



**Review Article**

IJDR 2017; 2(1): 18-21  
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## Effect of yoga on promotion of oral health

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### Abstract

The objective of this paper review is to focus on the role of yoga in prevention of dental diseases and maintenance of oral hygiene. The etiology of dental diseases is ignorance towards the dental care, modern life style and stresses of busy life. The people who are stressed are less likely to give their teeth and gums the proper oral care. Yoga is one of the most effective treatment for stress. Yoga reduce the stress, improve the oxidatus status of body, Improve the immune system and reduces chronic gingival inflammation. Yoga also improve the life style more towards the natural. All these effects helps in better maintenance of oral hygiene, and reduction in gingival inflammation and prevention of dental diseases

**Keywords:** Yoga, Oral hygiene, Stress.

### INTRODUCTION

Despite Oral diseases continue to be a major health problem world-wide.<sup>[1]</sup> Dental caries and periodontal diseases are among the most important global oral health problems, although other conditions like oral and pharyngeal cancers and oral tissue lesions are also of significant concern.<sup>[2]</sup> Oral health is integral to general well-being and relates to the quality-of-life .Dental caries, gingivitis & periodontal disease are the three most common chronic human diseases. Their prevalence is undoubtedly higher than in prehistoric times. Is this a “tribute” to progress in oral hygiene products? Realistically, the diseases are kept at bay by personal and professional oral hygiene - in spite of a pathogenic diet and lifestyles and numerous iatrogenic factors.<sup>[3]</sup> A stressful lifestyle may not only lead to depression, high blood pressure and anxiety, but it can also cause dental problems. Studies have shown that people who are stressed are more likely to neglect their dental care. The oral symptoms of stress such as canker sores, teeth grinding, gum diseases, TMJ disorders, burning mouth syndrome and dry mouth can be detected in the patients. The tension in the jaw muscle can cause jaw clenching and teeth grinding. It can also cause the jaw to shift and thus can affect the alignment of the teeth. Dry mouth leads to halitosis, which causes decay and periodontal diseases. Long term stress can lead to chronically elevated levels of stress hormone cortisol, which can weaken the immune system. Halitosis and weakened immunity present favorable conditions for bacteria to colonize and thus invade the gums. The stress can exaggerate and cause tooth loss.<sup>[4],[5]</sup>

The practice of yoga in the Indian subcontinent was documented as early as 3000 BC. The word ‘yoga’ is derived from Sanskrit word yuz, which is often interpreted as meaning ‘union’. Yoga is said to be for purpose of uniting the mind, body and spirit. Yoga focuses on body, breathing and mind.<sup>[6]</sup> This is accomplished by Asanas (exercise postures), pranayama (breathing techniques) and meditation.<sup>[7]</sup> Yoga prevents the impairment of cellular immunity seen in stress.<sup>[8]</sup> Yoga involves mind body relaxation techniques and cushions the changes related to stress. Since yoga involves mind body relaxation techniques (pranayama and meditation) along with mild to moderate physical exercise (Asanas), yoga may optimize the production of the pro-inflammatory cytokines.<sup>[9]</sup>

It can be hypothesized that yoga is helpful in prevention of dental diseases and maintenance of good oral hygiene.

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## RESULT

Regular practice of yoga not only helps in prevention and treatment of diseases of body in general but also helps to achieve the good oral health. Yoga helps to increase the motivation level for regular mechanical plaque control by reducing the stress. Yoga helps in decreasing the inflammatory response and increase the immunity that helps to achieve the good gingival health and healing after extractions and oral surgical procedures. Yogic life style is more towards the nature, it helps in prevention of dental as well as soft tissue disorder of the oral cavity which are the result of the stresses of the life.

After the critical review of the above paper following clinical studies are proposed to be taken up for the further research, so that we can quantify the effect of yoga on treatment and prevention of different types of dental diseases which will help us to modify the existing treatment modalities.

1. chronic periodontitis (pyorrhea, periodontal diseases) are among the most important global oral health problems. role of yoga in prevention and treatment needs further research.
2. Worldwide prevalence of dental caries stands at 60-90% for school children and about 100% for adult population. role of yoga in prevention and early detection needs further clinical study.
3. Role of yoga in dry mouth and salivary dysfunction, which is common and affecting roughly 25% of all women and 20% of men between the ages of 18-88 years.
4. Diabetes is a major concern in oral health care, oral complication of diabetes are dry mouth, dental caries, candidiasis and periodontal diseases. role of yoga in prevention and treatment need research.
5. Effect of yoga on dental pain and in neuralgia, which is a major concern for dental patients
6. Effect of yoga on bacteria present in oral cavity.

## DISCUSSION

Dental diseases are due to the ignorance towards the oral hygiene practices, lack of the motivation and also due to the poor lifestyle of modern days. We are living in a modern civilization, The more civilized the country the more the incidence of psycho somatic disorders. In the oral cavity this is manifested by the development of a diseases like lichen planus. This life style results in the increased level of stress that results in many types of health problems including dental problems. Stress actually has a lot to do with the health of our teeth and gums. Studies have shown that people who are stressed are less likely to give up their teeth and gums and proper oral care. Stress wears down the body, often leaving us feeling too tired or uninspired to take care of our health. Stressed individuals also have a tendency to grind their teeth which can cause the front teeth to become worn down; micro-cracks and broken fillings which can lead to nerve damage; the teeth to be ground down to the dentin which results in sensitivity to heat and cold; gum recession due to pressure on the gum line; loose teeth and gum pockets caused by the rocking motion of teeth grinding; headache and aching jaws due to overworked jaw muscles; and jaw impairment.<sup>[10]</sup>

Although yoga has been practiced for over 5000 years, it has only newly gained popularity worldwide.<sup>[11]</sup> The yoga originated in India and has been applied to relieve both mental and physical infirmities.<sup>[12],[13],[14]</sup> Yoga, the ancient science of body-mind coordination is widely practiced and researched globally.<sup>[15]</sup> Therapeutic yoga is defined as the application of yoga postures and

practice to the treatment of various health conditions.<sup>[16]</sup> Yoga is proven to be useful in relieving pain.<sup>[17],[18]</sup> and stress.<sup>[19],[20]</sup> Yoga is found to be effective in reducing stress, anxiety and improving health status.<sup>[21],[22],[23]</sup> Yoga is known for its beneficial effects on physiologic and psychologic functions and improves the quality of life of the patients.<sup>[24],[25],[26],[27],[28],[29],[30],[31]</sup>

Psychological stress and yoga are believed to be reciprocally related. Stress induces imbalance of the autonomic nervous system with decreased activity of the parasympathetic nervous system and increased activity of the sympathetic nervous system.<sup>[32]</sup> Autonomic imbalance is closely associated with anxiety. Scientific evidence supports the belief that yoga benefits physical and mental health via down-regulation of the hypothalamic-pituitary-adrenal axis and the sympathetic nervous system.<sup>[33]</sup> yoga offers comprehensive solutions for managing health as a whole. It can lead to reduction of stress levels and thereby preventing autonomic dysregulation. Reduction in perceived stress levels results in lesser negative feelings of anxiety and depression, improved sense of well-being, and better sensory-motor performance and hand grip endurance.<sup>[34]</sup>

So by reducing the stress level yoga is helpful in preventing the dental disorder related to the stress ,it also helps in improving the motivation for mechanical plaque control(tooth brushing) Yoga allows the practitioners to be more regular, irrespective of the factors such as weather, climate, place , accessibility etc.

Yoga help to reduce inflammation. Researchers believe that yoga helps reduce inflammation in the body by alleviating stress.<sup>[4]</sup> The pro-inflammatory cytokines are not just markers of inflammation, but can be deleterious to health. Therefore, these cytokines are both cause and effect of inflammation.<sup>[35]</sup> Severe stress increases plasma levels of the pro-inflammatory cytokines. It reduces levels of Immunoglobulin- A (IgA) and causes immune deficiency and increased susceptibility to infections.<sup>[36]</sup> This can lead to persistent chronic gingival inflammation with bleeding gums and foul smell. Since yoga involves mind body relaxation techniques (pranayama and meditation) along with mild to moderate physical exercise (Asanas). Regular practice of yoga reduces the resting levels of inflammatory cytokines like TNF- $\alpha$  and IL-6.<sup>[37]</sup> Yoga improves the oxidative status of the body so helpful in relieving the stresses of life.<sup>[38]</sup> Yoga helpful in improving the immune system and body defense systems.<sup>[39]</sup> Yoga has been found to be beneficial in reducing oxidative stress in type 2 diabetes.<sup>[40],[41]</sup> Yoga practitioners achieved a 20% reduction in oxidative stress.<sup>[42]</sup> which helps to reduce the inflammatory response in gingiva. This helps to improve the symptoms of gingival inflammation that is bleeding from gums .this can lead towards the healthy gingiva. so it can be said that the yoga is helpful in prevention and treatment of gum diseases. Good healthy gingiva can be achieved with the regular practice of yoga

The stress related factors play a major role in inflammation acting as barrier to wound healing in extraction socket and post operative healing. As we know that yoga is helpful in reducing the stress, optimize the secretion of inflammatory mediators and improve the immune status, all these effects will helpful in fast wound healing after dental extraction, dental implants and other surgical procedures.

Saliva, a key ingredient for washing away bacteria and food particles, contains antibacterial enzymes that break down food and make food easier to swallow. When the salivary glands slow down the production of saliva, bacteria is allowed to grow. That is how "morning breath" occurs. A dry mouth creates an environment where bacteria can thrive. Chronic dry mouth can then cause plaque buildup, tooth decay, and gum disease. Practicing yoga is a great way to learn proper breathing techniques that help prevent your mouth and throat from drying out. It can also stimulate the salivary glands. Yoga poses such as forward bends, twists, and inverted poses are known to increase saliva production.<sup>[10]</sup>

The primary purpose of this study was to evaluate the efficacy of yoga in maintenance of oral hygiene and prevention of dental disorder. During the literature review no adverse reactions to yoga were observed. The present study has proves that yoga do not cause any adverse effects on the oral cavity and are effective in maintenance of oral hygiene and dental disorders.

## CONCLUSION

Yoga is effective in prevention of dental diseases and maintenance of oral hygiene and healthy gingiva by improving the life style, reducing the stresses and reducing the gingival inflammation.

## Acknowledgements

We want to acknowledge to Acharya Balkrishana ji who is a motivator, and philosopher in getting this paper to take its final shape and to Dr. Paran Gowda, my colleague in the organization who patiently went through the article and made corrections in the manuscript. Finally to all my other friends and colleagues who directly or indirectly participated in this study.

**Conflict of interest:** None.

**Financial support and sponsorship:** The study was supported by Patanjali Yogpeeth, Haridwar, Uttarakhand, 249405, India.

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