Article 31*

The Non-Medicated Life: The Rational Avoidance of Medication

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Editor's Note: This is the 31st in a series on optimal diet and lifestyle to help prevent and treat heart disease. Any planned change in diet, exercise or treatment should be discussed with and approved by your personal physician before implementation. The help of a registered dietitian in the implementation of dietary changes is strongly recommended.

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 29 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. But this begs the question: how can one be sure that diet and lifestyle can indeed, rationally, be used in place of medication? Are there tests that can be used to help make this determination?

A decision to use medication is always based on an assessment of risk and benefit. Will the potential risk of medication be outweighed by the potential benefit? This assessment, in turn, is based on first determining the individual's estimated risk without medication.

For example, the National Cholesterol Education Program guideline for physicians uses a formula to calculate an individual's global risk for heart attack and/or stroke over a ten-year period. Called the Framingham Risk Score it is based on the Framingham Heart Study, an observational evaluation of thousands of patients over many years in Framingham, Mass. Patients would come in yearly to have their risk factors recorded and the state of their health determined. No treatment was rendered and patients were followed yearly until they had a heart attack or stroke or died from other causes. A data base of permutations and combinations of risk factors was constructed and correlated to outcome.

Today the Framingham Risk Score allows outcome to be predicted on the basis of risk factors such as age and sex, the level of total cholesterol, the level of HDL or good cholesterol, smoking status and blood pressure. Doctors will record their patient's risk factors, and then using the score calculations, will find in the Framingham database a group of participants with the same risk factors.

The score determines the average risk over a ten-year period for the group of original participants, whose risk factors match those of the doctor's patient, and their average risk is assumed to be equal to the patient's. If an individual has a one- to nine-percent ten-year risk, the risk is low. A ten- to 19-percent ten-year risk is moderate. And 20-plus percent ten-year risk is high or what is called a coronary artery disease risk equivalent.

Once the risk for no medication is established, a rational consideration of medication use or non-use may ensue. For example, a two-percent Framingham ten-year risk would require the LDL to be less than 160 milligrams per deciliter. If one could achieve this with diet and lifestyle alone, medication could be avoided. Similarly, a ten-percent Framingham ten-year risk would require the LDL to be less than 130 milligrams per deciliter, and a 20-percent Framingham ten-year risk would require an LDL less than 100 milligrams per deciliter. If diet and lifestyle could achieve these goals, medication can rationally be avoided.

Sometimes, however, the Framingham Risk Score is at odds with other information. Framingham Risk Score data does not include family history. This is despite the

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fact that physicians know a family history of premature heart disease is the strongest risk factor for predicting premature disease in other family members.

When there is a disagreement between Framingham ten-year risk and family history a more direct test of cardiovascular risk is required – one that actually looks for the physical presence of cholesterol deposits in the wall of the heart arteries. Such a test is called a Coronary Artery Calcium score.

The Coronary Artery Calcium score is determined by obtaining a CAT scan of the heart itself. This X-ray picture of the heart can show the presence or absence of calcium in the walls of the heart arteries. Calcium should not be present in the walls of arteries and its presence indicates chronic inflammation caused by cholesterol deposits called plaques. The absence of calcium in the walls of arteries in the heart therefore strongly suggests that no plaque is present. The absence of plaque would suggest that that whatever the cholesterol level in the blood, none of that cholesterol was penetrating into the artery wall.

The absence of demonstrable plaque also suggests that the risk of a heart attack is remote. Under such circumstances, the use of medication to lower cholesterol would not be supported by a risk-benefit analysis, and a patients desire to avoid medication could be rationally supported.

Currently, a CAC score test is not covered by health insurance and costs about $200 as an out-of-pocket expense. The test gives the most helpful results in those in their 40s or early 50s, which is generally the population that the use of cholesterol medications is strongly considered. Those interested in rationally avoiding medication may feel this is well worth the cost.

Nevertheless, given the co-pay cost of many of the cholesterol lowering drugs, from a purely financial perspective the test may make sense. Indeed, with a test showing no calcium allowing the rational discontinuation of medication, the cost of the test could be re-couped in about nine months after which cost savings would accrue.

In summary, informed diet and lifestyle can naturally accomplish for most individuals many of the benefits of medication. It is possible to determine if diet and lifestyle may be used in place of medication, but such a determination requires an assessment of baseline non-medicated risk.

The Framingham Risk Score is an excellent beginning in this regard, but CAC scoring is an even more powerful approach in selected individuals and may be cost saving. Such assessments of cardiovascular risk may allow one to avoid the proverbial bottle of pills while still preventing some of our most significant medical illnesses.

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