

## **Effects of Oil Pulling on Bad Breath and Cavities**

**KaviaselviGurumurthy**

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 - +-91-91767818

## ABSTRACT

Introduction: despite the growing and advancing technological methods of treating various diseases, the most straightforward and less complicated method of treating diseases without any side effects dates back to ancient ayurvedic herbs and practices. Oil pulling involves swishing oil in the oral cavity on an empty stomach to draw out toxins and bacteria. The most common oils used for this practise include coconut oil, sunflower and groundnut oil. The present study aims at determining the effect oil pulling among people of different age groups and also helps in understanding the knowledge level and awareness on this practise. Materials and methods: a self-accessible questionnaire consisting of 15 questions was circulated online and the results were graphically interpreted. Result: the survey showed that significantly high concentrations of people were unaware of this practice and there was a growing need to spread information on the same. Also, oil pulling, practiced by those, helped eliminate halitosis and caries. Conclusion: there is a need to improve the awareness on the practice of oil pulling.

**Keywords:** oil pulling, ayurvedic, halitosis, cavities, oral hygiene

## INTRODUCTION

The mouth is a gateway to the rest of the body and a mirror to the overall well-being of the body. The first signs of occurrence of any systemic disease occur most often in the oral cavity and can easily spread to the heart and other vital organs from the oral cavity.(1) It is thus essential to maintain proper oral hygiene and establish cleanliness of the oral cavity to avoid the onset of various deadly diseases. Even as technology advances there are still records of traditional old age remedies followed to maintain oral hygiene and one such practice is oil pulling. Oil pulling is an ancient ayurvedic principle that involves swishing a tablespoon of oil in one's mouth on an empty stomach for a duration of about 20 minutes.(2)

The science behind oil pulling is based on two speculations. The first one states that the alkali hydrolysis process emulsifies the fat in the oils into bicarbonates that increases the surface area of oils in turn increasing the cleansing action. The second postulate is based on the viscous nature of oil that inhibits the bacterial action in the oral cavity thus preventing the formation of plaque. (3) Oil pulling is known to play a vital role in maintaining oral hygiene and has several benefits. There are about 700 different types of bacteria present in the oral cavity and a week of oil pulling can inhibit or kill a significantly large number of these. Bad breath or halitosis can be caused due to infection, gum disease, poor oral hygiene and tongue coating.(4) Typically, treatment for bad breath includes the removal of the bacteria, either through brushing or by using an antiseptic mouthwash like chlorhexidine. Oil pulling has found to be as effective as chlorhexidine at reducing bad breath. (5) Decaying of teeth due to excessive sugar intake can lead to cavities whose effect can be reduced by this ayurvedic practice. Oil pulling can also reduce gingivitis, which is a type of gum disease that is marked by red and swollen gums that bleed easily and also lower the inhibition rates. Other added benefits of oil pulling include whiter teeth and strengthened gums. (6) The risk of oil pulling is associated with the occurrence of lipoid pneumonia which could be due to the entry of some of the fat globules from the oral cavity into the lungs, if the oil is sustained for a longer duration in one's mouth.(7) Apart from this adverse effect, the oil may wash away some of the useful bacteria present on the surface of teeth thus making it susceptible to certain types of disorders. (8)

The present study aims at analyzing the knowledge and awareness on oil pulling among different age groups and the results obtained were used to test the effect that the oil had on eradicating bad breath and cavities and other added benefits.

The purpose of this study is to assess the knowledge of oil pulling among students belonging to different age groups ranging from 15 to 21 years of age and to determine if the regular practice of oil pulling had an additional benefit to individuals who suffered from dental caries and bad breath.

## **MATERIALS AND METHODS**

For the study, a self-assessable survey consisting of 15 questions was prepared and circulated to a total of 100 participants of varying age groups via an online survey planet link. The results were analyzed to determine the awareness of oil pulling and its effects on individuals who practiced the same. The following questions were covered in the survey

## **RESULTS AND DISCUSSION:**

Despite the advancing technology and the various modern methods that come into existence, there is a growing need to step back into the age-old ayurvedic traditions and practices. (9) This need arises to bring about a downfall in the number of people who are affected by the side effects of synthetic methods in everyday practices including bad breath. (10) It becomes an essentiality to tie a knot between the traditional practices and the advancing technology to obtain maximum desired benefits in the field of health care and minimize the loss of lives due to the harmful chemicals present in synthetic drugs and this is where the use of oil pulling comes into play. (11)

Among the sample of people who had initiated responses to the survey, 58.8% were aware of the term oil pulling (Fig.1) and 8.8% practiced the same (Fig.2). When questioned about the number of times oil pulling was practiced by the population it was determined that 96.3% of them were associated with oil pulling 1-2 times a day while 3.7% practiced it 2-4 times a day. (Fig. 3) In relation to this topic, 10.8 % of the people confessed to having bad breath (Fig.4) while 29.7% of them suffered from caries. (Fig.5) In relation to the people who had accepted to have bad breath, 50% felt that their bad breath was eradicated through oil pulling (Fig.6) while 32.2% felt that oil pulling was the best remedy for bad breath (Fig.7). A majority of oil pulling users, 67.4%, did not follow other methods such as tongue cleaning, flossing, bifilac lozenges, salt water gargling and mouthwash to overcome their bad breath and cavities (Fig.8) On interpreting these results, it was established that there was a growing need to create and spread awareness among the different age grouped population on the importance and effects of oil pulling. (12) However, oil pulling could not significantly help in abolishing plaque and proved to be harmful if the oil contained traces of mercury, lead or arsenic and this practice also proved to cause lipoid pneumonia when carried out for longer durations. (13) An unknown benefit of oil pulling is that the oil helps in reducing the effect of pesticides and other harmful chemicals by combining with the lipophilic bacteria and eventually expelling them from the body.(14) Apart from this, strengthened gums and whitened teeth are added benefits.

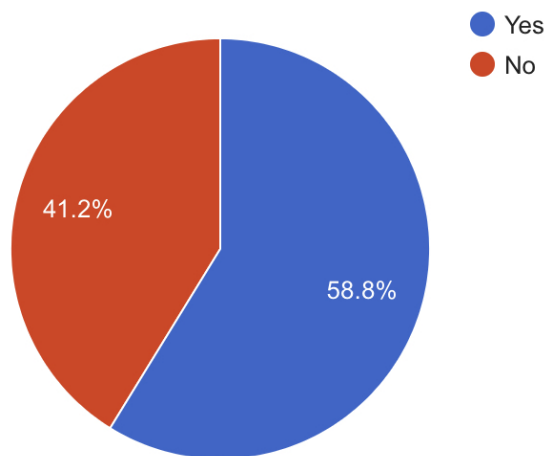


Figure.1: Pie chart showing percentage distribution of responses on awareness of oil pulling. About 58.8% were aware (blue) and 41.2%- unaware (red). Higher number of participants had responded to being aware of oil pulling (58.8%).

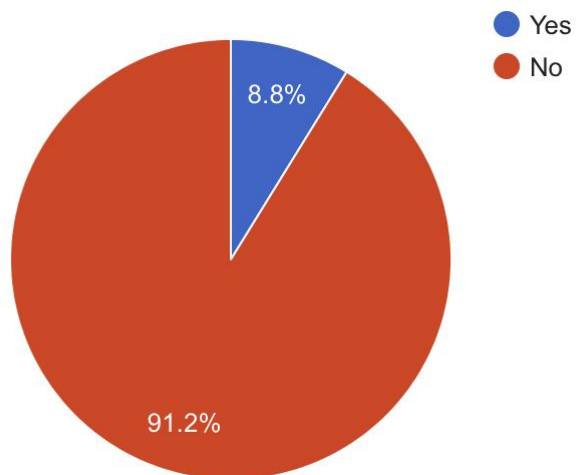


Figure.2: Pie chart showing percentage distribution of responses on practice of oil pulling. About 8.8% practiced oil pulling (blue) and 91.2%- did not practice oil pulling (red). Higher number of participants had responded that they did not practice oil pulling (91.2%).

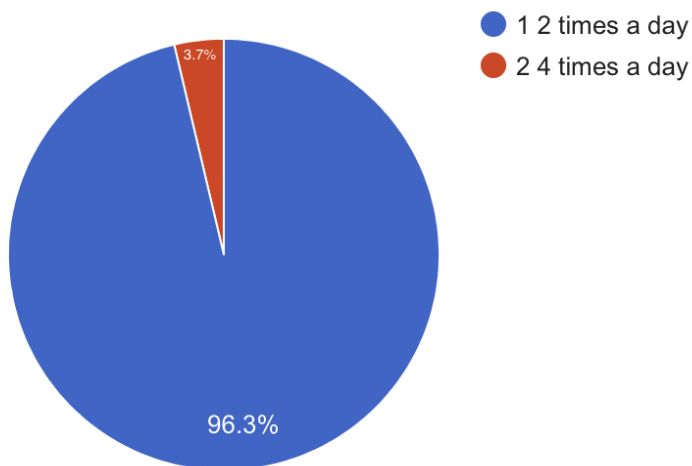


Figure.3: Pie chart showing percentage distribution of responses on frequency of oil pulling per day. About 96.3% practiced oil pulling 1-2 times a day (blue) and 3.7%-practiced oil pulling 2-4 times a day (red). Higher number of participants had responded 1-2 times a day (96.3%).

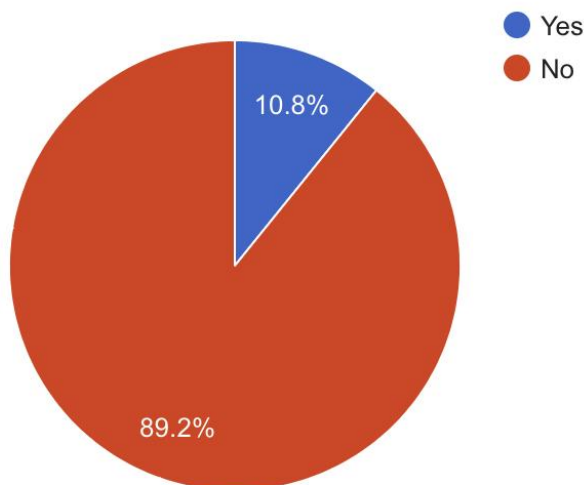


Figure.4: Pie chart showing percentage distribution of responses on presence of bad breath. About 10.8% had bad breath (blue) and 89.2%-did not have bad breath (red). Higher number of participants had responded to absence of bad breath (89.2%).

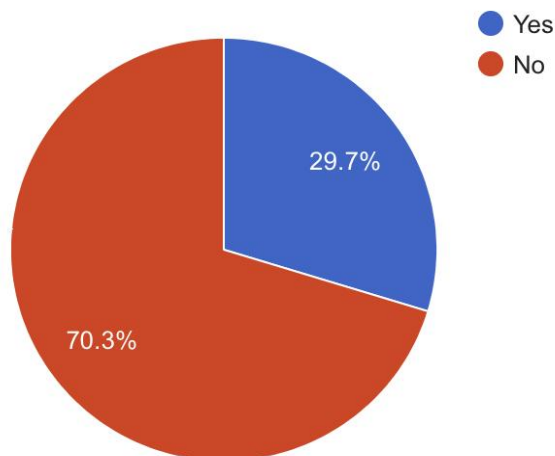


Figure.5: Pie chart showing percentage distribution of responses on presence of cavities. About 29.7% had cavities (blue) and 70.3%-did not have cavities (red). Higher number of participants had responded to absence of cavities (70.3%).

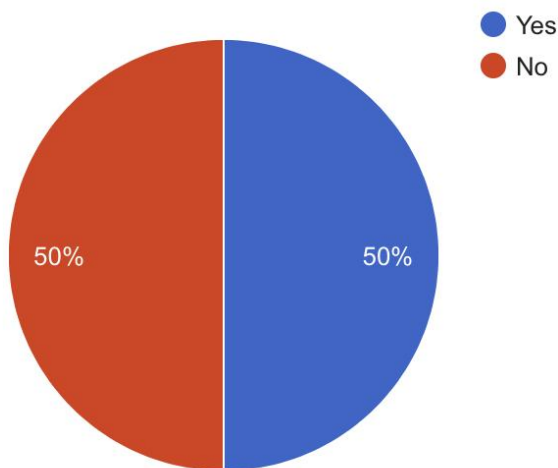


Figure.6: Pie chart showing percentage distribution of responses on ability to overcome bad breath by practicing oil pulling. About 50% could overcome bad breath by oil pulling (blue) and 50%- could not overcome bad breath by oil pulling (red). Equal number of participants had responded to both yes and no (50%).

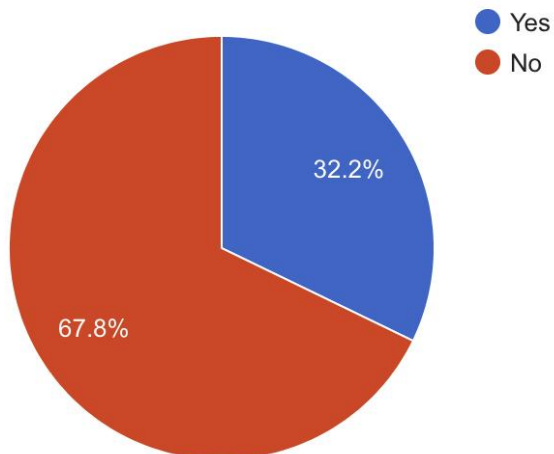


Figure.7: Pie chart showing percentage distribution of responses on whether oil pulling was the best remedy for cavities. About 32.2% had responded that oil pulling is the best treatment for cavities (blue) and 67.8%- oil pulling is not the best treatment for cavities (red). Higher number of participants had responded to no (67.8%).

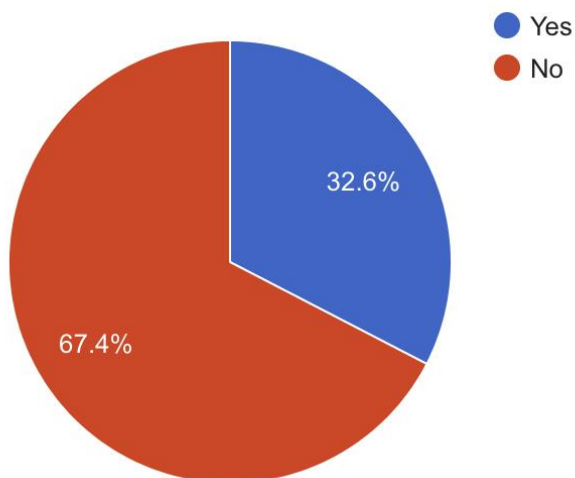


Figure.8: Pie chart showing percentage distribution of responses on practice of other medications to overcome cavities and bad breath. About 32.6% had responded that they practiced other methods (blue) and 67.4%- did not practice other medications (red). Higher number of participants had responded to no (67.4%).

## CONCLUSION

The present study concluded that the low awareness level on oil pulling was due to the presence of more advanced techniques for counteracting bad breath and cavities. Despite the few disadvantages that oil pulling may pose, it is essential that this ayurvedic practice should be brought into light among teenagers and younger children to prevent the onset of caries and halitosis without increasing the risk of diseases and side effects associated with the modern methods. (15) Expanding the sample size of this study could be useful in advanced research and help the traditional methods join hands with the advancing technological methods.

## REFERENCES

1. Pavithran VK, Krishna M, Kumar VA, Jaiswal A, Selvan AK, Rawlani S, et al. The effect of oil pulling with pure coconut oil on *Streptococcus mutans*: A randomized controlled trial. *Journal of Indian Association of Public Health Dentistry*. 2017;15(3):200.
2. Shanbhag VKL. Oil pulling for maintaining oral hygiene--A review. *Afr J Tradit Complement Altern Med*. 2017;7(1):106–9.
3. King A. BAD SCIENCE: Oil pulling. *Br Dent J*. 2018 Apr 13;224(7):470.
4. Tomar P, Hongal S, Jain M, Rana K, Saxena V. Oil pulling and oral health: A review. *IJSS Case Report & Reviews*. 2014;1(3):33–7.
5. Salian V, Shetty P. Coconut Oil and Virgin Coconut Oil: An Insight into its Oral and Overall Health Benefits. *J ClinDiagn Res [Internet]*. 2018;12(1).
6. Link R, MS, RD. 6 Benefits of Oil Pulling — Plus How to Do It [Internet]. Healthline. Healthline Media; [cited 2020 Jun 30].
7. An TD, Pothiraj C, Gopinath RM, Kayalvizhi B. Effect of oil-pulling on dental caries causing bacteria. *Afr J Microbiol Res*. 2008;2(3):63–6.
8. Mythri H. Oil pulling: A traditional method on the edge of evidence. *Dent Hypotheses*. 2017 Jul 1;8(3):57.
9. Singh A, Purohit B. Tooth brushing, oil pulling and tissue regeneration: A review of holistic approaches to oral health. *J Ayurveda Integr Med*. 2011;2(2):64.
10. The Dangers of Synthetic Drugs [Internet]. *Psycom.net - Mental Health Treatment Resource Since 1986*. [cited 2020 Jun 30].
11. Banerjee S, Mitra A. Changing landscape of herbal medicine: technology attributing renaissance. *Int J Pharm Pharm Sci*. 2012;4(1):47–52.
12. Kim JY, Jung JW, Choi JC, Shin JW, Park IW, Choi BW. Recurrent lipoid pneumonia associated with oil pulling [Correspondence]. *Int J Tuberc Lung Dis*. 2014;18(2):251–2.



13. Kaliamoorthy S, Pazhani A, Nagarajan M, Meyyappan A, Rayar S, Mathivanan S, et al. Comparing the effect of coconut oil pulling practice with oil pulling using sesame oil in plaque-induced gingivitis: A prospective comparative interventional study. *J Nat Sci Biol Med.* 2018;9(2):165.
14. Fife B. *Oil Pulling Therapy: Detoxifying and Healing the Body Through Oral Cleansing.* Piccadilly Books, Ltd.; 2017.190 p.
15. Asokan S, Kumar RS, Emmadi P, Raghuraman R, Sivakumar N. Effect of oil pulling on halitosis and microorganisms causing halitosis: a randomized controlled pilot trial. *J Indian Soc Pedod Prev Dent.* 2011 Apr;29(2):90–4.