

# Seafood ... *and eat it*

It's not known as 'brain food' for nothing. When you compare its nutritional value with that of other protein sources, the choice is a no-brainer, writes JOANNA McMILLAN PRICE

**F**ish and other seafood are pretty perfect options for a healthy dinner. All types are high in protein, low in saturated fats and good sources of nutrients such as niacin and other B group vitamins required for energy metabolism. They all also have iodine, an essential component of thyroid hormones; iron, for healthy red blood cells and oxygen transport; zinc, essential for many metabolic processes and a strong immune system; and small quantities of folate, necessary in the production of DNA and new cells in the body.

Red meat is generally hailed as the best source of minerals such as iron, yet seafood is fantastically rich in both iron and zinc, oysters and mussels scoring particularly well. In fact, oysters are the richest food source of zinc, with about 10mg per oyster (the RDI for women is 8mg, for men 14mg), while mussels have more than double the iron content of red meat. This makes them an excellent choice for those who wish to avoid red meat.

Other nutrients found in seafood include potassium, needed to maintain healthy blood pressure, phosphorus, for strong bones and teeth, and magnesium, for proper nerve and muscle function and heart health. For those who avoid dairy products, oysters, prawns and scallops are a valuable source of calcium.

Many people avoid seafood in the belief it's high in cholesterol, but in fact this is only true for prawns, squid (calamari) and fish roe. We also now know a lot more about how dietary factors affect our blood cholesterol levels and cholesterol in our diet is far less important than the total amount of saturated fat.

Soluble fibre in the diet also helps to prevent dietary cholesterol from being

absorbed, so if we eat these foods in the context of a plant-rich, high-fibre diet, they are far less likely to have a detrimental effect. Nevertheless, if you have been diagnosed with high cholesterol, it's prudent to limit your intake of prawns, squid or fish roe to no more than once a week, but you can happily choose from the many other types of seafood on a more regular basis.

Seafood also provides good amounts of omega-3 fats, with the highest levels of these fats found in oily fish, including salmon, trout, mackerel, sardines, tuna, herring and kingfish. We can get the shorter-chain omega-3s in some plant foods, such as linseed and seaweeds, but while these can be elongated in the body to make the longer-chain fats, we have a limited capacity to do so. The best way of ensuring you get the benefit of omega-3s therefore is to eat fish and seafood.

Why are these fats so important? While there is still much to learn, the research so far has shown that long-chain omega-3s can reduce your risk of cardiovascular disease in three ways: by "thinning" the blood, making it less likely that a clot will form and result in a heart attack; by protecting the heart from potentially fatal rhythm disturbances; and by improving the function of the blood vessels, thus reducing blood pressure.

Certainly for those with existing heart disease, consuming more omega-3 fats is one of the most important nutrition changes you can make. A large European study found that in volunteers who had already had one heart attack, those who took an omega-3 supplement reduced their risk of dying from heart disease by 25 per cent.

## Why omega-3s?

Omega 3s have an anti-inflammatory effect in the body and are therefore useful in treating disorders that involve inflammation, such as arthritis, inflammatory bowel disease and skin disorders including psoriasis, eczema and acne.

They are also known to be crucial for brain development and function. In fact, brain tissue from humans and animals has been shown to have very high levels of omega-3s. In babies and young children, omega-3s have been linked to development and IQ — interestingly, breast milk contains these essential fats while formula milks do not unless specifically fortified. Omega-3s continue to be important for the brain into adulthood and have even been shown to be helpful in treating some forms of depression.

When it comes to eyes, recent research suggests omega-3s may protect against macular degeneration, a major cause of blindness worldwide. And they may even assist in promoting fat burning and improving body composition when combined with exercise. This was shown in a recent Australian study where the combination of a fish oil supplement and exercise resulted in a 5 per cent loss of body fat — an effect not seen in either treatment alone.

In boosting your intake of omega-3 fats, it's important to make sure you are not simultaneously taking in too many omega-6 fats, found in seed oils (such as sunflower) and margarines, as these will limit your ability to absorb and use the omega-3s. The ratio of these two families of fats seems to be important and is one of the major changes in modern diets: we now eat far more omega-6 fats and far fewer omega-3s. You can redress the balance in favour of omega-3s by choosing a monounsaturated fat such as olive oil in place of polyunsaturated fats such as sunflower oil and margarine.

**Heart disease associations recommend two fish meals a week, but to reach 1g a day you really need to eat 3-5 fish meals. Canned and packet fish count.**



Perfect in every way: iron- and zinc-rich seafood.

## Did you know...

- 100g of cooked octopus has more than double the iron content of 100g cooked lean beef but has 30 per cent fewer kilojoules (or calories) and only a trace of saturated fat (compared with ~3.5g in lean beef), while both provide similar amounts of protein.
- A dozen oysters is not only an elegant (and romantic) entree choice but provides almost 10 times the daily recommended adult intake of zinc, half that of iron and niacin, about one-third of magnesium needs and almost all the phosphorus. All this for only 550 kilojoules (130 calories) and 4g of fat.
- A dozen mussels provides your total daily requirement of iron, one-third that of zinc, more than one-third of magnesium and one-tenth of vitamin A needs, while providing only 540kJ (130 calories), almost no saturated fat and less than 3g total fat.
- Half a medium-sized lobster provides only 630 kilojoules (150 calories), just over 1g of fat with almost no saturated fat while supplying 32g protein. Compare this to a medium-sized chicken breast (skin removed) with 1100 kilojoules (260 calories), ~11g of fat or which ~3g is saturated, and only a few more grams of protein. The lobster also provides seven times the iron and more than double the zinc of the chicken breast.

### How much omega-3?

How much omega-3 you need in your diet really depends on the results you want. If you have an inflammatory condition, you probably need to take a supplement unless you're prepared to eat a lot of fish and seafood. But be careful with supplements as too much omega-3 can cause bleeding problems. Always tell your doctor about any supplements you take, as medications can interact with seemingly innocuous dietary supplements. For this reason, the FDA in the US recommends consumers do not exceed more than a total of 3g per day, with no more than 2g per day from a dietary supplement.

For the rest of us just wanting a healthy diet, experts have yet to reach a consensus on how much omega-3 we need. The best evidence points towards benefits of consuming 1-2g per day, a target most people fail to meet.

Most heart disease associations around the world recommend at least two fish meals a

week, but to reach 1g a day you really need to eat 3-5 fish meals. This might sound a lot, but remember that canned and packet fish also count, making it not so hard to achieve.

### Mercury in fish

One concern with increasing fish consumption is the mercury content. The increase in levels of mercury in our waters has occurred through industrial pollution, with mercury building up in the flesh of certain fish. All fish contain some traces of mercury but it's the larger fish at the top of the food chain or those with longer lifespans that accumulate higher levels.

The greatest risk is to the unborn child, infants and young children. In babies, high exposure to mercury seems to affect attention, memory and learning, albeit subtly. For this reason, women planning a pregnancy, those who are pregnant and young children should be careful choosing which fish to consume

on a regular basis. (Very little mercury is transferred in breast milk.) In adults it takes a lot more mercury to cause symptoms — tingling in the lips, fingers and toes is usually the first sign — but is an extremely unlikely result of eating fish within health guidelines.

Fortunately, Food Standards Australia New Zealand (FSANZ) has found that most fish caught and sold in Australia are low in mercury. Fish found to have the highest levels were billfish (swordfish, broadbill and marlin) and shark, followed by orange roughy (sometimes called sea perch) and catfish. FSANZ makes specific recommendations for limiting these fish, particularly for anyone who is pregnant or planning a pregnancy and young children, but stresses that fears over mercury content of fish should not outweigh the health benefits of consuming more fish. ■

For more information, visit the FSANZ website at [www.foodstandards.gov.au](http://www.foodstandards.gov.au).