

“Chocolate is a healthy food.” Discuss.

Since Spanish explorers brought back chocolate from the new world, chocolate consumption has become a worldwide phenomenon. At first, chocolate, a derivative of the cacao bean, was consumed as a drink, only later achieving mass popularity in tablet or bar form. However, chocolate’s inherent popularity does not equate to it possessing healthy properties, as suggested by the title. The realities of chocolate are more down to earth; a number of these realities will be addressed in this essay. Chocolate has chemical properties that can influence mood and there is possible evidence for some positive impacts of chocolate on cardiovascular health. Yet, such positive attributes are counterbalanced somewhat by the argument that, in some instances, chocolate can be viewed as a drug rather than a food. Moreover, there is the possibility of some correlation between over-consumption of chocolate and obesity. Thus, it will be argued that despite chocolate’s positive effect in some cases on mood and the cardiovascular system it has also been linked to addiction and obesity.

Consumption of chocolate is something that many enjoy, and there is evidence (Parker, Parker, & Brotchie, 2006) that high carbohydrate foods such as chocolate do have a ‘feel good’ effect. Moreover, Scholey and Owen (2013) in a systematic review of the literature in the field point to several studies, such as Macht and Dettmer (2006) and Macht and Mueller (2007), which appear to confirm this effect. Yet, as Parker, Parker and Brotchie (2006, p. 150) note, the mood effects of chocolate “are as ephemeral as holding a chocolate in one’s mouth”. In addition, mood is something that is difficult to isolate and quantify, and aside from the study by Macht and Dettmer (2006) there appears to be little research on any longer term mood affecting influences of chocolate. Another point is raised by Macht and Dettmer (2006), whose study found that positive responses to chocolate correlated more with anticipation and temporary sensory pleasure, whereas guilt was also a statistically significant factor for many, for whom the ‘feel-good’ effect would be minimalised. As these authors stress, “temporal tracking of [both] positive and negative emotions” (p.335) before and after consuming chocolate in future studies could help in further understanding the ‘feel good’ effect and more negative emotions.

Another possible positive influence of chocolate is upon cardiovascular health. Chocolate, processed accordingly, can be a provider of significant quantities of heart-friendly flavanols (Hannum, Schmitz, & Keen, 2002) which help in delaying blood clotting and reducing inflammation (Schramm et al., 2001). Such attributes of flavanols in chocolate need to be considered in the context of chocolate’s other components – approximately 30% fat, 61% carbohydrate, 6% protein and 3% liquid and minerals (Hannum, Schmitz, & Keen, 2002). The key to maximising the benefits of flavanols in chocolate appears to lie in the level of fats present. Cocoa, which is simply chocolate minus the fat, is the most obvious candidate for maximising heart health, but as Hannum, Schmitz and Keen (2002) note, most cocoa products are made through an alkali process which destroys many flavanols. Optimal maximisation of the flavanols involves such compounds being present in cocoa and

chocolate products at levels where they are biologically active (Ariefdjohan & Savaiano, 2005).

The biological makeup of chocolate is also relevant in determining whether chocolate is better viewed as a food or a drug, but the boundaries between indulgence and addictive behaviour are unclear. Chocolate contains some biologically active elements including methylxanthines, and cannabinoid-like unsaturated fatty acids (Bruinsma & Taren, 1999) which could represent a neurochemical dependency potential for chocolate, yet are present in exceedingly small amounts. Interestingly, and linked to chocolate and mood, Macdiarmid and Hetherington (1995) claim their study found that “self-identified chocolate ‘addicts’” reported a negative correlation between chocolate consumption and mood. This is perhaps indicative of addictive or compulsive type behaviour. However, as Bruinsma and Taren (1999) note, eating chocolate can represent a sensory reward based, luxurious indulgence, based around texture, aroma and flavour anticipation, rather than a neurochemically induced craving. Yet, it has been argued that chocolate is sometimes used as a form of self-medication, particularly in relation to magnesium deficiency. A study by Pennington (2000 in Steinberg, Bearden, & Keen, 2003) noted that women do not generally meet US guidelines for trace elements, including magnesium. This correlates with earlier studies by Abraham and Lubran (1981), who found a high correlation between magnesium deficiency and nervous tension in women. Thus, tension-related chocolate cravings could be a biological entity fuelled by magnesium deficiency. Overall, however, it would appear that the proportion of people using chocolate as a drug rather than a food based sensory indulgence is small, though further research might prove enlightening.

A final point to consider in relation to chocolate is the perception that chocolate is linked to obesity. A person is defined as being obese when their Body Mass Index is greater than 30. The literature on chocolate and obesity has clearly demonstrated that there are no specific correlations between the two variables (Beckett, 2008; Lambert, 2009). This is typified by the findings of Mellor (2013), who found that, over a period of eight weeks of eating 45 grams of chocolate per day, a group of adults demonstrated no significant weight increase. As Lambert (2009) notes, chocolate consumption alone is not likely to cause obesity, unless large amounts of other calorie dense foods are consumed and this calorie dense intake is greater than needed for bodily function, bearing in mind levels of activity. The stereotypical ‘chocoholic’ seems more likely to consume many other sweet foods and be less likely to take exercise than other people, so chocolate consumption is only one possible variable when considering the causes of obesity.

Obesity and chocolate consumption seemingly have no proven correlations. Yet, in this essay, many chocolate focused arguments have been presented, including the transient effect of chocolate on mood and the fact that it is as likely to create feelings of guilt as of well-being. Another possible positive dimension to chocolate is a correlation with cardiovascular health. Yet the potential benefits of flavanols in chocolate are currently offset by the high fat/carbohydrate content of most forms of chocolate. Whether chocolate is a food or a drug is also unclear. The literature

outlines the chemical properties of chocolate which could help explain some addictive type behaviour, particularly in regards to nervous tension in women, but there is also a strong research focus on chocolate as a sensory-based indulgence. It can therefore be said that chocolate is not a healthy food, but can be enjoyed as part of a healthy and balanced diet and lifestyle.

(Word count: 1093. This is within 10% of the 1000 word limit, which is usually acceptable. Check this with your lecturer if you are in any doubt.)

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