

Cod-liver oil

Cod-liver oil, pale yellow oil obtained primarily from the liver of the Atlantic cod, *Gadus morhua*, and other species of the family Gadidae. Cod-liver oil is a source of vitamins A and D. It was widely used in the 18th, 19th, and early 20th centuries to treat and prevent rickets, a disease characterized by defective bone growth that is caused by a lack of vitamin D. Widespread fortification of milk with vitamin D in the United States and Europe beginning in the 1930s eliminated rickets as a significant public health problem, and with that physicians stopped recommending the use of cod-liver oil. It is still sold in health food stores as a vitamin supplement, as a remedy for joint pain caused by arthritis, and as a preventive of cardiovascular disease—although these last benefits have not been proved scientifically. Cod-liver oil is also used in feeds for poultry and other animals.



cod-liver oil capsules

Cod-liver oil capsules.

Adrian Wold

Chemically, cod-liver oil is a typical fish oil. It is high in omega-3 fatty acids, a valuable aspect in nutrition but one that makes it subject to oxidation, rancidification, and destruction of vitamin A when it is exposed to air. Cod-liver oil is a mixture of glycerides of many fatty acids, predominantly oleic acid, gadoleic acid, and palmitoleic acid. Both vitamin A and vitamin D toxicity can result from the consumption of large amounts of cod-liver oil.

The chief countries producing cod-liver oil are Norway, Japan, Iceland, and

Poland. Fresh cod livers are digested by steam, water, acid, or alkali to produce the oil. Medicinal grades are chilled, and congealed stearic acid and other fatty acids are filtered off.

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