

D03 The effect of omega 3 fatty acid and bioactive peptide supplementation on salivary interleukin-6 (IL-6) level among Malaysian footballers – A secondary analysis

Lim WL, Lim JZY, Tan SS, Chong MHZ and Shyam S

Division of Nutrition and Dietetics, School of Health Sciences, International Medical University, Kuala Lumpur, Malaysia

Inflammation is an immune system's protective strategy to eliminate harmful stimuli and starts the healing process in the human body. Excessive stress, inflammation from damaged tissues, and free radical and oxidative stress cause the immune cell to release Interleukin 6 (IL-6) and reduce an athlete's sports performance. The anti-oxidative and anti-inflammatory effects of omega-3 fatty acid and bioactive peptide(peptAlde) may potentially suppress IL-6 secretion as a biomarker to indicate changes in the inflammation level from the supplementation to assist athletes in handling stress to achieve optimal sports performance. To assess the effect of omega-3 fatty acid and bioactive peptide(peptAlde) supplementation on salivary and serum IL-6 levels among Malaysian footballers. Secondary data analysis from a randomised control trial. 52 healthy Malaysian footballers aged between 18 to 21 years old were randomly allocated into four treatment arms: placebo, BP, n-3 and BP + n-3. The archival saliva and serum samples during baseline, fourth week and eighth week of supplementation are then analyzed by human IL-6 ELISA Kit high sensitivity (ab46042) from the previous study to determine the IL-6 concentration level of each subject. Next, the data was then analysed using SPSS version 26.0 to perform statistical analysis. There is an effect on the 4th and 8th weeks of supplementation (Placebo, omega-3 fatty acid, bioactive peptide (peptAlde), and omega 3 fatty acid + bioactive peptide) on the salivary IL-6 level among Malaysian footballers. However, there is no correlation between salivary IL-6 levels and serum IL-6 levels among Malaysian footballers. The bioactive peptide supplementation is useful to suppress the salivary IL-6 level in the body. This is because it is inhibiting the angiotensin-converting enzyme (ACE) to lower the blood pressure, neutralizing and scavenging free radicals to reduce oxidative stress, anti-inflammatory properties, and improving mineral absorption in one's body.