



Chapter-4

FISH COOKERY

Learning Objectives:

At the end of this unit, the students would be able to

- a) introduce fish cookery
- b) Classify fish with examples
- c) explain the cuts of fish
- d) select fish and shellfish
- e) explain cooking of fish

I. Introduction :

A fish is any aquatic vertebrate animal i.e., covered with scales and has a set of paired fins and several unpaired fins. Most fish are cold blooded allowing their body temperatures to vary as ambient (room) temperatures change. Fish are abundant most waterbodies. They are found in nearly all aquatic environments. At least 31,900 species of fish exhibit greater species diversity than any other class of vertebrate.

II. Classification of Fish

Fish is generally separated into two categories:-

- (a) Lean Fish
- (b) Fatty Fish

Lean Fish contains 1-5% fat whereas, fatty fish contains 5-35% fat.

Fish and shellfish were once plentiful and inexpensive but nowadays the demand has outstripped the supply. There are two main categories of fish that are found: flat fish and round fish. Those that live near or on sea bed are known as demersal fish. These are white fish whose nutritious oil is concentrated in the liver. Oily fish tend to swim in the shoals near the surface of the sea. They are known as pelagic fish. In case of oily fish, the nutritious oil is dispersed throughout the flesh. This fish spends most of time lying on the sea bed and does very little swimming. Flat fish starts life with an eye on either of their head like a round fish and they swim upright like round fish too. As they mature they start to swim on one side only and one eye moves over the head on to the dark skinned side of the body. Because they do not have to chase their food, their flesh is always delicate

and white without too much muscle fiber. The characteristics of flat fish includes the following one side is pigmented and the other side non pigmented. They have simple bone structure. Eg: Dover sole, turbot and halibut rank the finest fish.

Owing to their nutrient value and health promoting properties, Round fish, usually oily fish are quite popular. They contain protein, vitamin A, B & D and omega 3 fatty acid, which helps to reduce the risk of clogged arteries, blood clots, strokes and even cancer. Oily fish live near the surface of the sea congregated in shoals. The largest family of oily fish is the eg: herrings, mackerel, sardines and pilchards, salmon (known as the king of the fish).

Shellfish -

The family of shellfish is truly enormous and includes crabs, lobsters, prawns etc. They can virtually be of any shape or size, their distinguishing feature being their skeleton on the outside, concealing soft and delicious flesh. Shell fish are generally low in fat but high in dietary cholesterol. Saturated fat in diet is linked to increased blood cholesterol.

They have a shell surrounding them.

Shellfish may be divided into 3 distinct categories:

- (a) Crustacean - crab, crawfish, crayfish, lobsters, prawns and shrimps.
- (b) Molluscs - cockles, mussels, oysters, and scallops
- (c) Cephalopods - octopus, squids, cutlet fish

Molluscs are univalves, bivalves and cephalopods. Univalves are conch, snail, winkles and periwinkles. Bivalves are scallops, oysters, and mussel. Cephalopods are squid, octopus and cutet fish.

III. Cuts of Fish

1) Steaks

Thick slices of fish on or off the bone.

Steaks of round fish (eg. salmon, cod) may be called darnes.

Steaks of flat fish on the bone eg. (turbot, halibut) may be called troncons.

2) Fillets

Cuts of fish free from bone: A round fish yields two fillets while a flat fish yields four fillets.

3) Supremes

Prime cuts of fish without bone and skin (pieces cut from fillets of salmon, turbot, brill, etc.

4) Goujons

Fillet fish cut into strips approximately 8×0.5 cm (3×1/4inch) used for making fish fingers.





CUTS OF FISH



Fillet

2 from a round fish

Fillet

4 from a flat fish

Delice

A trimmed folded fillet (lightly flattens the fillet and fold as indicated)

Paupiettes

A small rolled-up fillet (often stuffed)

Strips (goujons)

Thin strips of fish fillet (often bread-crumbed)

Darne

A steak cut from a round fish

Steak

A steak cut from a flat fish (or half the prepared fish)

Supreme of Escalope

A slanted cut-from a large fillet

fig. 1

5) Paupiettes

Fillets of fish (sole, plaice, whiting) spread with a stuffing and rolled.

6) Plaited

Also known as en tresse; e.g. sole fillets cut into three even pieces length wise to within 1cm (1/2 inch) of the top and neatly plaited.

IV. Selection of fish and shell fish

When buying whole fish the following points should be looked for to ensure freshness:

- 1) EYES: bright, full and not sunken, no slime or cloudiness.
- 2) GILLS: bright red in color, no bacterial slime.
- 3) FLESH: firm, translucent and resilient so that when pressed the impression goes quickly, the fish must not be limp.
- 4) SCALES: flat, moist and plentiful.
- 5) SKIN: should be covered with a fresh sea slime, or be smooth and moist, with a good sheen and no abrasions or bruising, there should be no discoloration.
- 6) The fish should be heavy in relation to its size
- 7) SMELL: pleasant, with no smell of ammonia or sourness.

Fresh fish should be purchased daily, if possible, direct from market or the supplier. The fish should be well iced so that it arrives in good condition. Fish may be bought on the bone or filleted. (The approximate loss from boning and waste is 50% for flat fish and 60% for round fish.) Medium- sized fish are usually better than large fish, which may be coarse, small fish often lack flavor.

Round fish should be scaled & gutted, and fins removed.

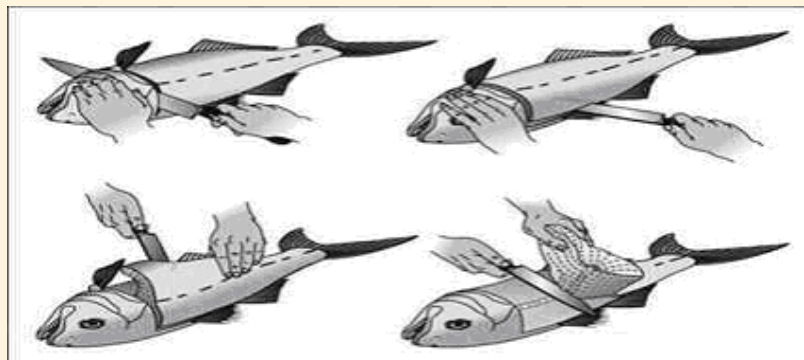


fig. 2





1. Make a deep cut just behind the gills (about halfway through the thickness of the fish).
2. Cut a slit a few inches in length along the top of the fish (the dorsal side).
3. Using the tip of the knife, separate the flesh from the bones, as illustrated. The fish should open up just like a book.
4. When completely open, finish cutting away the fillet by moving the knife along the "spine of the book."

V. Removing the skin from the fish fillets

- (1) Hold the tail end of the fillet firmly with the tip of your finger.
- (2) Firmly hold the knife still and at a fixed angle and make a deep cut.
- (3) Wriggle the skin from side to side while pulling backwards on the exposed bit of fish skin.
- (4) Continue this motion through the fillet.
- (5) Use a fillet knife in separating the fish skin from the flesh



VI. SELECTION FACTOR OF SHELLFISH

Crustaceans – This family of shellfish is truly enormous and includes crab, lobster, Cray fish, prawn and shrimps. They can be of in any shape or size, their distinguishing feature being that their skeleton is on the outside concealing a soft and delicious flesh.

Molluscs – This family of shellfish is normally divided into two main groups i.e., gastropods which include whelk and winkle and bivalves which include clam and mussels. This group of molluscs have attached hinged external shell that has loose soft, delicate flesh inside it includes clam, mussels and oysters.

- (1) Shellfish should be purchased live to ensure freshness.
- (2) It should be heavy in proportion to their size.
- (3) The shells should be lightly closed which indicates freshness.
- (4) They should smell fresh.

VII. COOKING OF FISH

Most fish are edible and the world of fish represents an enormous source of good food. The most nourishing fishes come from river, eg. eels, salmon, trout, mackerel, fresh herrings, turbot. All fishes consist of nearly 75% of water and also the albumenoid (egg whites) consistency varies little from fish to fish (about 18%). Fish flesh does not vary much from that of land animals. Proportions of fat, minerals and albumenoid are very much the same. Fish has phosphorated compounds and lean fishes are much easily digestible and are excellent food for the sedentary workers and the sick.

The edible flesh of fish and sea food like that of meat and poultry consist of water, protein, fat and small amount of minerals, vitamins and trace elements. The most important factor is that fish has very little connective tissues. It is this lack of connective tissue that make the fish:

1. Cook very quickly even at low heat.
2. Fish is naturally tender.
3. Cooked fish should be handled carefully or it will fall apart.

Fish being an aquatic vertebrate is the most sought after food due to its high protein content and easy to digest factor. They can be cooked in different ways. Stale fish are not only unappetizing but they can also be the cause of digestive disorders or even poisoning. Ideal cooking methods are baking, deepfrying, grilling, poaching and steaming.

Cooking of Fish : Fish can withstand the following methods of cooking and thereby provide variety to the palate.

- (i) Baking :- Fish, either whole, portioned or filleted, may be overbaked. It is usually baked in an oven at 350 F/180° C
- (ii) Deep frying :- Suitable for small whole fish, cuts and fillets. The fish is coated with flour or batter and then immersed into cooking at an approximate temperature of 100 °C - 180°C.
- (iii) Grilling :- Fish steaks and fillet can be prepared and passed through flour and placed on a hot grill brush with oil. Grilling helps to retain maximum of the nutrients and also the flavour.





- (iv) **Poaching:-** Poaching is cooking of fish in the required amount of liquid just below the boiling point. It gives the fish a tender texture. It is always safe and pleasant to eat a poached fish.
- (v) **Steaming :-** Steaming conserves flavour, colour and nutrients. It is an easy method of cooking.

Let us Revise :

- 1) **Molluscs :** The family of shellfish which has attached hinged external cell that has loose soft delicate fish inside.
- 2) **Crustaceans :** Shellfish which can be of any shape or size with their skeleton on the outside which covers soft flesh in the inside.
- 3) **Paupiettes :** Fish fillet that is rolled with a stuffing.

• Review Questions

Give short answers for the following

1. Give the classification of fish. Mention two examples for each.
2. Classify shellfish and explain with examples.
3. Write about the different methods of cooking of fish.

Explain in detail

Explain the various cuts of fish with the help of a neat diagram.

2. Classify fish and shellfish giving suitable examples.