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The Non-Medicated Life: Benefits of a Mediterranean Diet and Lifestyle, Part One

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*Originally published in Adirondack Sports & Fitness Magazine (www.ADKSportsFitness.com)

This is the twentieth in a series on optimal diet and lifestyle to help prevent disease and responsibly avoid an over reliance on medications. This complementary approach is based in the medical evidence of the most successful research trials and the best science available. Any planned change in diet, exercise or treatment should be discussed with and approved by your personal physician before implementation. Consultation with a registered dietitian is strongly advised.

Medicines are a mainstay of American life and the healthcare system not only because they are perceived to work by the individual taking them, but also because their benefit may be shown by the objective assessment of scientific study. Clinical research trials have shown that some of the medicines of western science may reduce the risk of heart attacks, strokes and cardiovascular death.

In the first nineteen installments of The Non-Medicated Life, informed diet and lifestyle have been shown to accomplish naturally for the majority of individuals, many, if not most of the benefits of medications. This is especially true of a Mediterranean diet and lifestyle. Indeed, while the powerful statin drugs of western science may reduce cholesterol and arterial inflammation and thus the risk of fatal and nonfatal heart attack by 30 to 40 percent, a high omega-3 Mediterranean diet has been shown in a landmark clinical trial to reduce the risk by an astonishing 70 percent.

While the data in support of a Mediterranean diet and lifestyle is most robust for cardiovascular prevention, it also supports the prevention of other chronic diseases as well as certain cancers. The data includes epidemiological or population based studies, observational prospective cohort studies, risk factor reduction studies, as well as clinical trials. A more thorough examination of what constitutes a Mediterranean diet and lifestyle

and the possible mechanisms by which it may work is in order.

The original data on the benefits of a Mediterranean diet and lifestyle came from epidemiological studies. Beginning in 1958, research legend Dr. Ancel Keys began measuring the cholesterol level and health outcome of over 12,000 subjects in 16 centers in Europe, the United States and Japan. The “Seven Countries Study” conducted over more than 25 years established a direct correlation between serum cholesterol and coronary heart disease mortality and suggested that differences in dietary consumption of fat and cholesterol accounted for the differential rates of coronary heart disease seen in different countries. Mediterranean countries were shown to have especially low rates of coronary disease. Other studies have suggested lower rates of both coronary heart disease, cancer and certain chronic diseases in the countries which line the Mediterranean basin.

While Mediterranean countries may have lower rates of heart disease, what constitutes a Mediterranean diet is not always clear. Superficially at least the cuisines seem quite unlike as they include at least 16 countries with diverse economic, cultural and ethnic differences. On closer examination, however, Mediterranean countries share certain dietary
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characteristics which, in turn, are imposed by a similar climate, geography and resultant flora and fauna. Thus, because olive trees naturally abound in the Mediterranean basin and land for dairy cows and cattle is less available, the cuisines established olive oil as the major source of fat calories rather than the saturated fats in red meat. This was not a choice but was a necessity imposed simply by what was available.

Olive oil is a predominately omega-9 monounsaturated fat and contains very little saturated fat. For the reason described above, red meat is eaten with a reduced frequency and this together with the low saturated fat in olive oil combine to reduce the saturated fat intake substantially without reducing the total dietary fat. This is important for several reasons. First, saturated fat is used by the body to make the “bad cholesterol” or LDL. It has been proven that the higher the LDL the greater the risk for heart disease. Moreover, elevated levels of “good cholesterol” or HDL result when a higher total fat intake is maintained.

Thus, by using predominantly olive oil as a fat source LDL is minimized and HDL is maximized. The benefit probably results also from the substitution of omega-9 fats for saturated fats and would not result from the addition of omega-9 to a diet high or even moderately high in saturated or trans-fat. Additionally, olive oil contains a multitude of naturally occurring lipophilic compounds, alpha-tocopherol and phenolic compounds which have strong anti-oxidant and anti-inflammatory properties which may contribute to the benefit.

The beneficial effects of a Mediterranean diet, however, are not simply due to the use of olive oil. The diet is also rich in unrefined grains, fresh vegetables, legumes, tree nuts and seafood, complemented with lesser amounts of chicken and dairy products. Red meat is eaten very infrequently. Tree nuts contain omega-3 fats, as do fish and if one looks among the Mediterranean countries for the lowest rates of heart disease one finds heart disease rates lowest in countries in which omega-3 fats are highest.

Indeed, the lowest rate of coronary heart disease in the Mediterranean countries is seen on the island of Crete whose population also has the highest levels of omega-3 fat in their blood. The diet of the people of Crete is rich in black walnuts, fish and a vegetable called purslane all of which contain omega-3 fats. Could part of the benefit of a Mediterranean diet also relate to an increased intake of omega-3 fats?

To answer this question, a randomized, prospective clinical trial of a Mediterranean diet high in plant based omega-3 fat was conducted in France. The Lyon Diet Heart Study as it was called used the basic Mediterranean diet described above but also employed canola oil margarine. Canola oil, like olive oil, is high in omega-9 monounsaturated fat, but unlike olive canola is also high in omega-3 fat in the form of alpha-linolenic fatty acid. When animals, fish or humans eat plant based omega-3 fat, it is converted to eicosapentaenoic fatty acid which some may recognize as the main omega-3 constituent of fatty fish oil.

The Lyon Diet Heart Study control group ate a “prudent” western diet. The intervention group consumed a high omega-3 Mediterranean diet. After five years there was a reduction in fatal and non-fatal heart attack of 70 percent in the intervention group as compared to the control group. Moreover, analysis of the fats in the blood of intervention participants showed high levels of omega-3 in the same range as seen in individuals in Crete. An outcome analysis showed that most of the risk reduction could be attributed to a reduction in arrhythmic death which occurs when the heart beats with a very rapid and abnormal rhythm which does not allow it to effectively pump blood. Fully one-third of all heart attack death worldwide is caused by arrhythmic death.

In The Benefits of the Mediterranean Diet and Lifestyle, Part One, omega-9 monounsaturated fats such as olive oil as well as omega-3 fats such as that found in fish, tree nuts and canola oil have been shown have a strong association

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with the lower cardiovascular risk seen in Mediterranean countries. Such “good” fats begin to define the essential makeup of a Mediterranean diet.

In Part Two, a more complete discussion of the possible mechanisms by which these “good” fats reduce not only cardiovascular risk but also cancer risk and how they should be used appropriately to optimize risk reduction will be addressed. In this way, a Mediterranean diet and lifestyle will be shown to offer a viable and pleasurable alternative to the proverbial bottle of pills to manage one of our most significant health problems.

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