

is lacking in extractives. On this account a fish diet is insipid, but it is less stimulating than a meat diet. Fish is well suited to cases of epilepsy and mental disorders, on account of its non-stimulating character.

Because fish emits a phosphorescent light, it has been assumed that it contains a large amount of phosphorus; and because Büchner uttered the dictum "Without phosphorus is no thought," fish has sometimes been regarded as a special brain food. Dr. Hutchinson shows the fallacy of this doctrine in his "Food and Dietetics"; but it must not be forgotten that fish is an easily assimilated food and enters the blood quickly, and mental work depends upon a good supply of enriched blood.

Under the name of fish are popularly included molluscs and members of Crustacea, which really are creatures of a lower order than fishes. With one exception, they should be kept strictly outside the sick-room, for they are very difficult of digestion. The exception is in favour of oysters, which, when taken raw, are easily digested. They consist of water, proteids, fat, and a carbo-hydrate. This latter constituent is in the form of glycogen, which occurs in the liver of the oyster, so that in cases of diabetes they are not a suitable food. The oyster contains a large amount of digestive juice, which assists in its own digestion when taken raw, but which is rendered inert by cooking. As a source of nutriment oysters are expensive. It is estimated by Stutzer that one egg contains as much nutriment as fourteen oysters, and one pound of beef is equivalent to 223 oysters. The chief objection to oysters is that from time to time outbreaks of typhoid fever are directly traced to them. The chief oyster beds are laid near the mouths of rivers, and, if the waters are charged with infected sewage, the oysters stand a great risk of pollution. To guard against risk, the oysters should be kept for three or four days in salted water, which should be changed twice daily, and if they are fed on oatmeal they will retain their good condition. During the breeding season—that is, during the summer months—they should be avoided, as they are then of poor quality and more likely to be dangerous.

Oysters are not alone in their power of producing disease. Many molluscs give rise to typhoid in a similar manner. Shell-fish often cause poisoning symptoms, and in some constitutions give rise to nettle-rash. Other fish are sometimes known to occasion irritation of the skin, and so commonly is this the case that the St. Louis Hospital for diseases of the skin in Paris has excluded fish from the diet of the patients. In July of this year, during the meeting of the British Medical Association, Dr. Jonathan Hutchinson brought forward the results of his investigations to show that fish, and particularly over-ripe herrings, gave rise to leprosy.

Beyond doubt, fish is a dangerous food unless it

is in good condition and perfectly fresh. It decomposes rapidly, and gives off a very unpleasant smell. Unfortunately, ice prevents the smell, although it does not prevent the effects of decomposition, and it is difficult to tell the exact condition of fish which has been kept on ice.

Fish is in best condition just before spawning. At that time the flesh is firm and elastic, and when it is cooked the flakes are opaque, and separated one from another by layers of curdy-looking substance, which is really coagulated albumen. After spawning the fish is out of condition; the flakes are bluish and transparent-looking, and there is no trace of albumen between the flakes.

Fresh fish may be judged by its bright appearance and firm texture. The skin should be covered with scales, and if these are absent it shows that the fish has been roughly treated, or that the scales have dropped out through staleness. The eyes should be bright and prominent. If the eyes sink and look dull and semi-opaque, the fish is stale. The best test of freshness is in the gills. When first lifted from the water, the gills are filled with bright red blood, and so assume a bright pink colour. As the air acts upon the blood in the gills, the colour is changed by varying degrees until they reach a light brown colour. The fish is then decidedly unwholesome. The fat fish, such as salmon, herrings, pilchards, and mackerel, are best when eaten directly they are caught, but turbot really become more easily digestible for being kept two or three days. The entrails should be removed as soon as possible from the fish, as they assist decomposition.

In cleaning fish, the dark skin lining the abdomen should be scraped away, and all traces of blood removed from the groove under the backbone. In fish with delicate skins the scales should be removed by scraping them from the tail towards the head. Salmon, sea-bream, and mullet should have the slime removed by wiping the fish with a wet cloth, but the scales should be left on to prevent the escape of nutrients during cooking. It is important that fish should not be soaked in water, as by so doing much of the soluble proteid is removed. On this account, too, boiling is not a good method of cooking, as much of the flavour and of the soluble nutrients are wasted.

To boil fish, it should be put into water at a temperature of 180° Fahr. It is usual to put it into cold water, as boiling, or even hot, water is apt to crack the skin and spoil the appearance of the fish, but the cold water plan is a wasteful method of cooking. A little vinegar added to the water helps to soften the fibres. Experience is needed to cook fish to the right degree. If underdone it is unwholesome, and if overdone it is flavourless and woolly. The proper degree is when the bone just leaves the flesh.

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