

Study of Correlation of Green Tea and its Antioxidant Effect in Reducing Oral Bacterial Count

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Abstract :

Aim

To evaluate effect of green tea and its antioxidant effect in decreasing the bacterial count in oral cavity

Objective

To evaluate the advantages of green tea intake and its effects in reducing the oral bacterial count

Background

In the modern culture people are more prone to oral problems due to high intake of oil and sugar rich foods which supports the growth of bacteria in the oral cavity and causes many problems taking green tea will show the positive effect towards the reduction of bacterial count in the oral cavity and reduces risk of health problems

Reason

In the research topic I am more interested to do on green tea and its antioxidant effect on individual oral health problems

INTRODUCTION

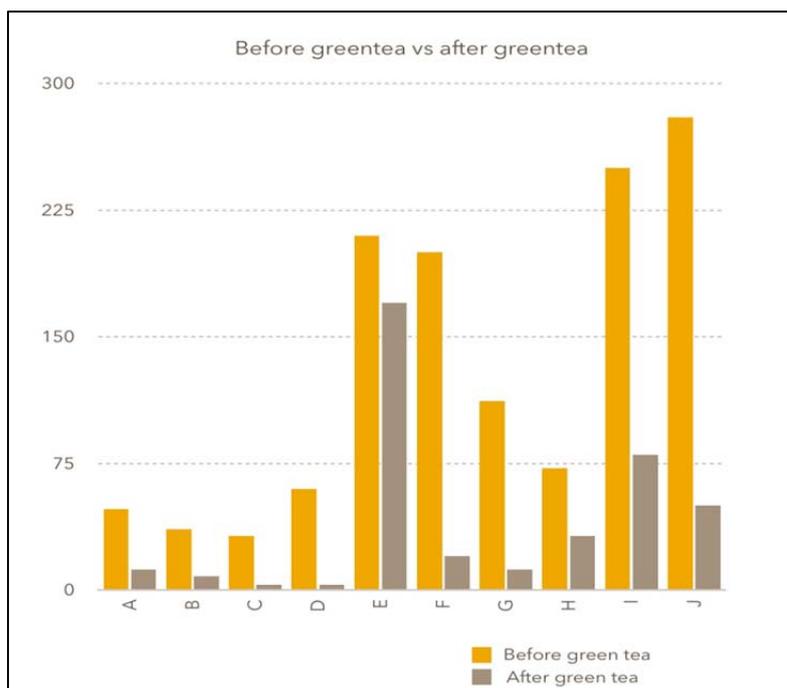
Green tea is the most ancient and popular beverage consumed around the world. It is made up of leaves of the plant *Camellia sinensis*. It is loaded with polyphenols like flavonoids and catechins, which function as powerful antioxidants. These substances can reduce the formation of free radicals in the body, protecting cells and molecules from damage. These free radicals are known to play a role in aging and all sorts of diseases. One of the more powerful compounds in green tea is the antioxidant Epigallocatechin Gallate (EGCG), which has been studied to treat various diseases and may be one of the main reasons green tea has such powerful medicinal properties. Green tea also has small amounts of minerals that are important for health. Green tea can boost the metabolic rate in the short term, it makes sense that it could help you lose weight. Green tea contains many bioactive ingredients mainly polyphenols which play a key role in the prevention and treatment of many diseases. The catechins in green tea may inhibit the growth of bacteria. This can lower the risk of infections and lead to improvements in dental health, a lower risk of caries and reduced bad breath (halitosis).

MATERIALS AND METHODS

I have selected some randomly 10 people and I have taken two samples from each person one is before taking green tea and other is after taking green tea they had been given sterile water and asked them to gargle water and the water sample is taken in the sterile test tube to count the number

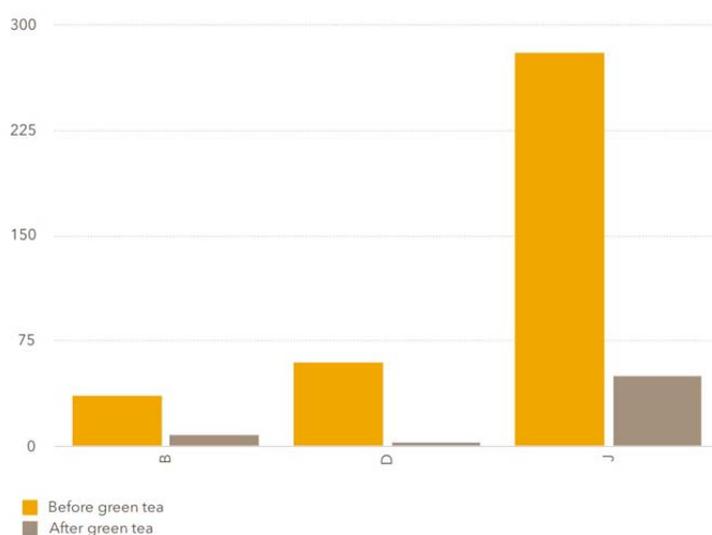
of bacteria present in the mouth and they are given green tea and again they are asked to gargle water and the water sample is taken in the test tube to check the growth of bacteria after taking green tea and the same process is done for all the ten people and sent to the laboratory for measuring the count of bacteria; the bacterial growth is measured in the colony forming units per 0.1 ml of the sample taken.

Person	OBSERVATION	
	Before green tea	After green tea
A	48	12
B	36	8
C	32	3
D	60	3
E	210	170
F	200	20
G	112	12
H	72	32
I	250	80
J	280	50



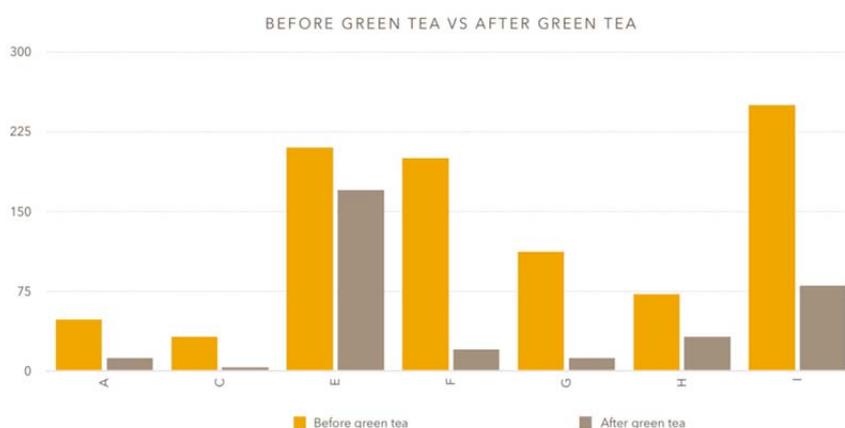
BACTERIAL COUNT IN PERSONS WHO TAKE GREEN TEA EVERY DAY

Persons	Before green tea	After green tea
B	36	8
D	60	3
J	280	50



BACTERIAL COUNT IN PERSONS WHO TOOK GREEN TEA FOR A STUDY PERIOD OF 2 DAYS

Category	Before green tea	After green tea
A	48	12
C	32	3
E	210	170
F	200	20
G	112	12
H	72	32
I	250	80



DISCUSSION

Persons B,D,J who took green tea everyday have significant reduction in the bacterial count in the oral cavity than the persons A,C,E,F,G,H,I, who took two cups of green tea for the study period of two days. The persons who consume green tea everyday have significant results. Polyphenolic compounds present in green tea particularly catechins are known to have strong anti-influenza activity[3] green tea showed reduction in volatile sulphur compounds production in the oral cavity[10]

CONCLUSION

Taking two cups of green tea as a daily routine is good for the health as the results show that intake of green tea which contains catechins like epigallocatechin-3-gallate and polyphenols which show negative effect to the growth of bacteria and inhibit the growth of bacteria in the oral cavity which reduces the oral bacterial count and improves the oral health care so green tea plays a key role in prevention and treatment of many diseases.

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