

HEALTHWATCH

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Algae is good oil for firm

Source of Omega-3

THE loss of world fish stocks could be one Brisbane company's gain as it works to produce an alternative source of the omega-3 fatty acids traditionally found in seafood.

Oponics, based in Brisbane's south, is trying to capitalise on the booming demand for omega-3 by creating a sustainable source from algae.

"Our plan is to apply an aquaponics process to use the effluent from fish tanks to fertilise the growth of algae," medical microbiologist Dr Graeme Barnett said.

"Though it is not a traditional source, algae produces a wide range of different oils or lipids, including omega-3 and is currently being used as a source in infant formula."

Fish oil, oily fish and other fish and seafood are the main sources of long chain omega-3s, with eggs and lean red meat providing smaller amounts.

At least 70 per cent of the population is deficient in the fatty acid necessary for effective heart and brain function.

There are proven health benefits in the prevention of heart disease and diabetes, as well as significant evidence a deficiency of the fatty acid can lead to depression. A US study suggests low levels of DHA omega-3 oil in human diets leads to higher risk of suicide.

"Oils and fatty acids are in every cell membrane and are necessary for the efficient operation of the membrane," Dr Barnett said.

"Nutrients and waste pass through and out of the membrane and if it is not functioning properly then brain and heart cells won't be working efficiently. Without it we are in serious trouble."

The CSIRO is predicting that the world's fish stocks will be depleted within 40 years.

But global demand for omega-3s is expected to rapidly increase from 85,000 tonnes in 2009 to 200,000 tonnes by 2015.

US retail sales of food and drink products enriched with omega-3 rose 11 per cent in 2010 to approach the \$4 billion mark and is expected to hit \$7 billion by 2015.

Earlier this month, Australia's drug regulator approved the first prescription-only omega-3 medicine.

Dr Barnett said many people had now turned to supplements because they were unable to eat enough fish to satisfy their diet.

Oponics Limited was founded as a private company in 2009 by Geoff Wilson and Dr Barnett and operates out of the Start Innovation Centre at the Brisbane Technology Park.