
Pork	Leg
Bacon	Gammon

Mutton and beef stocks are also made by boiling the appropriate meats.

Cook and finish meat and offal

Activity 8

Describe one dish that involves boiling meat and explain how you would do this.

Ask your tutor or manager to check your answers for you.

Braising

Braising is a combination of stewing and pot roasting. Meat is cooked in the oven in a covered pot with liquid, usually stock, and often with the addition of vegetables, such as onions, celery or carrots.

The meat fibres are broken down with braising, which means that the cheaper, tougher cuts of meat can be cooked in this way. The cooking liquor is usually served as a sauce with the meat.

You will need a pot large enough for the meat and accompanying liquid with a lid that is suitable for use on the stove top as well as in the oven.

Braising usually involves sealing the meat or blanching it in the pot on the stove top prior to braising. Meat may be marinated prior to braising. The meat may also be 'larded' which involves inserting pieces of pork fat into the meat to prevent it drying out.

There are two braising methods:

- Brown braising - the meat is browned all sides in fat on the stove top before braising.
- White braising - the meat is blanched in hot water or cooked lightly in butter before being braised.

Cook and finish meat and offal

Examples of meats suitable for brown and white braising are shown in the table below:

Meat	Cut
Brown braising	
Beef	Olives (small, rolled-up slices), topside, shin, brisket, braising steak
Lamb	Shank, chops
Veal	Leg joints and shoulder
Offal	Liver, sweetbreads
White braising	
Veal	Leg joints and shoulder
Offal	Sweetbreads

Activity 9

Describe one dish that involves braising meat and explain how you would do this

Ask your tutor or manager to check your answers for you.

Cook and finish meat and offal

Poaching

Poaching Involves cooking gently with a minimum amount of liquid at a temperature just below boiling point. Historically poaching was used widely for all sorts of meats. With modern ovens and other cooking methods available, poaching is less widely used for meats, though still used for eggs and fish.

The exception is sweetbreads, which are normally poached and sometimes then sautéed in butter. Poaching can be done in a saucepan.

Steaming

Steaming is not used often in meat dishes, because the results can be bland. Some oriental dishes require steaming and some prepared meat dishes, such as steak and kidney pudding. Also ham and bacon joints (usually served cold) can be cooked by steaming.

Steaming can be done at low pressure or high pressure.

- Low pressure in a steamer or between two plates over a pan of boiling water,
- High pressure in a special pressure cooker.

There are four different types of steamer:

- atmospheric
- pressure
- high compression
- pressureless convection.

Steamers can be dangerous and should be used with care. The pressure must be reduced before opening and the instructions for use should be followed carefully.

Stewing

Stewing involves cooking chunks of meat in a pot on the stove top. The meat is usually dusted with flour, sealed then put into a pot with just enough liquid to cover. The liquid can be water, stock, beer, wine or a mixture. The meat is stewed on a low heat for a long time and is good for cheaper, tougher meats (similar to braising). The flour on the meat will thicken the liquid and the liquid is served with the meat. Other ingredients, such as vegetables or dumplings are often added to a stew.

Cook and finish meat and offal

Activity 10

Describe one dish that involves stewing meat and explain how you would do this.

Ask your tutor or manager to check your answers for you.

Roasting

Roasting involves **cooking the meat in dry heat in an oven** or on a spit with fat and oil. Roasting is usually done in an oven at 180 °C to 200 °C. Roasting is suitable for **large joints of tender meat**.

The meat is placed in a roasting dish in the oven and basted regularly with the juices to keep it moist. Roasted meat should be removed from the oven ten minutes before the end of the cooking time and 'rested' for fifteen minutes. It will continue to cook during this time. For spit roasting the meat is skewered on a revolving spit in the heat so that it cooks evenly.

The table gives examples of meat cuts suitable for roasting:

Meat	Cut
Beef	Fore rib, silverside, sirloin, topside
Lamb	Leg, loin, rack of lamb, shoulder
Pork	Leg, loin, ribs (as spare ribs), shoulder
Bacon	Ham, bacon and gammon joints

Cook and finish meat and offal

Combination methods

Combination cooking involves using a mixture of cooking methods. This might be, for example, steaming used in a convection oven. Combination ovens are available which can be programmed to cook using different methods for different times.

Equipment such as a bain-marie also allow combination cooking. In a bain-marie, the food is placed in a container that is then placed in a water bath. The unit may then be placed in the oven. The food is cooked by a combination of the heat of the water and steaming or baking of the food surface. The type of meat cooked depends on the combination method chosen.

Activity 11

Describe one dish that involves cooking meat using combination methods and explain how you would do this

Ask your tutor or manager to check your answers for you.

It is important that you use appropriate techniques for cooking different types of meat to ensure that the meat is not tough or dried out and retains maximum flavour. Using the correct equipment for each cooking technique will ensure that the food is cooked properly and safely.

Cook and finish meat and offal

How to tell when the meat is cooked

For meats that are cooked without liquid, you can check the colour of the juices during cooking. Check by inserting a skewer into the meat and checking the colour of the juices.

Colour of juices table

Stage of cooking	French name	Colour
Rare	au bleu	Red and bloody
Underdone	saignant	Reddish pink
Just done	a point	Pink
Well done	bien cuit	Clear

Beef and lamb joints can be served rare, which means that the juices will still be red at the end of the cooking time.

The following meats should never be eaten rare as they can have bacteria right through them.

- pork
- prepared meats, such as burgers and sausages
- rolled joints
- kebabs.

For dishes that are cooked in liquid, such as stews, casseroles and braised dishes, you will need to **check the texture of the meat** with a fork. The strands of meat should come apart easily when it is cooked. Offal should be firm and not bloody when cooked.

Cook and finish meat and offal

Correct temperatures

To cook meat dishes safely so that bacteria are killed, they must reach a core temperature of at least 70 °C for two minutes or equivalent. Equivalents are shown in the table below. Core temperatures can be checked using a **temperature probe**.

Temperature	Time
65 °C	10 minutes
70 °C	2 minutes
75 °C	30 seconds
80 °C	6 seconds

Healthy eating

Meat is a good source of protein, but can also be high in fat. For healthy eating choose cuts that are lean and cook by methods that don't require the addition of fat. Fatty meats should be eaten in moderation.

Finishing, holding and serving meat and offal dishes

Correct and finish dishes

Presentation is important for any dish. Before serving any meat dish, you may wish to adjust the colour or flavour of the dish, or the consistency of any sauce or liquid by:

- cooking under a high heat to brown
- adding seasonings
- thinning or thickening sauces/liquids
- skimming fat from sauces
- glazing the meat.

Cook and finish meat and offal

Garnish and present

A garnish is an edible decoration, applied to a dish as part of presentation and finishing. The decoration can be as the individual chef decides. It must **enhance** the dish, **not detract** from the flavours or the look of the product. Simplicity is best. A garnish can be herbs, vegetables or even other meats. A separate sauce or gravy may be added to grilled or roasted meats.

Activity 12

Describe two different garnishes you might use for meat dishes.

Ask your tutor or manager to check your answers for you.

Hold and serve

If meat dishes are **not to be served immediately**, they should be held at a temperature above 63 °C. They can be held for up to two hours at this temperature, then should be discarded or cooled quickly for later reheating.

Meat dishes will be best served as soon as they are cooked. If they are to be served cold, they should be chilled to below 8 °C as quickly as possible, then stored at this temperature until serving.

Cook and finish meat and offal

Evaluating of finished dishes

Each dish must be individually evaluated. **They must have eye appeal, have a pleasant aroma and taste good.** The only way to evaluate a dish is to have it presented and study it taste it and get other people's opinions.

To evaluate a dish, you need to look at the following.

- **The meat:** must be moist and not shrunken.
- **The sauce:** should be of the correct consistency, well seasoned and a good colour. If glazed, it should be even and not split.
- **The glaze:** should be even and not over-browned.
- **The presentation:** should be simple and pleasing to the eye, it should look fresh and not over-handled.
- **The taste:** flavours should be clean and easily identified, the dish must be a blend of flavour with no single ingredient overpowering the dish.
- **The temperature:** if it supposed to be hot it should be hot, though not too hot as the sauces and meat could end up overcooked.

Activity 13

Evaluate a dish that you have prepared giving a short description under each of the headings given above.

Ask your tutor or manager to check your answers for you.

Customer feedback: this is always the best evaluation of a dish. Encourage the customers to comment on specials before putting them on the menu, and accept constructive criticism!

Cook and finish meat and offal

Summary

In this section you have learned about:

- The correct **tools and equipment** for the cooking method chosen.
- How to cook meat using a **variety of cooking methods** and understand temperature and time control at all stages of the cooking and holding process.
- **How to finish and garnish** meat and offal dishes.
- **How to hold and serve** meat and offal dishes.
- **How to evaluate** finished dishes.

You have now completed this unit. Please spend a short time reviewing what you have covered for this section before attempting the assessment for the unit.

Answers to activities

Activity 1, page 3

List all the meats and offal you can think of.

Meat:

Beef	Mutton	Frog's legs
Pork	Poultry	Venison
Lamb	Rabbit	Hare
Bacon	Ostrich	
Veal	Crocodile	

You probably named the more common ones (beef, pork, lamb) and may have a long list of other meats. In the last ten years, more unusual meats have come on to the market from other countries, such as ostrich and crocodile. You may have identified poultry, though this is often dealt with in a category separately from meats. Meats, such as venison (from deer) and hare, are classed as game and also dealt with separately.

Offal:

Liver	Brains	Lights
Kidney	Oxtail	Sweetbreads
Tripe	Tongue	
Head	Heart	

Many of these are rarely eaten now though used to be eaten by poorer people in the past. Liver and kidney are still widely eaten; oxtail is used to make soup; and tongue cooked as cold pressed meat. Sweetbreads -which are the thymus glands of young beef, lamb and pork - are considered a delicacy.

Activity 2, page 9

What sort of indicators might put you off using a cut of meat?

- Bad smell.
- Stickiness.
- Discolouration - usually turning greyish at the edges.
- Too much fat.