

## Importance of Oral Hygiene in Oro-Dental Diseases: A Review Study

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### ABSTRACT

Oral hygiene is the practice of keeping one's mouth clean and free of disease and other problems (e.g. bad breath) by regular brushing (dental hygiene) and cleaning between the teeth. Oral hygiene to be carried out on a regular basis to enable prevention of dental disease and bad breath. The most common types of dental disease are tooth decay (*cavities, dental caries*) and gum diseases, including gingivitis, and periodontitis.

General guidelines suggest brushing twice a day but ideally the mouth would be cleaned after every meal. Cleaning between the teeth is called interdental cleaning and is as important as tooth brushing. This is because a toothbrush cannot reach between the teeth and therefore only removes about 50% of plaque off the surface. There are many tools to clean between the teeth, including floss, flossettes, and interdental brushes; it is up to each individual to choose which tool he or she prefers to use.

Sometimes white or straight teeth are associated with oral hygiene, but a hygienic mouth may have stained teeth and/or crooked teeth. For appearance reasons, people may seek out teeth whitening and orthodontics. In *Ayurveda, Dantadhavan Vidhi* is explained as routine work in Dincharya and suggested various types of techniques like *Dantadhavan, gandusha, kawal* etc to maintain oral hygiene.

**Keywords:** oral hygiene, tooth brushing, tooth decay, dantdhawan.

### INTRODUCTION

#### ORAL HEALTH

- WHO defines oral health as “a state of being free from chronic mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual’s capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing.”
- (<https://www.who.int/news-room/fact-sheets/detail/oral-health>)
- Oral health begins with clean teeth. Keeping the area where your teeth meet your gums clean can prevent gum disease, while keeping your tooth surfaces clean can help you stave off cavities and gum disease.
- Oral diseases are the most common non-communicable diseases (NCDs) and affect people throughout their lifetime, causing pain, discomfort, disfigurement and even death.
- The Global Burden of Disease Study 2016 estimated that oral diseases affected half of the world’s population (3.58 billion people) with dental caries (tooth decay) in permanent teeth being the most prevalent condition assessed.

- Globally, it is estimated that 2.4 billion people suffer from caries of permanent teeth and 486 million children suffer from caries of primary teeth.
- Severe periodontal (gum) disease, which may result in tooth loss, was estimated to be the 11th most prevalent disease globally.

Reference: (<https://www.who.int/news-room/fact-sheets/detail/oral-health>)

According to the World Health Organization Trusted Source:

- Between 60 and 90 percent of school children have at least one dental cavity.
- Nearly 100 percent of adults have at least one dental cavity.
- Between 15 and 20 percent of adults ages 35 to 44 have severe gum disease .
- About 30 percent of people around the world ages 65 to 74 don't have any natural teeth left.
- In most countries, out of every 100,000 people, there are between 1 and 10 cases of oral cancer.
- The burden of oral disease is much higher in poor or disadvantaged population groups.
- *Dantadhavan* is a part of *Dincharya*.
- In *Charak Samhita* and *Ash.Hridaya*, *dantadhavan* mainly focused on preventive aspect while *Sushruta* mentioned it in *chikista sthana*, focuses its curative aspect.
- There is close relationship between oral hygiene and overall health of an individual as mouth is the first part of digestive system. So to keep it normal, we can use many useful herbal drugs for doing *Dantadhavan*(Tooth cleaning).
- *Dantadhavan* mainly followed by *Jivhanirlekhan*.
- Other methods e.g. *Kawal- Gandusha*.

**AIMS:**

- To assess the importance of oral hygiene in oro-dental disease.
- To verify importance of *dantdhavan vidhi* in maintaining oral hygiene.

**OBJECTIVES:**

- To compare the methods of tooth cleaning as per *Ayurveda* and modern aspect.
- To spread the awareness in society about the importance of oral hygiene, to prevent oro-dental and other systemic diseases.

**REVIEW OF LITERATURE:**

**Causes of dental and oral diseases**

There are many factors that contribute to gingivitis and periodontitis, including:

- Smoking
- poor brushing habits
- frequent snacking on sugary foods and drinks
- diabetes
- the use of medications that reduce the amount of saliva in the mouth
- family history, or genetics
- certain infections, such as HIV or AIDS
- hormonal changes in women
- acid reflux, or heartburn
- frequent vomiting, due to the acid

**ORAL HYGEINE CAN CAUSE :-**

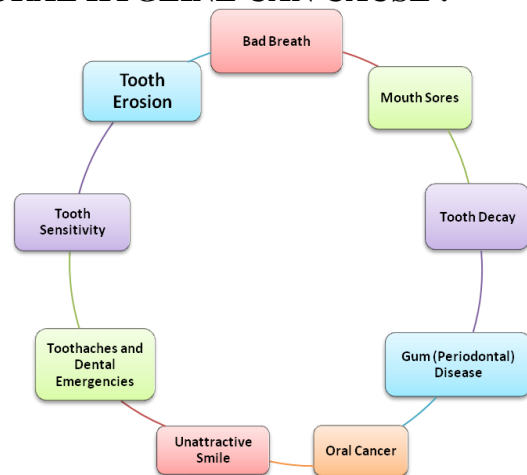


Figure 1

**Integrated Conceptual Approach Towards Maintaining Good Oral Hygiene**

<i>Dhantpavan</i> - Dhantpavan means Dhattuna or Chewing sticks.	Tooth brushing Interdental brushing Tongue scrapers Oral irrigation
<i>Jivhanirlekhana</i> - It is used for cleaning tongue with the help of tongue scraper	
<i>Kavala</i> and <i>Gandoosha</i> – oil pulling	

- **Dantadhāvana** literally means ‘cleaning the teeth’. It is one of the earliest acts in one’s daily routine. It is generally done with a small piece of a twig with its bark, taken from certain specified plants or trees having medicinal properties after shaping it like a toothbrush by crushing one of its ends.
- **Gandusha (gaegling) or oil pulling:** oil pulling is an ancient Ayurveda procedure that involves swishing oil in the mouth for oral and systemic health benefits. It is mentioned in the ayurvedic text Charaka Samhita where it is called kavala or gandusha. oil pulling has been used extensively as a traditional Indian folk remedy for many years to prevent decay, oral malodor, bleeding gums, dryness of throat, cracked lips and for strengthening teeth, gums and the jaw.
- **Brushing:** to get the best oral hygiene results from toothbrushing, use an electric toothbrush.
- **Flossing:** One method that helps maintain oral hygiene by removing bacteria from areas between the teeth that are hard to reach by brushing alone is flossing.
- **Rinsing** with a mouthwash can get to place that your toothbrush and even the deep cleaning of floss can miss. Look for a mouthwash that contains fluoride, because fluoride is proven to strengthen enamel and fight cavities. In addition, a mouthwash such as crest pro-health advanced strengthens enamel, prevents cavities, and kills bad breath bacteria.
- **Jivha nirlekhan (tongue scrapping):** it is ideal to use gold, silver, copper, stainless steel for scrapping of the tongue. Tongue scrapping stimulates the reflex points of the tongue, removes bad color (halitosis). Improves the sense of taste, stimulate the secretion of digestive enzymes.
- General guidelines suggest brushing twice a day but ideally the mouth would be cleaned after every meal. Cleaning between the teeth is called interdental cleaning and is as important as tooth brushing. This is because a toothbrush cannot reach between the teeth and therefore only removes about 50% of plaque off the surface. There are many tools to clean between the teeth, including floss, flossettes, and interdental brushes
- **DIET:** A nutritious, balanced diet is essential for your overall health, and it’s important for your oral hygiene, too. Be sure to include plenty of dairy products, fruits, vegetables, and whole grains in your diet. Some foods that are especially good for oral hygiene: cheese, yogurt, milk, and peanuts. These foods can help remove sugars from the tooth surface and protect the teeth from plaque

#### LIST OF DRUGS USED IN ORO-DENTAL DISEASES:

Sr. no.	Name of the Drug & Botanical name Properties Pharmacological actions	Properties	Pharmacological actions
1	Karanja (Pongamia pinnata) [Ch, Su, Va]	Kapha-Vatahara, Krimighana, Kandughna	Anti-inflammatory, Antioxidant and Anti-ulcer activity
2	Karaveera [Ch] (Nerium indicum)]	Kapha-Vatahara, Krimighana, Kandughna Dusta vranahara	Anti-bacterial, anti fungal, anti viral, anti oxidant, analgesic, anti ulcer, anti inflammatory, anti cancer, chemo and radio therapy supplementation
3	Saindhava[Su] (Rock salt)	Tridoshaghna, Rochaka, Deepana	Antacid, Carminative, Digestive Stimulant, anti helmenthic, Antioxidant (due to trace minerals), Anti-inflammatory (mild action)
4	Nimba [Su] (Azadirachta indica)	Kaphapittahara, Krimighna, deepana, Vranahara, Chardihara, Vishahra	Anti fungal, anti bacterial, anti inflammatory, anti tumour
5	Trikatu Shunti (Zingiber officinalis) Maricha(Piper nigrum) Pippali(Piper longum)	Deepana, Pachana	Anti tumour, Anti microbial, Anti fungal, Analgesic, Anti inflammatory[15], Appetizer and digester
6	Trisugandha-[Su] Twak(Cinnamomum zeylanicum) Ela(Elettaria cardamomum) Patra(Cinnamomum tamala)	Deepana, Pachana mukhashodhan	Anti inflammatory, Analgesic, Anti oxidant, odorant, Anti microbial, Anti cancerous, Anti emetic

Table to be continued...			
7	Arka [Ch, Va] (Calotropis gigantea)	Vata hara, Vishaghna, Deepana, Shophahara, Vranahara, Krimihara, Kanduhara, Visharogahara	Anti bacterial, free radical scavenging, wound healing, anti inflammatory, anti cancerous, analgesic
8	Malati [Ch] (Jasminum grandiflorum)	Vranahara, Mukhapakahara, Dantarati, Vishahara	Anti bacterial, anti inflammatory, anti ulcer, anti microbial, anti oxidant
9	Arjuna [Ch, Va] (Terminalia arjuna)	Trishnahara, Sadyovranahara,	Anti microbial, anti fungal, anti tumour, expectorant, anti cancer
10	Khadira [Su, Va] (Acacia catechu)	Kaphapittahara, Dantya, deepana, Aruchihara, Krimihara, Vranahara, Dantarogahara	Anti oxidant, Anti inflammatory, Analgesic, Anti microbial
11	Taila [Su] (Sesamum indicum)	Vataroga hara, Agnimandya	Anti oxidant, strengthens nerves, anti bacterial, Anti viral, Analgesic, Anti cancerous
12	Madhooka [Su] (Glycyrrhiza glabra)	Tridoshaghna, Rasayana, Vrana Shothahara, Chardi Trishnahara, Daha, Raktapitta	Anti ulcer, Anti oxidant[11]
13	Kshoudra (Honey) [Ch, Su, Va]	Kaphavatahara, Chardi, Trit, Krimi, Ropaka, Vishahara.	Anti bacterial, anti microbial, promotes oral wellness, gingivitis, anti oxidant,[12]

## CONCLUSION

- Oral hygiene is the practice of keeping one's mouth clean and free of disease and other problems (e.g. bad breath) by regular brushing (dental hygiene) and cleaning between the teeth. Oral hygiene to be carried out on a regular basis to enable prevention of dental disease and bad breath. The most common types of dental disease are tooth decay (*cavities*, *dental caries*) and gum diseases, including gingivitis, and periodontitis.
- Ayurveda recommends some daily use therapeutic procedures for the prevention of and maintenance of oral health. These include: *Dantadhavan* (Brushing), *Jivhanilekhana* (Tongue scrapping) and *Gandoosha* (gargling) or oil pulling.
- The cost of Ayurveda is much lower, it is closer to the community, and patients get personal attention or the healing touch of the practitioner who speaks the same language.
- According to World health Organization (WHO) 75% of the world's population uses herbs for basic health care needs. WHO has recommended for the incorporation of the traditional systems of medicine like Ayurveda into the primary health care system, for those communities where it is accepted.
- All the Ayurvedic medicines and local remedies discussed above (oil pulling, herbal chewing sticks, ayurvedic herbs

etc.) are easily available in the rural areas where socioeconomic condition of the people is not good enough to buy costly toothpaste or curative medicines.

- The literature showed that there are numerous Ayurvedic drugs, which can be used in prevention as well as management of oral diseases. Many Ayurvedic herbal plants, which are reviewed, possess antimicrobial, anti-inflammatory, analgesic, antiulcer genic activities when screened according to the modern parameters.

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