

Does Chocolate Consumption Reduce the Risk of Strokes in Women?

In my last posting about the SATURN trial, I discussed the difference between articles that are found in peer-review journals versus those published in so-called “throw away” journals. I have also discussed in the past about the type and the way a specific study was conducted and how the researchers collected the information. The gold standard of any trial is to have what is called level 1 evidence. This means that the study was randomized, blinded to the researchers, controlled, with a statistically significant primary endpoint being reached. For example, this would be a study comparing two drugs or a drug versus a placebo given to people, the contents not known to the patient or investigator. The study is rigorously controlled and the goal of the study (primary endpoint) with one drug being superior to the other is clearly reached with statistical significance.

In the October 18, 2011 issue of the Journal of the American College of Cardiology, Dr. Susanna Larsson of the National Institute of Environmental Medicine in Stockholm, Sweden stated in a news release that women who ate up to 2 bars of chocolate per week showed a significantly reduced risk of stroke. Those women who ate up to a half of a bar or even smaller amounts also had a reduction in the stroke rate. The study included 33,372 women who answered a food-frequency questionnaire. They were asked to report how often and how much chocolate they consumed, including a variety of other foods for a year time span. Investigators listed the women into categories ranging from those who never ate chocolate to those who indulged three or more times a week and examined the risk of stroke over a mean follow-up of 10 years, adjusting for major risk factors associated with stroke. Women who reported having been diagnosed with hypertension did not show any significant benefit; however, those without hypertension and higher chocolate consumption seemed to show a marked decrease in stroke reduction. The researchers identified 1549 strokes in their study.

I know this sounds great to chocolate lovers but the biggest problem not related to chocolate is the way the study was conducted. The women were given a food frequency questionnaire and from this such wonderful results were reported. I don't remember what I ate yesterday let alone keeping track of everything for a year. Then a great statistician was brought in to adjust the data and was somehow able to exclude anything else that may impact stroke rates, and you have a study saying that in Swedish women who ate a certain amount of chocolate had lower stroke rates than those who did not. I think I will go sell ice to the Eskimos. This information actually made the television news. The association with chocolate consumption and stroke was stronger with higher concentration of cocoa in the chocolate.

So what are the health properties of chocolate? Researchers have long thought that cocoa, the main ingredient in chocolate, may have cardiovascular benefits due to the flavonoids in cocoa and their antioxidant properties. Antioxidants

protect the body from damage caused by free radicals and can suppress oxidation of low-density lipoprotein particles which are the carriers of the bad cholesterol in the blood. Dark-chocolate consumption has also been shown to reduce blood pressure, which is a major risk factor for stroke, but the data is limited at best.

Now the question from chocoholics who just love their chocolate is how much should one eat? Chocolate, and especially chocolate bars, are high in sugar, fat, and calories and should therefore be consumed in moderation if at all. Dark chocolate, with a concentration of greater than 50% cocoa, is usually lower in sugar and has higher flavonoid content. Indulgence in chocolate in moderation remains a reasonable approach to satisfy a craving. Eating a healthy diet, controlling blood pressure, cholesterol levels, and modifying other risk factors for stroke is the best approach for now. For more information you can visit www.lipidcenter.com