Diet and Mortality 3-10-2010
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For at least two centuries one of the most persistent health quests was finding the foods that gave the longest life with quality. Nearly all the famous and infamous studies failed to focus on all-cause mortality, including many on the "Mediterranean Diet".

Instead, most concentrate on heart deaths of the type normally called "heart disease", which means atherosclerosis of the coronary arteries that leads to heart attacks. Other forms of heart deaths may or may not be included. There is a common belief that heart disease alone is a majority cause of death, but it is not.

According to the Centers for Disease Control (CDC), there were 2,426,264 deaths in the USA in 2006. Of these, 26% were heart deaths and 23% were cancer deaths. This means that only 49% of deaths were from these two most major causes.

This explains why the Adventist work showed so little effect of diet on all-cause mortality. In The Adventist Health Study (see below) heart deaths were 26%, showing that it was representative of USA heart deaths overall.

The greatest example of a "food" that prevents heart attacks yet increases mortality is alcohol, as I describe in Myth 5 of Malignant Medical Myths, 2006. While heart deaths are prevented, deaths from cancer and accidents go up more, so, as I wrote, alcohol is not a health food.

The French, Spanish, Indian and Israeli Paradoxes are all based on heart deaths, not mortality. The first three are considered paradoxes because heavy or increasing consumption of cholesterol and saturated fat did not shorten lifespan.

One of the few studies that counted all-cause mortality was called The Adventist Health Study.
A paper by Gary E. Fraser and David J. Shavlik, School of Public Health, Loma Linda University, California in Arch Int Med 1997;157:2249-2258 was the source of the following findings.

Non-Hispanic white Seventh-Day Adventists from California of ages greater than or equal to 24 were contacted. Years of ages greater than or equal to 84 were followed for about 12 years to accumulate 11,828 person-years.

There were 1,387 deaths of which 364 were called "CHD" (coronary heart disease) deaths (26%). Sticking with all-cause mortality, I will show which of the 65 food items surveyed seemed to matter.

I apologize for the use of relative risks (RR), but there were enough deaths in these oldest old subjects that these results are clinically significant. Also, serving sizes were not able to be measured, so only the number of servings per day, week, etc., are given.

Nuts: Compared with a RR = 1.00 for less than 1 serving per day, 1-4 servings of nuts per day gave RR = 0.82 and 5 or more servings per day gave RR = 0.76 in men and women combined. Both were statistically significant. Nuts were the most beneficial food in this study.

The authors gave conventional reasons knowing they were on shaky ground. They did not consider that nuts contain copper (II) ion, a good heart nutrient, according to Leslie Klevay of the United States Department of Agriculture (USDA). (See Myth 2 MMM).

Fish: Compared with a RR = 1.00 for less than 1 serving of fish per week, 1 or more servings per week gave RR = 1.11 in both men and women, but with inadequate statistical significance.

Fruit: Compared with less than 1 serving per day, 1 per day and 2 or more servings of fruit per day lowered RR to 0.78, but without significance. This does not support 2-4 servings of fruit per day as in the USDA Food Pyramid.

Green Salad: Adventists eat a lot of salad, yet compared with fewer than 3 servings per week (RR=1.00), 3-6 servings of green salad per week and 1 or more servings per day did not significantly change RR.

Beans: Compared with less than 1 serving per week, beans at 1-2 or 3 or more servings per week made little difference.

Bread Type: Compared with whole wheat bread at RR=1.00, eating white bread raised the RR to 1.22, but this was barely significant. Too bad a "no bread" category was not checked.

Doughnuts: Compared with "never" with RR=1.00, less than 1 per week made no difference, but 1 or more doughnuts per week raised RR to 1.28 in both sexes combined, and was significant. This was the most dangerous food in this study.

Sweet Desserts: Surprisingly there was no significant difference between less than 1, 1-2 and 3 or more sweet desserts per week even though diabetes was a serious threat, with RR =1.59 and highly significant.

Cheese: Compared with RR=1.00 at less than 1 serving per week, 1-2 servings of cheese per week gave RR=1.0 and 3 servings per week gave RR=1.23, but neither was close to significant.

Meat, Fish and Poultry combined: Compared with less than 1 serving per month!, 1-2 servings per month and 1-4 servings of meat, fish and poultry per week had no significant result, while 5 or more servings per week gave RR=1.19 with marginal significance.

Beef: Compared with RR=1.00 for never, less than 3 servings per week had no real

effect, but 4 or more servings of beef per week gave RR=1.22, but was barely significant. As with all the food items, serving sizes were not sought.

Diabetes: Of non-food items, diabetes at RR=1.59 as above was the most dangerous.

Body Mass Index (BMI): Compared with a BMI of less than 21.1, the bottom quartile, up to a BMI of more than 25.8 in the other quartiles all showed a lower RR, opposite to outdated claims for low BMI, but none was significant. Other work with wider limits shows a U-shaped relationship with best results at a BMI of 20-30.

Hypertension: Compared with those without hypertension RR=1.00 subjects told by a physician that they had hypertension but were not taking drugs for it had RR=1.03 (not significant) and those taking drugs for it had RR=1.56 (highly significant, 95% confidence interval of 1.18-2.05). This is excellent independent evidence against the inflated claims for such drugs. See Myth 4 in MMM.

It is amazing what a careful study with no industry support unearths (it was all National Institutes of Health funding here) and how damaging it is to common claims about diet and mortality. Again, beware any study that focuses on single-cause death or disability without the all-important all-cause mortality.

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