

# Fish

## Classification

White Fish	Oily Fish	Shellfish
Cod	Mackerel	Crab
Whiting	Herring	Lobster
Sole	Trout	Mussels
Haddock	Salmon	Shrimp
Plaice	Sardines	Prawns

## Why should we include Fish in the diet?

- Important source of protein, Vitamin B, iodine and unsaturated fat (oily)
- Many different **varieties**
- Some are **cheap yet nutritious** eg mackerel
- Available **frozen, tinned** and in ready meals
- Has many different **uses**
- **Short cooking time**, saves time & fuel

## Nutritional Value

	Amount	Type	Function
<b>Protein</b>	17-20%	High Biological Value	Growth & repair of cells; production of hormones, enzymes & antibodies
<b>Fats</b>	Oily 13% White 0% Shellfish 3%	Saturated fat (white fish has no fat but it may be added during cooking)	Heat & energy Protection of delicate organs
<b>Carbohydrates</b>	0%		None presents so should be served with carbohydrates eg breaded fish or fish & chips
<b>Vitamins</b>	Good source	Vitamin A (oily fish only) Vitamin D (oily fish only) B Group	Healthy eyesight Healthy bones & teeth Healthy nervous system and also controls the release of energy from food
<b>Minerals</b>	Good source	Iodine Phosphorus Calcium (tinned fish)	Healthy thyroid gland Healthy bones and teeth Healthy bones and teeth
<b>Water</b>	55-70% Amount depends on % fat		Carries nutrients & oxygen to all cells in the body <u>or</u> Helps remove waste from the body via urine

## Uses of fish

- **Breakfast** – kippers
- **Starter at dinner** – prawn cocktail, seafood chowder
- **Main course at dinner** – fish pie, poached salmon, battered cod
- **Supper:** fried mackerel
- **Sandwiches:** salmon, tuna, sardines
- **Snacks:** smoked salmon on crackers

### Structure of Fish:

- Fish is made up of long fibres filled with Fish juice
- The Fish juice contains extractives (flavours), vitamins, minerals and protein
- They are held together with connective tissue
- Between the Fish fibres are some fat cells
- The amount of fat depends on the type of animal and its age

### 'In Season'

- Some fish are **more plentiful** at certain times of the year.
- It is best to eat them 'in season' as they have
  - **better flavour**
  - **they are cheaper**
- Example: Cod is in season from Sept to March

### Cuts of Fish

Fish is often bought ready to cook – head, tail, scales & insides removed

Can be bought:

- *Whole*
- *In Fillets*
- *In Cutlets*



### Preserved Fish

Fish can be preserved by:

1. **Freezing** Eg Cod, Plaice
2. **Canning** Eg Tuna, Salmon, Sardines
3. **Smoked** Eg Haddock, Salmon



### Buying Fish

FRESH	FROZEN
<ul style="list-style-type: none"><li>• Buy from a reliable source – hygienic and fresh</li><li>• Fish should have fresh odour – no unpleasant smells</li><li>• Skin should be moist and unbroken</li><li>• Scales should come off easily</li><li>• Eyes should be bright and shiny</li><li>• Gills should be bright red/pink</li><li>• Flesh should be firm to touch</li><li>• Choose medium sized fish – better flavour</li></ul>	<ul style="list-style-type: none"><li>• Should be frozen solid</li><li>• Check expiry date</li><li>• Packaging should be unbroken</li></ul>

### Storing Fish

FRESH	FROZEN
<ul style="list-style-type: none"><li>• Remove wrapping</li><li>• Rinse under cold tap</li><li>• Refrigerate as soon as possible</li><li>• Place on crushed ice cubes and cover with ice</li><li>• Renew ice as it melts</li><li>• Cover to prevent the flavour spreading</li><li>• Use within 24 hours</li></ul>	<ul style="list-style-type: none"><li>• Store in a freezer as soon as possible</li><li>• If the fish has begun to thaw DO NOT refreeze</li><li>• Use within the recommended time</li></ul>

### Why Do We Cook Fish?

- To **destroy bacteria** and make it safe to eat
- To **improve flavour**
- To make it **more digestible** and tender

### Cooking Fish

- Make sure it is **very fresh** (unless frozen)
- **Wash** and **dry** before cooking
- When cooked the flesh becomes **opaque** (white, not see-through)
- It **breaks apart easily**
- Fish **cooks very quickly** – overcooking causes it to break apart



Slightly See-through



Opaque

### Effects of Heat/Cooking Fish:

- **Protein coagulates** and **shrinks**
- Fish becomes **opaque**
- **Connective tissue dissolves** & flesh breaks apart easily
- **Bacteria** are **killed**
- **Minerals and vitamins** dissolve into cooking liquid
- Heat **destroys** some vitamin B

### Sauces & Coatings

Sauces	Coatings
<ul style="list-style-type: none"><li>• Cheese sauce</li><li>• Parsley sauce</li><li>• Tartare sauce</li><li>• Tomato Sauce</li></ul>	<ul style="list-style-type: none"><li>• Batter</li><li>• Egg &amp; Breadcrumbs</li><li>• Seasoned flour</li></ul>