

Omega 3 and 6 Dietary Content Associated to Inflammatory Cytokines Biomarkers

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The nutritional benefits of whole fish and fish products as functional foods and the potential of fish as a source of bioactive components are well known. In fact, the consumption of fish can have a considerable impact on dietary-derived health benefits such as on the control of several clinical aspects of coronary heart disease (CHD). Omega-3 PUFAs found in some fish species is strongly associated with protection from CHD. Recent reports indicate potential for fish and other marine foods to reduce inflammatory disorders and cancer. However, the optimal content and dietary ratio are not fully understood neither the protection against the inflammatory status. Twenty seven wistar rats were divided into three groups (nine each group) and submitted to three different diets containing omega 3 and 6 in different amounts and ratios during 3 months. Blood samples were collected at the experiment's end for lab work for proinflammatory biomarkers such as IL6, TNF α , Leptin and Insulin. All plasma biomarkers concentration is consistently correlated to the amount of dietary concentration of omega 3 and 6 content and ratio. Moreover we have found an optimum omega 3/omega 6 ratio associated to a protective anti-inflammatory profile. Furthermore, plasma insulin best concentration is associated to a 0.3 omega3/omega 6 ratio in the diet, supporting previous finding.