DOESITWORK?

Omega-3 fatty acid

A DECADE ago, few of us would have known where to find an omega-3 fatty acid if our lives had depended on it. Today, you could be forgiven for thinking that your very existence depends on your intake of omega-3s. Fatty acids have been credited with improving the heart, brain, skin, foetus, immune system and joints. But the science is not always strong. This week, Lord Winston has come under fire from nutrition experts for making unsubstantiated claims in an advert for a "clever milk" containing added omega-3.

So what are these fatty acids?

Fatty acid molecules, found in every cell in the body, must be obtained from food as we cannot manufacture them ourselves. "Omega-3 and omega-6 fatty acids have extremely important roles in maintaining the correct structure of cell membranes throughout the body," says Prof Basant Puri of Imperial College London. "Some form the building blocks for a huge number of compounds involved in regulating blood clotting, body temperature, blood pressure, reproduction and immune function." Western diets tend to contain too much omega-6 and insufficient omega-3, the richest source of which is oily fish.

What if we don't get enough?

Studies have shown that increased consumption of fish oil can reduce the risk of cardiovascular disease. The other major area of research is in brain function. In a small trial of patients with Alzheimer's disease carried out by Prof Puri, those given an omega-3 supplement for six months showed improved brain cell activity. Research for the Children of the Nineties project showed that women who eat oily fish regularly during pregnancy tend to have children with better vision, behaviour, cognitive development and communication skills.

However the science is not regarded as conclusive by all. The Food Standards Agency says: "Evidence on the cognitive benefits of the omega-3 fatty acids is uncertain." Dairy Crest, makers of St Ivel Advance – which Lord Winston is promoting – did not seek clearance for its claim that omega-3s "may enhance a child's concentration and learning". Prof Mike Lean, a member of the Joint Health Claims Initiative (JHCI) expert committee and head of the department of human nutrition at Glasgow University says: "There have only been a couple of studies showing improvements in concentration with omega-3 supplementation. I find their results implausible and other studies have not produced the same dramatic effects."

However, the JHCI ruled that omega-3s can help heart health.

How should we get our omega-3?

"You should get as much omega-3 as you can from dietary sources," says Dr Alex Richardson, a senior research fellow at Oxford University, who runs the independent website Food and Behaviour Research (www.fabresearch.org). Experts recommend half a gram of omega-3 a day. The best way to get this is by eating oily fish, according to the FSA. But because of concerns about pollutants such as PCBs, dioxins, cadmium and lead, it advises that, while men, boys and post-menopausal women can safely eat up to four portions a week, women of childbearing age and below should stick to two.

Foods high in the fatty acid – such as St Ivel Advance milk and Columbus eggs, which come from chickens fed a vegetarian diet – are an alternative source of omega-3s. Prof Puri believes that milk with added omega-3s may be useful for those who do not eat much oily fish, but Prof Lean insists that the many benefits of fish cannot be reproduced "by sucking out the omega-3s and putting them into something else".

What about supplements?

People in Britain eat, on average, only a third of a portion of fish a week, and many are turning to supplements. Last year, they bought £114 million of fish oil supplements. That is likely to nearly double over the next five years, according to market analysts Euromonitor.

Attention is focusing on which supplements bring most benefits. "We need more research, and the answer may vary depending on the purpose for which you are taking the supplement," says Dr Richardson. The key omega-3s are DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid). Both have been found to benefit the heart, but EPA seems to be the most effective in stimulating brain function. Cod liver oil is not a rich source of these fatty acids, and if you try to obtain high levels of DHA and EPA from cod liver oil, you risk ingesting too much vitamin A.

Dr Richardson advocates a daily intake of half a gram of EPA, and favours supplements containing at least five parts EPA to one part DHA: she uses MorEPA capsules in her research. Prof Puri believes DHA brings no added benefits and may inhibit some benefits of EPA. He favours VegEPA capsules, which contain EPA and evening primrose oil.

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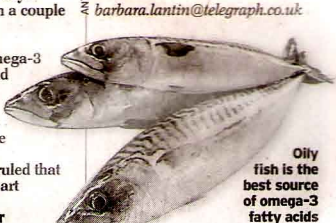

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Oily fish is the best source of omega-3 fatty acids