Follow the Chisum Fitness Trail – Diet

RE: Protein Rich Diets and Inflammation

Last week's article provided a brief overview of the current research concerning vascular inflammation and cardiovascular risk. This installment will provide information as to the problems associated with dietary consumption of high protein.

This particular segment will focus only on protein consumption. In the following weeks, there will be space dedicated to fats, carbohydrates, Vitamins, etc.

Fleming (2000. Angiology) studied 26 people, for one year. Ten subjects selected the high protein diet (HPG). These individuals chose this diet as they believed it would provide a healthier option. The remaining 16 were professionally evaluated and instructed upon moderate modification options (TG).

Diagnostic tests, such as MPI and ECHO, were preformed at the beginning and end point of the study. Nine independent variables were defined and evaluated. They included: Lipoprotein (a), homocysteine, total cholesterol, high-density lipoprotein cholesterol, low-density lipoprotein cholesterol, very low-density lipoprotein cholesterol, fibrinogen, C-reactive protein (CRP), and triglycerides.

Regression of each independent variable and upon the extent and severity of Coronary Artery Disease (CAD), within the TG, was noted using MPI. Both MPI and ECHO found a 43.75% recovery of viable of myocardium (healthy heart tissue) in this group.

Each of the independent variables for the HPG was statistically worse. Three showed marked increases. They were fibrinogen (14%), CRP (61%), and Lipoprotein (a) (106%). The overall cumulative progression of the severity and extent of CAD was 39.7%.

Following this study, each of the HPG subjects were afforded the opportunity to change to the TG. Those who made this change were able to regress both with the extent and severity of their CAD, and myocardial function.

A follow up of those within this group, which declined this treatment alteration of reducing the dietary protein and educational components, was initiated. Every independent variable had worsened, and their CAD had progressed.

From the accumulated data presented, in both the original and follow up studies, the following statement was inserted. "These results would suggest that high-protein diets may precipitate progression of CAD through increases in lipid deposition and inflammatory and coagulation pathways."

Jenkins et al. (2002. Metabolism) sought to determine the effects high and low isoflavone soy diets had upon inflammation. There was a marked difference between the genders.

Women had a significantly higher Interleukin-6 (Il-6) concentration than the male subjects. This was consistent with both controlled and unadjusted data.

This information has both a positive and negative aspect. This may explain the lower incidence of certain cancers within endogenous peoples where soy-based diets are common. Conversely, the higher levels of Il-6 is directly linked with increased risk for cardiovascular disease (CVD) and symptoms with certain immune conditions such as endometriosis, lupus, fibromyalgia, etc.

An Israeli study (Blum et al. 2003. Am. Heart J.) studied postmenopausal women with moderately high levels of cholesterol. Each woman was given 25 grams of isolated soy protein for a total of 6 weeks. This research did not find any negative alterations within the inflammatory markers.

Meat consumption has increased dramatically since 1968 in the United States and most European countries. Grant (2000. Br. J. Nutr.) employed a multi-country analysis of the amount of meat eaten and the increase in inflammation within those diagnosed with Rheumatoid Arthritis (RA).

The highest statistical correlation was found between the fat within meat and inflammation. Very close to this marker were those of the meat and offal (meat leftovers used in sausages, hot dogs, etc).

Grant acknowledged the association between both fats and meat had upon the inflammation within RA. Within the conclusion, it was noted that certain chemicals within the meat (nitrates and iron) may also play a role in this condition.

Marketed diets high in protein are propertied to have a pronounced positive effect upon those suffering with diabetes. In the 1999 Insulin Resistance Atherosclerosis Study (IRAS), 1560 diagnosed diabetics and prediabetics were studied. The C-reactive protein (CRP), which is tied to inflammation and CV risk, rose proportionally to the plasma glucose. This accounted for a 2-fold higher level than the baseline reading for those with impaired glucose, and 3.2 times for diabetics.

This was one of the landmark studies in the role inflammation has upon CV risk. From this data, many research projects were initiated to define the actions involved.

In Conclusion: This new data may indicate an elevated risk for CVD, and aggravation with diabetes and RA, in those individuals consuming a protein rich diet.

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

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