

## Omega-6 is in the shadow of omega-3, group says

12/02/2008- **The potential of omega-6 in the role of improving behaviour is overshadowed by the better-known omega-3 fatty acids, a research facility has said.**

The role of fatty acids in boosting mental health was given a shot in the arm earlier this month. A report by the Associate Parliamentary Food and Health Forum, which looked at the links between diet and behaviour, put forward a raft of suggestions to the UK Government and health agencies to boost research and funding into the role of essential fatty acids on the mind.

Adam Kelliher, chief executive at Equateq, supports the report's standpoint - but says omega-6 misses out as more research is focussed on omega-3. He told NutraIngredients.com: "*There is a real need for more work, now that the current published papers are showing that there is a real observable mechanism between omega oil intake, and behaviour.*"

*"It is certain that long chain fatty acids generally benefit brain function, but there are many key unanswered questions, such as: Why do some sub-groups respond so much more than others? What is the optimum combination of fatty acids, ostensibly between omega-3 DHA and EPA? Does omega-6 GLA enhance the offering? Are natural oils better than synthetic? What is the optimum dose for various age groups? Does a good diet bring the same benefits as have been seen from concentrated delivery of fatty acids through supplementation?"*

He said larger trials are needed to try and answer some of these questions.

Indeed, a trial is due to start in UK young offender's institutes to test whether an increased intake of vitamins, minerals and fatty acids helps cut violent behaviour.

The report looked at the role of diet, particularly fatty acids, and how it affected schizophrenia, general mental health, depression, self-harm, and violent behaviour.

The forum noted that arachidonic acid (AA) is very important for the brain and heart, and there is an abundance of this omega-6 fatty acid in modern diets.

Kelliher said: "*My view is that omega-6 has a very powerful role in the fatty acid mechanism that is now misunderstood amidst all the hoopla about the wonders of omega-3. The crude view is that omega-3 good, omega-6 bad and variously accused of being inflammatory, carcinogenic and the root of all physical ailments in the Western world.*"

*"The truth is that we do have too much omega-6 in the typical diet, but this is mostly Linoleic Acid, the 'parent' fatty acid at the top of the metabolic pathway. What we are generally deficient in is GLA and its direct metabolite DGLA. The latter has clear anti-inflammatory roles, and if married up with a matching mechanism from omega-3 EPA, then bingo, you are keeping all the inflammatory actions in check."*

He said the key message is to get the balance of fatty acids right, as well as taking the right kind of omega-6.

### Misunderstood

Studies on omega-6 have come up with mixed results. Last year a study by researchers from Ohio State University said that improving the ratio of omega-3 to omega-6 in the diet may improve mood and reduce depression. Scientists took blood samples from 43 older adults (average age 67) and calculated polyunsaturated fatty acids (PUFA) levels and compared these to levels of markers of inflammation, and found that people with high ratios of omega-6 to omega-3 were more likely to suffer depression and inflammatory diseases.

Research in 2005 found that omega-6 fatty acids promote the growth of prostate tumour cells in the laboratory, according to US researchers, who say they have also identified a mechanism for this action.

The scientists suggest that a rapid increase in the amount of omega-6 fatty acids in the western

diet could have caused the rise in incidence of prostate cancer in recent years.

Their findings are not the first to connect this group of fatty acids to cancer. Omega-6 fats have also been linked to the development of breast cancer, with a Spanish team reporting that the fats enhanced expression of certain genes that accelerate the disease.