

BRAIN HEALTH MAY BE A BOX OF CHOCOLATES

I love chocolate. I could have chocolate morning, noon, and night and never tire of it. You might not be quite as fanatical about chocolate, but even non-lovers may find it difficult to resist now and again. There's just something about it. Indeed its forces are so powerful that ancient Maya and Aztec cultures included chocolate in religious ceremonies. Throughout history chocolate or cacao beans, which are the source of chocolate, have been used as money, religious offerings, ceremonial icons (think: chocolate rabbit), aphrodisiacs, health remedies, and treasures of all descriptions.

Even without solid scientific evidence of health benefits it is tempting to believe that chocolate is beneficial, because it's just so great: how could it not be good for you? But the proof is in the science.

Recent Neuroscience research examined whether older people who have problems with their blood circulation and also show early signs of cognitive decline (similar to Alzheimer's disease) might benefit from chocolate. This may sound a little whacky, but there are two good reasons for why the scientists thought that chocolate may be beneficial. Firstly, medical research has already shown that when the brain does not get enough oxygen and nutrients from the blood, the nerve cells become sick, and may even die. Because of this the brain may not work as well as it should, and one symptom is cognitive decline. Thus, if we could improve the blood flow to the brain, we may be able to reverse or prevent cognitive decline from poor circulation. Secondly, independent previous scientific experiments had shown that chocolate could improve circulation. Putting these bits of information together, the scientists reasoned, or hypothesised, that chocolate may be able to improve circulation to the brain, and thus reverse cognitive decline.

Sixty older people (average age 73) participated in the study. Half consumed 2 cups of hot chocolate per day for 30 days. Their brain blood flow and cognitive abilities were measured before and after the study. Perhaps you can imagine what the researchers found – why else would I be telling you this story. The chocolate worked! It improved brain blood flow by nearly 10% in people with circulatory problems, and it also improved their performance on cognitive tasks.

Chocolate is made of many chemicals and compounds, and one group of them, called flavonols, has been believed to be the one that gives beneficial health effects. In this study, the researchers tested the power of flavonols by using two kinds of chocolate, one with and one without flavonols. Both kinds of chocolate had beneficial effects, so the flavonols are not the key. Thus the wonders of chocolate continue to add up, while the chocolate itself remains shrouded in mystery.

REFERENCE: Sorond FA et al. (2013) Neurovascular coupling, cerebral white matter integrity, and response to cocoa in older people. *Neurology*. Aug 7, epub ahead of print.