

Follow the Chisum Fitness Trail – Diet & Inflammation

RE: Fats and Inflammation

As was discussed in previous Trail Articles, high protein and fat diets have been directly linked to increased risk of CVD, through accelerated vascular inflammation. In this issue, diets rich in fats will be explored.

Blackburn (1992. Proc. Soc. Exp. Biol. Med.) was one of the first researchers to publish information concerning the association between diet and acute inflammatory responses. This author exposed the need to pursue this precise data collection, due to the expanded cost for patient care, and poor prognosis, in these patients.

Blackburn and Calder (1997. Adv. Enzyme Regul.) reported the connection between eicosanoid production as a modifier of immune inflammatory response. Calder was one of the first to note that when a certain lipid found containing n-3 PUFAs, both the amount, and the specific type of eicosanoids generated, reduced the inflammation.

Obesity has a dominant negative effect on vascular inflammation. The greater percentage of body fatness and the length of time associated with this condition, are determining factors in the risks.

Bray et al. (2002. J. Nutr.) published a review of professional articles on fat intake and obesity. This subject is controversial in nature, as many studies have supported different conclusions concerning this subject. The authors found that it was not necessarily the amount of fat, as many studies have shown that fat has been reduced in the American Diet, yet obesity among the American public is rising each year.

The main culprit seems to be how much trans-fatty acids are eaten. This does not eliminate the need to assess the total fat content, but inserts trans-fatty acids into the equation.

In a French study, (2002. J. Nutr.) Mekki et al. studied the effects three types of fats had upon healthy young men right after eating lunch. The three were butter, olive oil, and sunflower oil. Before you proceed, take a few seconds and guess which would have the worst effect upon plasma fat concentration.....drum roll.....

If you picked olive oil.....you were wrong. If you picked butter.....you were wrong also. By a process of elimination, sunflower oil elevated the postprandial (after lunch) plasma lipid level and the accumulation of serum triglycerides, nonesterified fatty acids, and free and esterified cholesterol. Each of these elevates the risk for inflammation and CVD.

In conclusion: It is critical that both the total fat and trans-fatty acid percentages, within the diet, be altered to increase the health of all Americans. It appears that the trans-fatty acids may have a greater risk potential than many of the other forms of consumed fats.

If you have any questions, please feel free to contact me.

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