

Fish oil supplementation: applications in health

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In this presentation a brief background is provided on the wealth of research that has been conducted on EPA/DHA or other omega-3 fatty acids and their potential health implications. However, in much of this research there are many confounding factors that often make comparisons between studies difficult (dose, type of supplement, EPA/DHA mix, duration of supplementation, animal vs human studies etc) and as such many positive findings are balanced by neutral or negative findings in the literature. Thus, despite some clear mechanistic insights many meta-analyses do not demonstrate any clear benefits of omega-3 on cardiovascular or metabolic health. The potential for omega-3 to impact upon metabolic health was then explored by examining the time course of incorporation of fatty acids into skeletal muscle tissue and possible mechanisms by which omega-3 could ameliorate the insulin resistance induced by Western diets. The final part of the presentation focussed on an aspect of immune function that has not been studied to date in the omega-3 literature (T-lymphocyte activation, mobilisation, and state of differentiation). In summary, while omega-3 fatty acids have known anti-inflammatory actions their impact upon metabolic health markers and immune cell differentiation require further exploration.

Hydration breakout session summary

Following an overview of the regulation of body fluid balance (thirst, gastric emptying, intestinal transport, fluid losses and behavioural factors) the session moved on to methods for assessing hydration status, when to assess hydration status, and why hydration monitoring may be important (potential health and performance impacts). Groups then considered a number of questions related to hydration in daily living, during exercise and recovery from exercise before moving on to explore the optimal composition of hydration beverages and possible differences in requirements based on gender and age.