Green tea has been around for centuries, and has been associated with health promoting effects since the beginning of usage (1, 2, 6, 9, 21, 25, 26, 28). It is a popular drink in Asia (6, 2, 9, 25) and is one of the most popular beverages worldwide (4, 7, 6, 9, 20). It has only been in recent years that the health benefits related to green tea have been under scientific investigation (1, 7). Green tea has many antioxidant properties (1, 2, 3, 4, 5, 6, 7, 20, 24, 28) associated with the rich content of polyphenols, vitamins, and minerals (6). Due to the antioxidant properties, it is speculated that green tea contributes to cancer prevention (3, 4, 6, 7, 11, 12, 16, 19, 20), a reduction in cardiovascular disease (2, 6, 9, 15, 18, 19, 20, 24, 26, 27), and reducing obesity (2, 6, 7, 9, 21, 25, 26). This paper will discuss those health related issues, as well as the need for more studies to confirm these findings.

Cancer affects the lives of many people worldwide, and can affect various areas of the body. Green tea has been under investigation regarding the potential ability of green tea to assist in the later onset of certain cancers, or even prevent certain types of cancers (6, 7, 12, 13, 16, 19, 28). In past studies, green tea has been linked with the prevention of prostate cancer (5, 6, 9, 21), breast cancer (6, 7, 19, 20, 21, 22), and skin cancer (5, 6, 14, 17, 19, 20). The linkage between green tea and cancer is believed to be due to the antioxidant properties that lower DNA oxidative damage, therefore reducing the risk of cancer (3, 4, 11, 17).

Another health benefit that is being studied is that of cardiovascular health. Studies have shown that consumption of green tea can contribute to a reduced risk of
cardiovascular disease (2, 6, 9, 15, 18, 19, 20, 24, 26, 27). Once again, the antioxidant properties of green tea are associated with the reduction in risk (9). The reduced risk is related to the ability of green tea to decrease cholesterol (9, 11, 15, 19, 21), and reduce triglycerides the atherogenic index (15, 19). Reducing the risk of cardiovascular health can increase overall health, therefore, extending ones lifespan.

Decreasing obesity is a third health benefit related to the consumption of green tea. The polyphenol epigallocatechin gallate (EGCG) is the most abundant polyphenol in green tea (4, 5, 9, 16, 20, 26) and plays a significant role in decreasing obesity (6, 25). Studies have shown that consuming green tea can lead to a reduction in body weight (2, 6, 7, 9, 21, 25, 26) and body fat (2, 7, 25, 26), as well as increasing fat oxidation (2, 7, 10, 23, 25) and thermogenesis (2, 7, 10, 25); all of which contribute to lowering obesity. Being able to lower obesity also assists in extending ones lifespan.

Although green tea has been associated with many health benefits, it is not as simple as consuming a cup of green tea a day to see benefits. Many studies and results are related to a large consumption of green tea, anywhere from three cups a day to ten or more cups a day (18, 19, 21, 22) in order for results to be seen. Studies also affirm that green tea is not the sole reason for these health benefits, it is a contributor, and that there are other factors that play a role (13, 21, 24, 26). Many studies and literature reviews also mention the need for more human studies to be conducted to verify the legitimacy of green tea being associated with these health benefits (20, 22), as many studies done currently involve research with mice. Green tea may play a large role in preventing or reducing certain health issues, however, more research needs to be done to provide concrete and detailed evidence of the extent of the benefits of green tea.
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