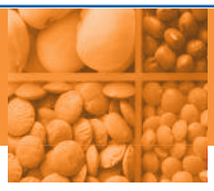
CHAPTER

01 Introduction

Contents

Do not wish to be anything but what you are, and try to be that perfectly.

St Francis de Sales

The Australian culinary scene has changed significantly over the past 20 years or so. Meal arrangements in the home, extended working hours that spill over to the evening and weekend, the diversity of leisure and sporting activities, an ageing population and the acceptance of Asian and other cuisines have influenced our approach to commercial cookery.

Only rarely do we see raw vegetables and carcass meat coming into even the largest kitchens. Basic preparation often is completed in dedicated food-processing plants and boning rooms. Standardisation of size, weight and quality is readily available. Sauces, pre-mixed ingredients, par-baked and pre-portioned meat cuts are accepted and available even to the retail market.

In the past the hotel and catering industry comprised residential hotels and restaurants, industrial catering, hospitals and institutions. Today, industrial catering has all but disappeared and the food-service industry includes many businesses that provide meals away from home, such as coffee shops, licensed clubs, event catering, bakery cafés and service stations. It contributes to books and magazines, participates in television entertainment and recognises celebrity chefs. It organises its own exhibitions and national competitions, and has a significant influence on the population's food choices and nutrition.

It is against this background that young (and not so young) chefs will start their training and enter the food service industry. Everyone knows **about** cooking, but not so many acquire the depth of knowledge of ingredients and flavours and understand the chemistry and physics of food preparation that the aspiring chef must achieve. However, there are more skills to acquire. Using the hand tools of the trade, following safe working procedures with the latest machinery and hot and cold processes, working as a team and showing respect for self and others are other skills and knowledge that must be acquired. There are new foods and tastes to be discovered, the pressure and excitement of **the service** to experience, the provision of refreshments for conventions and seminars, celebrations and marketing events to cater for and the buzz of being an important part of many **Grand Occasions** to enjoy.

This book is just the beginning in your discovery of all the things you will want to know about food and cooking. It will start you on a lifelong journey that holds many rewards and some challenges that will enable you to achieve some 'empathy for food'. In this book, we have set out the fundamental principles, practices and disciplines of professional cooking. With this foundation you will be able to expand your repertoire of dishes and develop your skills. You will need to read widely. Fortunately, many books have recorded the history of the trade, and new colourful books and magazines are helpful in gauging food fashions and trends.

Here are some important points to help you to make the most of this book.

Timing and teamwork

Preparation time depends on the skill of the chef. Work schedules need to be planned in advance for each day. Fresh supplies must be ordered and delivery times agreed; menus need to be reviewed and special functions taken into account. Then work plans must be set and tasks allocated to the staff rostered for work.

All the food service departments, and kitchens in particular, depend on teamwork to get the preparation and the finished dishes ready on time. A well-organised kitchen will depend on good leadership from the executive chef and good communication and mutual respect among the chefs and apprentices. A good working environment will make the work satisfying and rewarding for the entire food service operation.

The preparation usually referred to as *mise en place* (things in place) is central to the operation of the food service. When the preparation is late or poorly done tempers begin to fray and shouting commences as the menu orders are received. Some of us can remember when, just before the start of service, the sous chef would call each section of the kitchen to answer that it was '*en place*'. If the answer was negative, it was the duty of the sous

chef to re-direct staff to sections of the kitchen that needed assistance. Poor or incompetent preparation has a bad effect not only on the kitchen but on the food service as a whole. Customers know when the service coming out of the kitchen is delayed or corners are cut and standards are dropped, and business is likely to decline.

Seasoning and consistency

Even with standard recipes and ingredients, different chefs will achieve different results. For this reason, the chef must make a habit of constantly monitoring the cooking operation. When the food is ready to be served or plated, it is often necessary to adjust the seasoning and consistency. This requires taste and observation.

Consistency concerns liquids, which can be corrected by reduction, slight thickening or addition of liquid. For more information, see Chapter 14 on Sauces.

Tasting must be done in a hygienic manner, using a clean spoon or taster every time in order to detect the true flavour and seasoning.

The amount of seasoning must be determined by tasting again and again, until the correct flavour balance is obtained. Food should be only lightly salted, as some diners habitually salt food before tasting it. People have become accustomed to high salt levels that can mask true flavours. Food should always be slightly under-seasoned until it is ready to be served or plated so that it can then be adjusted by addition if necessary.

Remember that seasoning, once added, cannot be removed.

Measuring ingredients

Unfortunately, many systems of measurement are used in recipes – grams and litres, pounds and ounces, gills, pints, quarts and gallons, teaspoons, tablespoons and cups – metric, American and British. An Australian 'cup', for example, is not a tea cup nor a breakfast cup, it is 250 millilitres.

Measuring ingredients has become much easier with the development of electronic scales that measure amounts by weight and volume. They also have **tare** feature that allows the weight of a container placed on the weighing platform to be ignored in the calculation. This speeds the weighing process and keeps the scales clean. Measuring cups or spoons should be filled and levelled off to achieve an accurate result.

When converting recipes from another system into metric measure, first find the country of origin and calculate the equivalent metric amount. Round off the amounts to the nearest 5 grams, bearing in mind that 1 ounce equals 28 grams, or 10 millilitres in the case of liquids. Test the recipe and make adjustments if necessary.

NOTE:

Scaling up recipes to yield a larger number of portions is simple when items such as steaks or fillets are involved. Recipes for sauces and soups can be increased when the number of portions in the original recipe is known. However, the quantity of thickeners and seasoning must be re-calculated when scaling up, as cooking times need to be extended for large quantities, and the rate of evaporation of liquid increases.

Conversion tables information

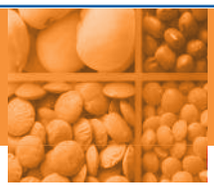
A trace

A 'trace' is a background flavour that should not be identified in the finished dish. It could be less than one gram; it might be a pinch but the amount must bear a relationship to the quantity in the recipe. Remember – less is more in terms of subtle flavours.

Portion sizes and presentation

These vary greatly in different sectors of the industry.

The portion sizes stated in this text are commercially acceptable, but must be varied to suit the needs of the particular food service. Portion sizes should be decided according to the following factors:

- The expectations of the diner. This will be influenced by the venue and dishes on the menu. Portion sizes for counter meals in hotels and clubs may need be substantial because diners are looking for a feed and may only order a main course. Diners visiting up-market restaurants may order three courses and spend time over the meal.
- The number of courses to be served in the meal. For example, a degustation menu that lists a number of courses is likely to have smaller portions than a menu offering two or three courses.
- The nutritional needs and the physical state of the consumers. Aged-care facilities, hospitals, childcare centres and institutions pay great attention to dietary requirements. Residential care homes and institutions provide all the residents' meals and thus have the added responsibility of providing a nutritionally balanced diet.

Preparation time

Preparation time will often depend on the skill of the cook. In a commercial kitchen, two or more dishes are made at the same time. Some may be drawing on *mise en place,* while others require preparation from scratch. For this reason, times have not been included in this book. Work schedules need to be planned each day, and this is best learnt in the practical situation.

Close cooperation between the chef, cooks and apprentices saves time and produces a good working environment, thus making the job more enjoyable for all members of the team.

Understanding recipes

What is a recipe?

The entire business of food preparation and cookery is based upon recipes. Like a formula for colour mixing or plans for a building, recipes list the materials and the ways in which they are to be used. As an architect learns to read a plan, so the chef needs to be skilled in understanding the recipe and visualising the finished product.

Recipes, like house plans, assume the reader has studied the principles and practice of the subject; in this case, food. The point here is to underscore the importance of learning the theory of cookery. It involves aspects of mathematics, physics, chemistry, biology and gastronomy. The reader needs to keep this knowledge in mind when using the recipes.

Recipes in this book list the **ingredients** in the order in which they are used. After careful review, the **procedure** is expressed in plain English. In most cases, the quantities relate to portions at two levels. This accounts for the needs of students in class and an example of commercial quantities. The food items listed are readily available. The recipes have been consciously selected to provide practice and experience for students. It is anticipated that trainee chefs will build on this foundation and increase their repertoire of dishes in line with their own interests, fashion and the needs of the workplace.

Recipes could be regarded as falling into three broad categories: generic, mainstream and bakery.

Generic recipes are those that form the foundation of culinary preparations. Examples are the stocks, the basic sauces such as Béchamel, the basic preparations – Mirepoix and coating mixtures. Stocks are not served, but provide the foundation for other cookery. Basic sauces may be served as they are, but usually go on to become greater things (see table 14.2 Basic sauces and their derivatives).

Mainstream recipes comprise most of the culinary repertoire, and include the roasts, braises, fries and all ethnic cuisines.

Generic and mainstream recipes require good knife skills for trimming, cutting and keeping waste to a minimum. Quantities given in the recipe must be used to achieve the portion yield required. However, if ingredients are of lesser quality, more trimming may be needed. Small variations may be tolerated, so long as the finished dish is not compromised. It is usual to allow for adjustments to seasoning and consistency during the cooking process and prior to final presentation.

Bakery covers most of the edible grain foods – breads, cakes and pastries – and ice cream and chocolate. Recipes in this category are often written in a different format, so that the ingredients are set out in groups. They require strict adherence to weights, measures, time and temperature to achieve satisfactory results.

Bakery recipes need a slightly different approach than generic and mainstream recipes. The selection, weight and volume of ingredients are critical at the start. The temperature of raw ingredients is important because it aids or inhibits emulsification. Pastes need time to set off, and some mixtures must be warm to encourage coagulation. Ingredients carelessly measured or left out by mistake cannot be added once mixing has commenced or the product is in the oven.

Reading the recipe

Always read the recipe thoroughly, before even going into the kitchen. Think about the ingredients involved. Research any ingredients that are new to you. Consider how much time should be allocated to each step and whether resting or cooling times are necessary in the process.

Assemble all the ingredients and equipment for the task, but keep clear a good work space.

Give full attention to the task at hand so that the preparation flows and time lines can be achieved.

Recipe development

From time to time, chefs are asked to develop new recipes. Maybe a new menu is to be written or food prepared for a special theme or function. Start by thinking about why the recipe is being developed or created from scratch.

Assess the capacity of the kitchen in relation to large and small equipment, and the expertise of the kitchen staff. Recipes involving considerable preparation time or needing much oven or stove top space may not be practical in the circumstance.

Read widely. There is an abundance of books and magazines, both old and new, that can be researched for ideas. Discard procedures or ideas that are not practical.

Consider various food groups and flavour profiles, and keep in mind the methods of cookery that will be used in the recipe. Decide the context in which the recipe is to be used – the dining area, be it formal or casual, the course and budget.

Select the main ingredient and style of cookery. Add the proposed garnishes and accompaniments if required. Write a pilot recipe for testing.

Consult with your peers; amend the recipe and make a second trial.

Cost the recipe and be prepared to adjust it if the cost is over budget.

Confirm the recipe and enter it on a computer program. Make references to date, who created it and code number if required.

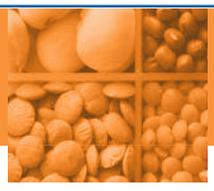
Altering a recipe to match catering requirements

Great care must be exercised in bulking up recipes, particularly with regard to seasoning and thickening. Large quantities of sauced or 'wet' dishes take longer to cook. This may result in increased evaporation of the cooking liquid and overcooking of garnishes such as vegetables. Delay adding salt until the item is cooked. Sauces thickened with potato flour will thin out if frozen or held for long periods. Amend the recipe to use another thickener. Short-order work such as grilling or pan frying is not a problem, as the food is continuously cooked to order.

The volumes of bakery recipes can be increased, provided standard ratios of ingredients are maintained. For example, equal quantities of sugar, butter (fat), eggs and flour will make a cake. However, recipes with large yields use special-purpose vegetable margarines and flours. Bread dough is sensitive to temperature and its effect on yeast activity. Large doughs need to be 'taken' and 'worked off' within time limits and away from draughts.

Gastronomy

Gastronomy is the art and science of good eating and drinking. In his book *Marketing of the Meal*


Experience, Graeme Campbell-Smith discusses two elements of the gastronomic experience – the 'living environment' and 'the food on the plate'. If the latter is the most important part of the experience it is solely the responsibility of the chef and his or her team. It is therefore most important that the team has a clear understanding of its opportunity and responsibility to provide meals and/or dishes that meet, or are likely to exceed, the expectations of diners.

All the five senses – sight, hearing, smell, taste and touch – come into play when eating a meal. If the combination is balanced and well matched to the food, it is enjoyed; if not, the food is rejected and the experience remembered with regret.

Sight is a very prominent sense when eating. If the food is recognised and 'looks right' it can be enjoyed. However, if the food is unfamiliar in appearance or colour, sight will send a strong message of caution to the brain. This visual appraisal is primary acceptance or rejection, as the food has not yet been tasted. A dish can be totally rejected or can diminish the anticipation of enjoyment just by the way it looks.

Hearing adds to the enjoyment of food by its association with the food itself or the processes of cooking and service. It is expected that crudités will be crunchy, that crisp food crumbles, puff pastry will break with a faint tearing sound, solid food will require much chewing and a champagne cork will pop. All these sounds register in the brain through the ears and mouth.

Smell is one of the most powerful senses. Smells may reach the diner well before the sight of the dish. The aroma of a roast, a freshly baked pastry or a cup of brewed coffee creates a heightened level of anticipation and stimulates production of saliva in the mouth.

Touch refers to the sensation that food provides in the mouth while being chewed. The tongue is able to communicate food qualities such as texture, density, temperature, moisture and viscosity. The 'mouth feel', which mirrors the food combination, has a strong influence on the taste of the food.

Taste of food is perceived in the mouth through taste buds on the tongue that identify sweet, sour, bitter, salt and *umami,* or the taste of savouriness. These are the primary tastes that are present in all cooking. Taste is influenced by heat and cold; pungent and astringent foods give rise to different taste sensations.

Tastes are perceptions that change from one individual to another according to circumstances, but are also influenced by cultural background, food habits, taste training, age and education.

These short notes on the role of the senses in gastronomy highlight the need for a chef to practise the science and art of tasting; to be aware that food is enjoyed if all the senses are satisfied. A meal should have variation in the shape of the food and in taste, texture and temperature. No food item should have an adverse effect on the next one, but merely should contrast or complement it.

A good meal is not necessarily an intricate succession of dishes –invariably it involves simple dishes made from fresh ingredients that are well cooked and carefully seasoned, and presented neatly with a thoughtful combination and blending of ingredients that are suitably garnished.

Food combinations

In the recipes, only passing reference has been made to food combinations. This does not mean that matching ingredients is not important. A chef must be constantly aware of texture and flavour. This awareness comes with a conscious desire to train the senses by thinking about what is being eaten – how different flavours and textures compare and contrast with one another; how temperature affects flavours; what foods are bland or spicy, bitter or salty, sweet or sour etc. Refer to Chapter 5 Menu planning and Chapter 22 Buffets for further information on this point.


Food matching
additional resources

Presentation of dishes and their service

The enjoyment of a meal is determined by a number of factors extending beyond the actual preparation and cooking of food; not least of these is the person dining. It may be that the diner is alone, or attending a business meeting, social occasion or celebration, or comprises a family with young children. All of these combinations create a different 'scene' that should influence the style and rhythm of service. The kitchen, or 'back of the house', may not be aware of these little scenes; however, it is necessary to understand the close link that must exist between the teams in the kitchen and those on service. A high level of cooperation and excellent communication must exist. It is the foundation upon which the food service is built.

The environment in which the food is to be served influences the level of expectation of the food service. Restaurateurs and other food-service managers place great importance on décor, furnishings and uniforms. Even before seeing the menu, diners gain an impression that will have an influence on the meal experience.

Having considered these factors, the dishes served must meet expectations by looking attractive and tasting good. Some chefs place much emphasis upon flavour alone, while others concentrate only upon the presentation. There is a need to strike a balance; the ideal meal consists of attention to, and harmony in, both. Following are some simple guidelines that help to make a meal attractive.

Arrangement of the food

When planning a course, try to visualise how it will look. The food items should appear to be balanced, with two or three colours and attractive shapes on the plate. Trim the meat, fish or main item correctly before cooking. For the time and effort spent in preparing a dish it surely must be worth the effort to present the food to its best advantage.

If the food is to be presented on platters, allow plenty of room so that the food can be served neatly without demolishing the entire arrangement after a few serves. If the food is plated in the kitchen, make sure that the main item is at the front of the plate, with the vegetables grouped at the back – that is how the plate should be placed in the front of the guest.

Temperature

Cold food must be served on cold plates and salads in cold bowls. If plates are in short supply, do not take warm plates from the dish washer to serve cold food. Put the plates in a refrigerator or, better still, buy a few more plates. Likewise, hot food must be served on hot plates. If single-serve items are baked in an oven it will be necessary to use an under-plate (or liner) for service and include a warning to waiting staff and diners. This style of service requires careful planning and may require two plates so that the item can be transferred to a plate with vegetables or garnish.

Excellent coordination between waiting staff and the kitchen is the key to serving dishes at the right temperature. Many a meal has been spoilt because a dish is left languishing on the hot plate.

Garnishes and accompaniments

A garnish should provide a focal point for the food on the plate. It should complement the main item both in style and flavour. The style of garnishing depends upon the course, the texture of the food and the type of dish.

Garnishes must be simple, in some way be related to the main food item, small, edible and attractive.

Unlike garnishes that are served on the dish, accompaniments are offered separately. They may be sauces or relish, or an addition that complements the food. Sometimes accompaniments are made available for diners to serve themselves or to be served by the waiting staff.

Plates

Use the correct plate

Plates come in different sizes for different courses and in different shapes to suit various arrangements of food. For example, oval plates are favoured for fish, round plates for red and white meats and square plates for cheese. Take account of the range of colours and patterns of crockery available and match these with the food.

Select the size of plate to match the portion size of the food. If a plate is too small, the food will look crowded and unappetising. If a plate is too large, the food will look lost and the portion will appear to be skimpy.

Carefully arrange the food on the plate

Consider a plate or a platter to be like a frame for a picture. Food must never hang over the edge or rim of the plate or platter. All the food should be contained within the inner rim of the plate, just as a picture is contained inside the frame.

Do not use cracked or chipped plates

As well as being a food-safety hazard, cracked or chipped plates are among the worst presentation faults one can imagine. Cracked or chipped plates should be thrown away.

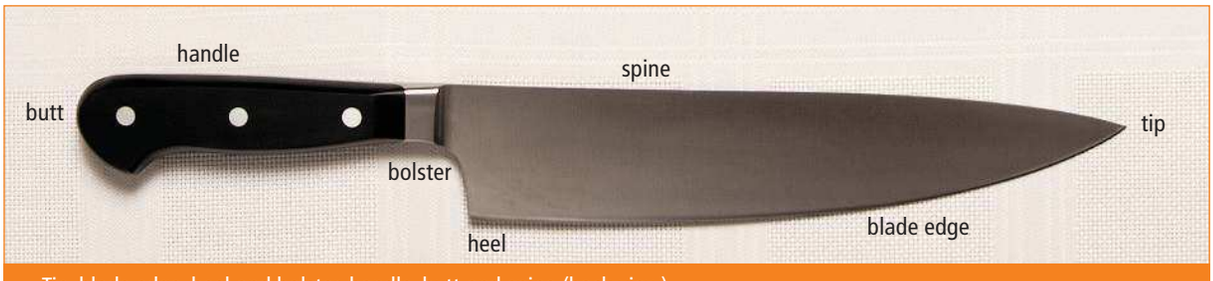
Ensure plates are spotless after plating the meal

Wipe any drips of sauce or finger marks before leaving the kitchen.

The selection and care of knives

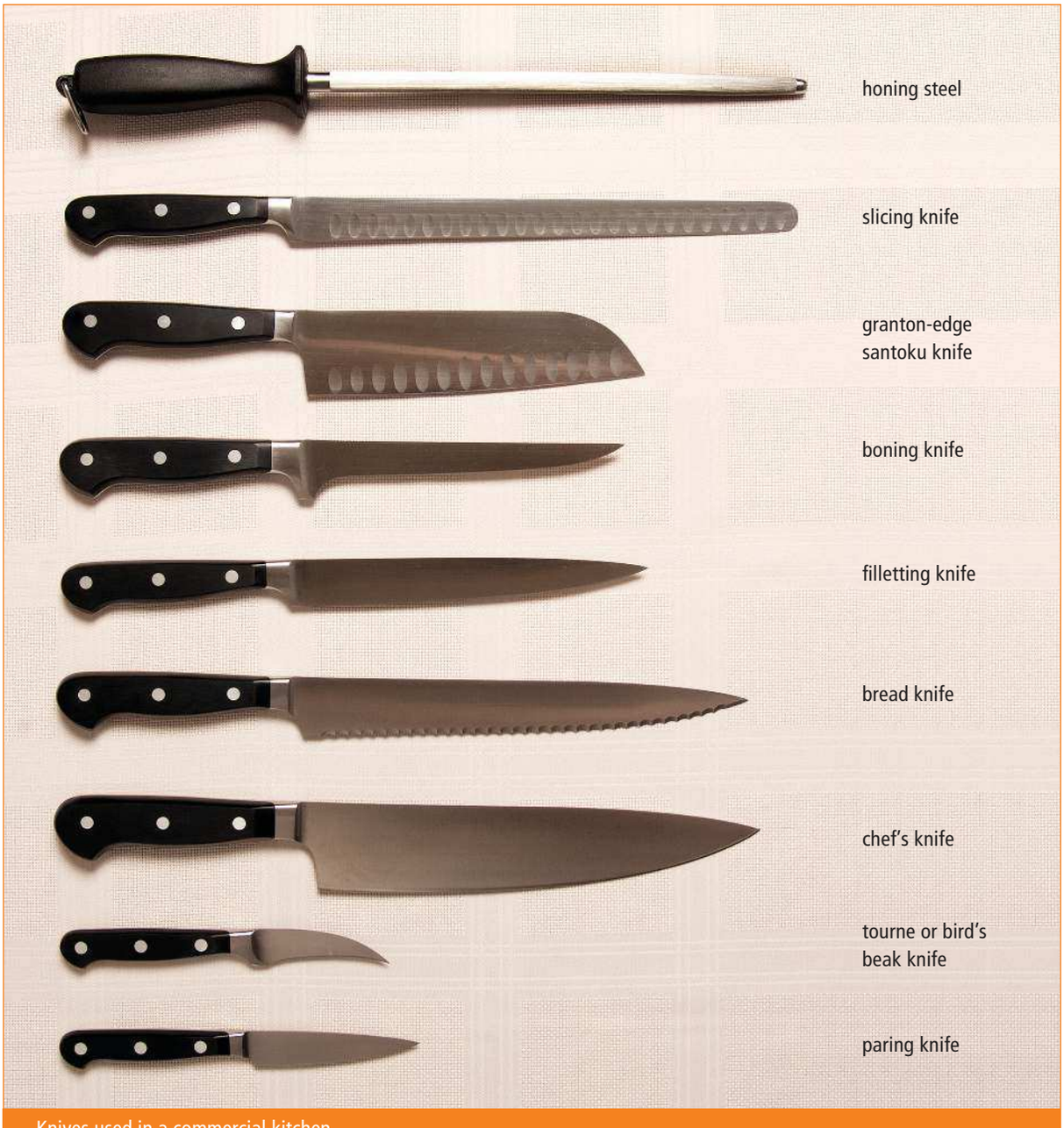
Knives are to the chef as the paint brush is to the artist or the turning chisel to the wood turner. To have knowledge of the construction, range, safe use and care of knives is a great help in all culinary operations. As a start, it is necessary to distinguish between the kitchen knives sold in shops for home use or gourmet cooking and knives forged by long-established cutlery makers for professional chefs. The former are stamped, sometimes hollow, ground knives made according to prices set for mass marketing, and are not suitable for use in commercial kitchens. On the other hand, suitable knives and steels for trade work can be obtained from specialised catering suppliers. These knives are expensive and should be selected by the user personally so that heft (that is, the weight of the knife and the feel of the knife in the hand) can be evaluated. The shape varies according to the task for which the knife is intended. Generally, the thinner the blade, the better the slicing action; therefore, a thin-bladed knife is good for carving and filleting. A knife with a thick back will have greater stiffness and is ideal for tasks such as chopping.

Here are the parts of a knife.



Tip, blade edge, heel and bolster, handle, butt and spine (back view)

For a start, the trainee chef should buy only three or four knives and add others as needed. Generally, about six knives will be sufficient for routine kitchen work. As a guide, select a chef's knife 20–26 centimetres, a paring knife 7–10 centimetres, a utility or boning knife 12–18 centimetres and a carving (or scalloped-edge slicing) knife 20 centimetres. Later on, offset, cheese, turning (or bird's beak) and speciality knives can be added as desired. As some knives, including scalloped-edged knives, have right and left hand versions, you must clarify your preference when purchasing.



Knives used in a commercial kitchen.

A two-pronged roasting fork about 16 centimetres in length is needed to assist with carving. The sharp ends should be shielded when not in use.

Maintaining an edge on knives

First, we distinguish between honing and sharpening knives, and then consider the safe use of knives in cooking.

Honing knives

A honing steel is used to maintain the cutting edge of a knife while in use. Select a steel that is 28–32 centimetres long. Steels are usually oval or round, having coarse, medium or fine groves. A medium steel is preferred for general use. A baton resembling a honing steel coated with industrial diamonds or made of industrial ceramics is a sharpening tool and is not suitable for honing.

To hone a knife – method 1

1 Hold the steel upright on a firm surface.
2 Hold the knife at an angle of about 20 degrees to the steel and observe the angle.
3 Commence stroking the steel with even pressure, drawing the knife from the heel to the tip against the steel, from the handle to its tip so that the tip of the knife meets the tip of the steel at the end of the stroke.
4 Repeat this action on the other side of the steel while maintaining the same angle of the knife to the steel.

Honing a knife – method 1

To hone a knife – method 2

1 Hold the steel in the left hand.
2 Hold the knife at an angle of about 20 degrees to the steel and observe the angle.
3 Place the heel of the knife at the top of the steel and draw the knife down the steel toward the guard of the steel.
4 Repeat this action on the other side of the steel while maintaining the same angle of the knife to the steel.

Honing a knife – method 2