

What is Hake fish?

Hake fish comes from the same family as Cod and Haddock. It is a small fish of averaging 1 to 8 lb in weight, but which has been known to grow up to 60 lbs. Hake can grow up to 1 meter in length and their lifespan can be around 14 years. However, they live into shallow water ranging from 200 to 350 meter depth. Hake species stay in deep sea water during the day and they come to the middle depth during the night. They are actually undiscerning predators which feeds on species found near or on the bottom of the sea. The males and females hake fish look almost the same and are not easily differentiated.

After spawning, the hake eggs float on the surface of the sea and then the larvae develop which later becomes free swimming in the upper levels of the sea. After a certain period of time, the baby hake then migrate to the bottom of the sea which is approximately less than 200meter depth.

A total of 12 hake fish species are known. These are the:

- European hake (*Merluccius merluccius*) found in the Mediterranean and Black sea
- Argentinean hake (*Merluccius hubbsi*), found in Argentina
- Southern hake (*Merluccius australis*), found in Chile
- Offshore hake (*Merluccius albidus*), found in USA
- Benguela hake (*Merluccius poli*), found in South Africa
- Shallow-water hake (*Merluccius capensis*), hake found in Southern Atlantic
- Deep-water hake (*Merluccius paradoxus*) found in Southern Atlantic
- Gayi hake (*Merluccius gayi*), found in North Pacific
- Silver hake (*Merluccius bilienaris*), found in Northwest Atlantic



- North Pacific hake (*Merluccius productus*), found in North Pacific
- Panama hake (*Merluccius angustimanus*), found in Mediterranean Sea
- Senegalese hake (*Merluccius senegalensis*), found in Atlantic coast of western North Africa

Not all of them are viewed as an important aspect for commercial use but the species that have grown really fast and have recorded as really high captures are the Deep-water and Shallow-water hake.

Nutrition

People who are health conscious and who want to avoid cholesterol, preparing hake fillet can be an excellent meal as compared to red meat. Research has shown that red meat contains very high amount of fats and cholesterol whereas the fatty oil found in hake fillet is considered to have good cholesterol and low in fat content.

Hake fillet is an excellent source of protein which makes digestion easier and is also high in Omega-3. Based on the fact that Omega-3 is not manufactured by the body, consumption of hake fillet or any other hake fish products is considered to be an essential component.

There are two type of Omega-3 fatty acids found in hake fish which are: Eicosapentaenoic acid (EPA) and, Docosahexaenoic acid (DHA). Most of the fish we consume contains a majority of 18% of EPA and 12% DHA.

Docosahexaenoic acid (DHA) is a type of fatty acid found in fish such as hake. It is the most abundant omega-3 fatty acid found in the brain and retina of human body. Approximately 40% and 60% of the



Polyunsaturated Fatty Acid are found in the brain and retina respectively. Moreover, DHA has the largest effect on the brain. In the human body, DHA is either present by the diet or through Eicosapentaenoic acid (EPA).

Eicosapentaenoic acid (EPA) is also a type of fatty acid found in fish. In the human body, EPA is obtained by the consumption of hake fish or fish oil. In particular; this fatty acid is believed to have valuable importance in mental conditions such as Schizophrenia and also helps the reduction of developing certain types of cancer.

Scientists have proved that consumption of hake fish at regular interval in a meal decreases the risk of getting heart attack than those who don't. Hake fish contains also a high amount of vitamin B12 and vitamin B6 which are essential for human body.

Over-exploitation of Hake fish

In the early 18th century, fishing vessels from North America and Europe came close to the coastal level of Namibia in order to catch whales and seals. Later on, the German people came and settled in Namibia. Since then, Namibia has become a German protectorate in 1884. Under the German rule, people from European countries started to settle in Namibia for trading and tourism.

Hake supply off Namibia has a history of overexploitation since more than 40 years. Over-exploitation of Hake fish was a major problem because of the late regulations that has been implemented after 1990. Catches were recorded since 1965 by the International Commission for the South East Atlantic fisheries (ICSEAF) but strict rules were not implemented in order to prevent over-exploitation.

The hake stock level is one of the most vital fish species in Namibia. It benefits both catches and high earnings. The hake fishing sector has contributed almost N\$951 million to Namibia GDP in 1997. It has also contributed more than 10% GDP till the year 1998.

However, the only Hake species which is now considered not to be over-fished is Cape hake, which is found in Zone 47-Namibia. This has been stated by the Worldwide Fund. In 2001, the TAC for Hake fish has been

200 000 tonnes as compared to 1990 which was at 60 000 tons. This has shown a successful progression in the Hake fishing industry after 10 years of new management.

Namibia is the only country which has increased its quota for hake fish, resulting from 130,000 tonnes in 2009 to 145,000 tonnes in 2010. Furthermore, the Local Ministry of Fisheries has bounded to very strict rules and regulations regarding the catch of hake. For example, the closed seasons for hake fish lasts for around two months, September and October depending on the level of stock. This rule has been applied in order to ensure that regrowth of hake fish population are being allowed. Supplement restriction that has been imposed is; trawling for Hake is not allowed in less than 200 m depth so as not to affect the natural habitat of non-targeted species and to minimize by-catch.