



# A New Perspective on the Introduction of Some Medicinal Plants for Oral Health and Teeth



Ebrahim Alinia-Ahandani<sup>1\*</sup>, Zahra Alizadeh-Tarpoei<sup>2</sup>, Milad Sheydaei<sup>3</sup>, Zeliha Selamoglu<sup>4</sup> and Mahdi Alinia-Ahandani<sup>5</sup>

<sup>1</sup>Department of Biochemistry, Payame Noor University, Tehran, Iran

<sup>2</sup>Department of Biology, Faculty of Basic Sciences, University of Gilan, Iran

<sup>3</sup>Faculty of Polymer Engineering, Sahand University of Technology, Tabriz, Iran

<sup>4</sup>Medical Biology Department, Medicine Faculty, Nigde Omer Halisdemir University, Nigde, Turkey

<sup>5</sup>Department of Occupational Health, School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

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**\*Corresponding author:** Ebrahim Alinia-Ahandani, Department of Biochemistry, Payame Noor University, Tehran, Iran

## Abstract

Medicinal plants are considered as a major asset in any society. The role of these plants is more visible today than ever before and requires a stronger position every day. In recent years, research on their effects in various areas, including the fight against disease. Today's lifestyle changes have caused various foods to cause more serious harm to humans by having substances and plaques that destroy oral tissue health. Viral and bacterial as well as using like mouthwashes and cleaners, fight against cancer and dietary supplements are developing and evolving. Chemical drugs, due to their side effects, sometimes damage other parts of the body. They need to be researched more in the future. In this short review paper, the effects of some of the most important medicinal plants like *Curcuma longa*, *Ananas comosus*, *Zingiber officinale*, *Salvia rosmarinus*, *Mentha piperita* and *Syzygium aromaticum*, that are used today to treat and improve oral health issues are introduced. Finally, suggestions for better and more use are given.

**Keywords:** Medicinal plants; Oral health; Foods; Viral; Improve

## Introduction

Medicinal plants are agents that contain one or more of their active ingredients. This substance, which makes up less than 1% of the dry weight of the plant, has medicinal properties that affect living organisms. Medicinal plants contain many ingredients that are used to treat diseases and eliminate its symptoms [1-7]. Herbal medicine uses plant seeds, roots, leaves, bark or flowers for medicinal purposes. The biological properties of these plants have beneficial effects. Herbs are used to treat chronic and acute diseases and various ailments, including cardiovascular disease, prostate problems, depression, inflammation, oral issues and immune system. Medicinal plants are used all over the world to treat diseases and many studies show their effectiveness. Today, the tendency to use herbal medicines has become more popular [8-11]. The side effects of chemical drugs, environmental requirements and the gradual trend towards natural products have led to the acceleration of the use of medicinal plants in some developed and developing countries, especially in the last

decade, but its unknown side effects pose a serious threat to their arbitrary and excessive use.

At present, the misconception is that herbal medicines have fewer side effects and are less dangerous, while this is not true, and any herbal medicine has side effects in addition to its benefits. Other factors that affect the properties of the plant, such as the type of environment in which the plant grows, how it is harvested and how it is processed in order to obtain the extract, by soaking in water, alcohol or other solvents to extract some chemicals [12-14]. Manufactured products include dozens of chemicals, including fatty acids, steroids, alkaloids, flavonoids, glycosides, saponins, etc. Painful diseases such as arthritis (inflammation of the joints), back pain and tendonitis (inflammation of the tendons) are caused by inflammation. Inflammation is a natural reaction of the immune system to infection or injury [15]. If inflammation becomes chronic, it can cause other diseases such as cancer, cardiovascular disease, and diabetes in addition to causing pain.

In the following, we will introduce you six medicinal plants that are often used as natural pain relievers.

### **Tumeric (*Curcuma longa*)**

Turmeric or Currant (Scientific name: *Curcuma longa*) is a type of known plant and spice. Turmeric belongs to the genus of *Liliopsida*, the order of *Zingiberales*, the genus of *Zingiberaceae*, and the *curcuma* species [16-19]. Turmeric powder is a dark yellow color that is one of the most widely used spices in the world. The main habitat of this plant is India and Iran, also it is the main part of the famous curry spice. This plant is one of the most powerful antioxidants and reduces inflammation in the body, repairs the skin and improves cognition (memory) [20,21]. Turmeric, due to its richness in a chemical called curcumin, improves insulin resistance in diabetics, neutralizes excess blood insulin, and thus prevents fatigue caused by low blood glucose and reduced appetite and weight. In traditional medicine, turmeric is used to relieve the pain of arthritis and oral health; Because this plant contains an antioxidant called Curcumin. According to studies, curcumin can overcome cytokines (proteins that are secreted following the inflammatory process) and be an effective analgesic [22,23]. Prostaglandins are produced in various tissues of the body in response to tissue damage or infection and as part of the healing process. They cause inflammation, pain and fever. Therefore, curcumin can also have analgesic effect by inhibiting the effect of prostaglandins. Curcumin is also effective in reducing pain associated with autoimmune disorders and tendonitis [24].

### **Pineapple (*Ananas comosus*)**

Pineapple is known as a fruit and herb that is generated from southern Brazil and Paraguay. Its size is 1-1.5 meters and the size of the ridge on it is up to 30-100 centimeters. This fruit would be called hincarp in horticulture [24-26]. It is a perennial plant belonged to the tropics of the Americas. It has prickly and pleasant fruits; In Cuba, Puerto Rico and Hawaii, pineapple is extended. The fruit and flesh of the fruit are highly canned [26]. Also in the Philippine Islands, thorny leaves are used to weave threads. According to the FAO in 2019, Brazil, Thailand, Philippines, Costa Rica and India are the largest producers of pineapples. Bromelain is an enzyme extracted from pineapple stems. It contains prostaglandin levels. Prostaglandins are lipid compounds that have hormonal-like effects in the body and therefore can have different effects depending on the type of receptors to which they bind. If you have arthritis, diseases related to musculoskeletal stress, such as temporomandibular joint syndrome, or trauma-related inflammation, bromelain can help and relieve pain. Reduce. This enzyme is also found in fresh pineapple fruit. Bromelain can also help repair and improve muscle and connective tissue and also has a great researched effect on oral health [27].

### **Ginger (*Zingiber officinale*)**

Ginger (*Zingiber officinale*), (from Middle Persian Sangipel, also in some ancient texts named as Shengvir) is a flowering

plant of the ginger family, the stem of which is used as a spice or medicinal plant in traditional medicine [28,29]. This plant is native to Southeast Asia. Their flowers are yellowish green with purple edges and creamy spots and small, conical and dense spike flowers that emerge from the stem in summer. The main ingredients of ginger include sugars (from 50 to 70%), fats (from 50 to 70%). Up to 18%), oleoresin (from 4 to 7.5%) and caustic compounds (from 1 to 3%). 1 tablespoon of fresh ginger (ie 6 g) contains 5 calories, 1 g of carbohydrates and a very small amount of fat, protein and fiber. Drinking ginger tea helps relieve colds and congestion caused by colds and can get better effects on oral health. On the other hand, taking supplements containing ginger is effective in reducing pain [30]. Ginger relieves pain caused by arthritis by lowering prostaglandin levels. Some studies show that ginger can reduce pain and inflammation more effectively than non-steroidal anti-inflammatory drugs such as aspirin [31,32].

### **Rosemary (*Salvia rosmarinus*)**

Roman rosemary (*Salvia rosmarinus*), a perennial woody plant with fragrant, evergreen, needle-like leaves and white, pink, purple or blue flowers, is native to the Mediterranean region. Until 2017, it was known by the scientific name *Rosmarinus officinalis*, which is now just a synonym [33]. This plant is from the Lamiaceae family of mint, which also includes many plants. The name "rosemary" is derived from the Latin *ros marinus* ("sea dew"). Rosemary is known in traditional medicine as a weak analgesic [34,35]. According to a two-week study of stroke sufferers suffering from shoulder pain, they were given rosemary-containing analgesic gel twice daily for 20 minutes with acupressure (a technique similar to acupuncture performed with fingertip pressure.) Received a 30% reduction in pain; But those treated with acupressure without rosemary gel had only a 15% reduction in pain. Researchers have also found that rosemary oil can be more effective than acetaminophen in relieving pain, according to another animal study [36]. Of course, the concentration of rosemary oil is important in creating an analgesic effect; if it is higher than a certain limit, it can have the opposite effect, so to relieve pain, instead of pure rosemary oil, using specialized products formulated for this purpose would be mentioned. On the other hand, rosemary oil is likely to reduce tissue inflammation that inflammatory pain can also lead to swelling, pain, and stiffness. In a study of people with rheumatoid arthritis, people who received a 15-minute knee massage with rosemary oil three times a week had inflammatory pain. Their knee area was reduced by 50%. However, the rate of pain reduction in the group of patients who did not use rosemary oil was only 12% [37,38]

### **Peppermint (*Mentha piperita*)**

Peppermint (*Mentha piperita*) is a species of mint, it is a plant of the continuous dicotyledonous petals, which is an edible and medicinal vegetable [39-41]. This plant is also called lily of the valley, peppermint, halibut and asparagus. Peppermint has anti-inflammatory, antimicrobial and soothing effects. The active ingredients in peppermint oil are carvacrol, menthol and limonene.

Diluted peppermint extract is often used in topical analgesics. Peppermint is traditionally used to relieve painful spasms and problems associated with arthritis. Rubbing peppermint oil on the temples and forehead can also relieve tension headaches (the most common type of headache). However, you should avoid rubbing peppermint oil on cut skin, because this substance can cause allergic reactions. For this reason, you should do a skin sensitivity test before using peppermint oil on the painful area. To do this, apply a small amount of oil on the skin of your arm. If after 24 hours there are no signs of allergies such as redness, itching, swelling, etc., topical application of this oil will most likely be safe for you. Note that this oil should not be used for children [42-44].

### Clove (*Syzygium aromaticum*)

Clove is a type of medicinal plant; the tree of this plant is green all the year. The flowers of this plant have a strong aromatic smell and the height of the tree is 10 to 12 meters and sometimes it grows up to 20 meters and has large leaves with red flowers. The flower buds are pale at first and gradually turn green and then red, at which time the fruit of the tree is ready to be harvested. It is used as a spice in pickles and its seeds are also used as medicine [45,46]. Carnation is currently harvested primarily in India, Indonesia, Madagascar, Iran, Zanzibar, Pakistan, Vietnam, and Sri Lanka. Cloves, like other herbal supplements, can be used to treat a wide range of ailments. Cloves help reduce nausea and treat colds. This plant can also relieve headaches and pain caused by arthritis. Clove also has a toothache effect. In addition, cloves can be used as a topical analgesic. One study suggests the use of cloves to treat fungal infections, although more research is needed to prove its effectiveness [47,48]. Eugenol, the active ingredient in cloves, is a natural painkiller found in some over-the-counter medications. Rubbing a small amount of clove oil on the gums can relieve toothache temporarily until you see a dentist; but if you apply a lot of undiluted clove oil on your gums, it will probably damage your gums; Therefore, it is better to consult your dentist before using this method at home [49-51]. If you have bleeding disorders or are taking blood-thinning medications, you should be very careful when consuming products containing cloves, as clove oil can increase the risk of abnormal bleeding.

### Discussion

In order to promote community health and eliminate the exorbitant costs of treatment, it is enough to create a proper culture about these products so that communities are encouraged to use these natural medicines and do not start using chemical medicines with any small disease. For example, the common cold or common new weak mutations of Covid 19 are some of the diseases that people get several times a year, if you are careful, people who constantly take a variety of pills to cure this disease (even before the disease and with the least symptoms to try), they take more colds than other people for a long time, but people who are more resistant and use less pills and chemicals have a stronger immune system and last longer [52-58]. They achieve a short

recovery time. By reviewing the cost of oral treatment in dental clinics and offices and considering that the price of many dental equipments and materials has raised hugely, you will surely come to the conclusion that the best way is to take care of and prevent oral disease.

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