

## **Effect of Green Tea on Dental Health**

**SaiSanjith**

Department of Physiology,  
Saveetha Dental College and Hospitals,  
Saveetha Institute of Medical and Technical science,  
Saveetha University,  
Chennai- 600077.

Email id: [151901039.sdc@saveetha.com](mailto:151901039.sdc@saveetha.com)

**JothiPriya**

Department of Physiology,  
Saveetha Dental College and Hospitals,  
Saveetha Institute of Medical and Technical Sciences,  
Saveetha University,  
Chennai - 600077.

Email id - [jothipriya.sdc@saveetha.com](mailto:jothipriya.sdc@saveetha.com)

Ph no - 8778996993

**Gayathri Devi**

Department of Physiology,  
Saveetha Dental College and Hospitals,  
Saveetha Institute of medical and technical sciences,  
Saveetha University,  
Chennai- 600077.

Email id: [gayatri.physio88@gmail.com](mailto:gayatri.physio88@gmail.com)

**LakshminarayananArivarasu**

Assistant Professor, Department of Pharmacology,  
Saveetha Dental College and Hospitals,  
Saveetha Institute of Medical and Technical Sciences, Saveetha University,  
Chennai - 600077.

Email id – [lakshminarayanan512@gmail.com](mailto:lakshminarayanan512@gmail.com)

Ph no - +-91-9176781718

**Corresponding author**

**LakshminarayananArivarasu**

Assistant Professor, Department of Pharmacology,  
Saveetha Dental College and Hospitals,  
Saveetha Institute of Medical and Technical Sciences, Saveetha University,  
Chennai - 600077.

Email id – [lakshminarayanan512@gmail.com](mailto:lakshminarayanan512@gmail.com)

Ph no - +-91-9176781718

### **ABSTRACT**

Green tea is especially rich in health-promoting flavonoids (which represent 30% of the dry load of a leaf), including catechins and their subordinates. The most plentiful catechin in green tea is epigallocatechin-3-gallate, which is thought to carry a vital job in the green tea's anticancer and

cancer prevention effects. Catechins ought to be viewed alongside of the better-known antioxidants like vitamins E and C alongside of the better-known antioxidants. It has been proposed that green tea likewise advances periodontal wellbeing by decreasing irritation, forestalling bone resorption and restricting the development of specific microorganisms related with periodontal sicknesses. The gainful properties of green tea incorporate anticarcinogenic, mitigating, antimicrobial and cell reinforcement properties and advantages all in all and oral wellbeing. Based on this idea, we propose future research facilities and epidemiologic examinations to clarify the connection between green tea and dental health

Catchphrases: Antioxidants, catechins, dental health, epigallocatechingallate, green tea

## INTRODUCTION

Green tea, native to China and India, has been consumed and hailed for its health benefits for centuries globally, but has only recently gained popularity in the United States. Tea is the most consumed beverage in the world behind water. However, 78 percent of the tea consumed worldwide is black and only about 20 percent is green. All types of tea, except herbal tea, are brewed from the dried leaves of the *Camellia sinensis* bush. The level of oxidation of the leaves determines the type of tea. Green tea is made from unoxidized leaves and is one of the less processed types of tea. It therefore contains the most antioxidants and beneficial polyphenols. Green tea is one of the most famous drinks on the planet, and it has gotten extensive consideration on account of its numerous experimentally demonstrated gainful consequences for human wellbeing. researches affirmed that there is a cozy connection between green tea utilization and the avoidance of both malignancy advancement and cardiovascular disease(1) These impacts have been to a great extent credited to the most predominant polyphenol contained in green tea, to be specific epigallocatechingallate. Epigallocatechingallate is known to instigate apoptosis in different kinds of tumor cells, yet has almost no impact on ordinary cells (2)(3) Recently, it has been accounted for that epigallocatechingallate could initiate the apoptotic cell demise of osteoclasts(4). Thus, it can forestall alveolar bone resorption by hindering osteoclast endurance through the caspase-interceded apoptosis and can be useful to periodontal wellbeing. This article surveys the gainful parts of green tea in dental wellbeing just as on overall well-being.

## MATERIALS AND METHODS

A questionnaire was prepared with all the questions regarding this study. The present study was approved by the institutional review board. The nature and purpose of the study was explained and strict Confidentiality was assured. This questionnaire was transferred into a survey and the survey was circulated on the online platform among students and faculty of the college.

**RESULTS AND DISCUSSION:** The survey was answered by 131 people. The results are converted into graphical form for easy understanding as follows.

The impacts of green tea extract on caries, hindrance of hamsters and on acid resistance of human tooth enamel have been proposed by both in vivo and in vitro examinations. The dialyzed tea arrangement wherein the fluoride was evacuated totally additionally indicated surprising impacts, like the first tea extricate. The outcomes acquired from this investigation recommended that fluoride in green tea may assume a job in expanding the cariostatic activity alongside different segments in tea. In any case, the activity of fluoride doesn't appear to be so significant in light of the fact that its focus is exceptionally low. The impact of green tea on caries restraint

just as on the addition of acid resistance seems, by all accounts, to be progressively correlative with the non-dialyzable substances in tea(5). Green tea catechin indicated a bactericidal impact against dark pigmented, Gram-negative anaerobic rods, *Porphyromonas gingivalis* and *Prevotella* species, and the joined utilization of mechanical treatment and the use of green tea catechin utilizing a moderate discharge nearby conveyance framework was successful in improving the periodontal status. The peptidase exercises in the gingival liquid were kept up at lower levels during the trial time frame in the test destinations, while it arrived at 70% of that at gauge in the fake treatment locales, Innate immunity is also developed due to T cell receptor-dependent activation of human lymphocytes through cell surface ganglioside GT1b (6)(7)(8). Every day admission of green tea was altogether connected with seeping on examining (BOP), testing profundity (PD) and clinical connection misfortune (CAL), to such an extent that the more often subjects drank green tea, better was their periodontal condition. As in an investigation where the creator included 940 men and inspected their PD, CAL and BOP, the connection between the admission of green tea and periodontal boundaries was analyzed. The admission of green tea was characterized as the quantity of cups every day. Results demonstrated that the admission of green tea was conversely associated with the mean PD, mean CAL and BOP (9)(10)(11). Tea (*Camellia sinensis*) has been touted as a healthy and medicinal beverage for centuries, and research has centered at the antiox- idant interest of the catechins(12)((12,13). However, no in vivo records demonstrating an immunologic impact of tea on human tissue had been published.

Look advised that the oral intake of l-theanine, an amino acid found in green tea, may want to purpose anti-strain outcomes through the inhibition of cortical neuron excitation(14). Antioxidants in inexperienced tea may prevent and decrease the severity of rheumatoid arthritis(15). A German study located that an extract of green tea implemented externally to the pores and skin for 10 minutes, three times a day, could assist humans with broken skin from radiation remedy (after 16-22 days)(16). EGCG may prevent the resorption of alveolar bone that occurs in periodontal diseases by inhibiting the expression of MMP-9 in osteoblasts and formation of osteoclastIn lab tests, EGCG, found in green tea, was found to prevent HIV from attacking T-cells(17). However, it is not yet known if this has any effect on humans(18)(19).

Limitations of the study are Less number of sample size, Homogeneous population, Restriction of sample to specific local regions.Future extension lies in the field of periodontics and dental science as such products help in maintaining good overall oral health.

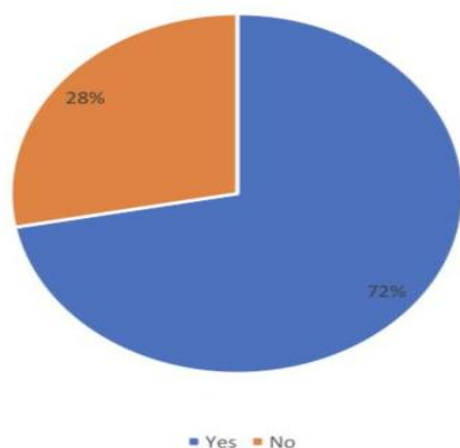


FIG.1. The pie chart shows the percentage representation of people's knowledge on green tea.

72 % of people agreed that there's a relation between green tea and dental health.

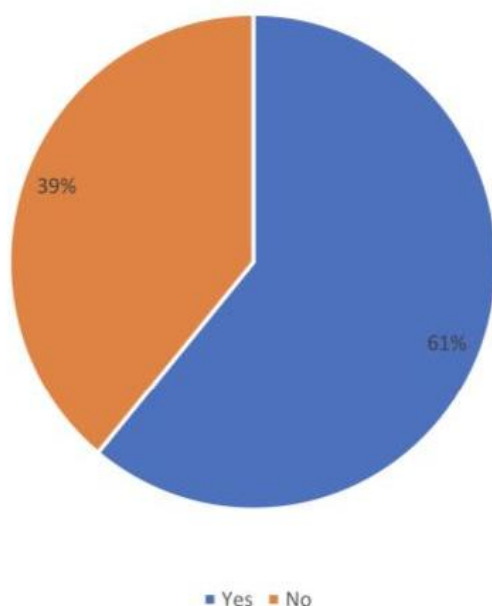


FIG.2.The pie chart shows the percentage representation of people's knowledge on green tea and its action on cavities. 61% of respondents said that green tea can protect us from cavities

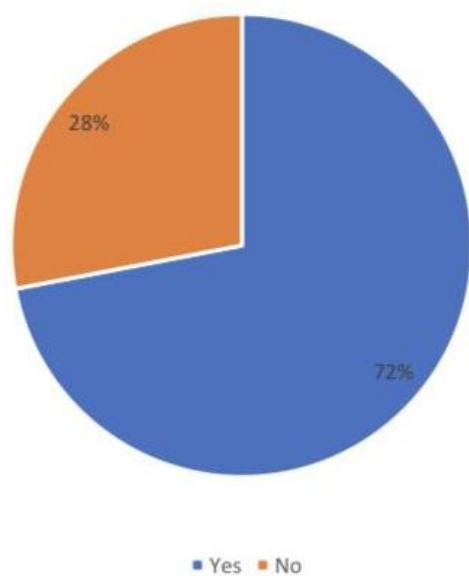


FIG.3. The pie chart shows the percentage representation of people's knowledge on green tea's role in maintaining periodontal health. 72% of people felt that green tea can protect from periodontal diseases and keep bad breath away

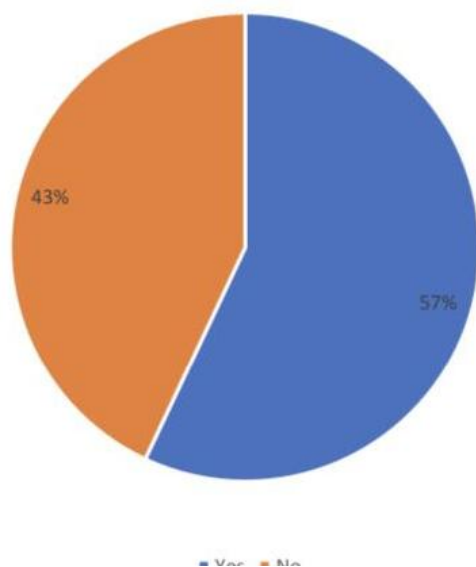


FIG.4. The pie chart shows the percentage representation of people's knowledge on green tea and its action on oral health. 57% of respondents said that green tea is good for overall dental health .

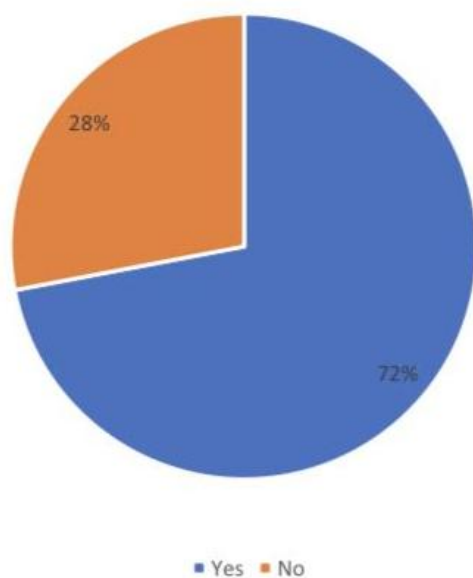


FIG.6. 72% of the people say that green tea can protect us from bad breath and periodontal diseases.

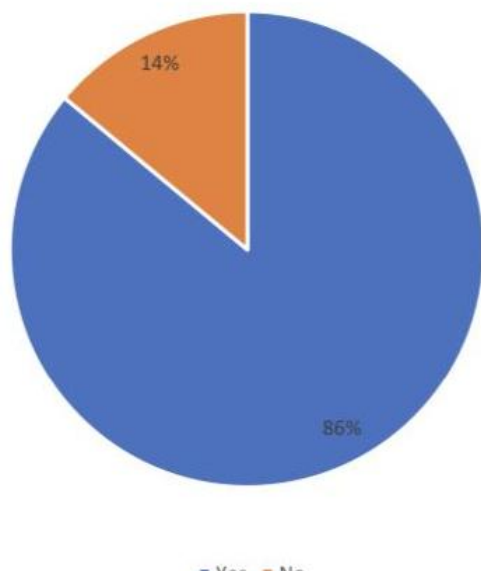


FIG.7. 86% of the people said that green tea reduces diseases.

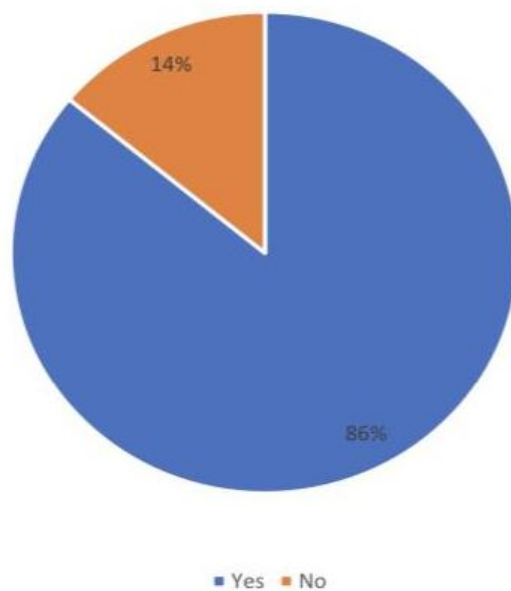


FIG.8. 86% Of the people believe that green tea helps in reducing weight.

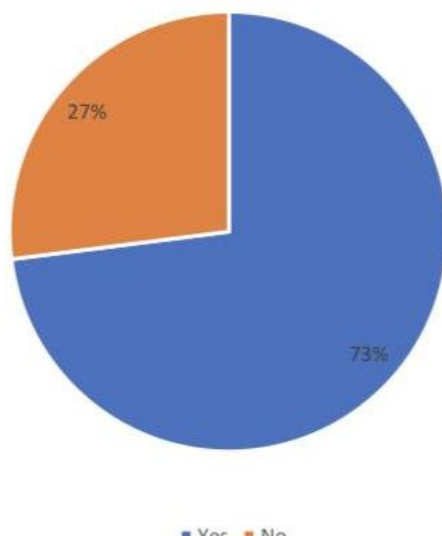


FIG.9. 73% Of the people feel that green tea can protect from several diseases like diabetes and periodontitis.

**CONCLUSION:** order to improve the success rate in the treatment of periodontitis, usage of green tea is a novel approach aimed at early intervention, enhancing the host resistance and inhibiting the inflammatory mediators involved in the onset of gingivitis and periodontitis. Regularly drinking green tea that is already known to possess health-related benefits.

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**CONFLICT OF INTEREST :**nil

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