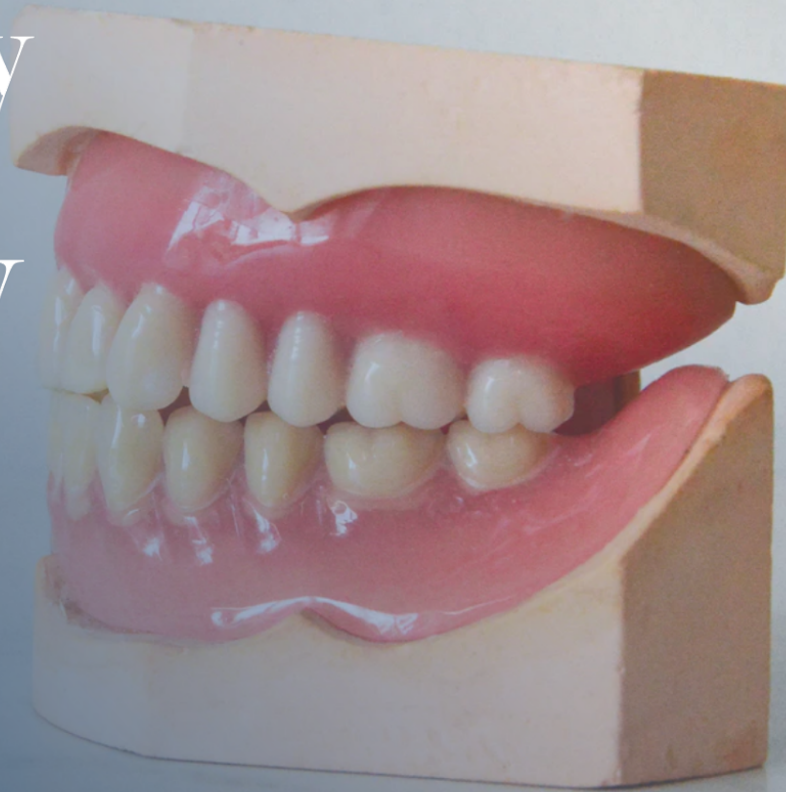


# Homeopathy *and* Dentistry

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According to the Centers for Disease Control (CDC), the US population is currently plagued by at least two major dental health related challenges: periodontal (or gum) disease,<sup>1</sup> and the over prescription of opioids for alleviating dental and oro-facial pain.<sup>505</sup> The dental profession has been struggling to find better and safer alternatives in the management of these and other dental challenges for many years, yet the incidence of these problems has not decreased. Any safe and effective alternatives to their management could save thousands of lives in this country annually.

## Periodontal disease

According to the American Academy of Periodontology (AAP), periodontal disease is a chronic inflammatory disease that affects the gum tissue and bone supporting the teeth. If left untreated, periodontal disease can lead to bone and tooth loss. Research has also shown that periodontal disease is associated with other chronic

inflammatory diseases, such as diabetes<sup>506</sup> and cardiovascular disease.<sup>507</sup>

According to recent findings from the Centers for Disease Control and Prevention (CDC), one out of every two American adults over age 30 has periodontal disease. According to a study published by the International and American Associations for Dental Research, 47.2%, or 64.7 million American adults, have mild, moderate or severe periodontitis, the most advanced form of periodontal disease. In adults 65 and older, prevalence rates increase to 70.1%.<sup>508</sup>

For decades, physicians and dentists have paid close attention to their own respective fields, specializing in medicine pertaining to the body and the oral cavity, respectively. However, recent findings have strongly suggested that oral health may be indicative of systemic

<sup>505</sup> Wong WJ, Keenan J, Hudson K, et al. Opioid, NSAID, and OTC Analgesic Medications for Dental Procedures: PEARL Network Findings. Europe PMC. (PMID:27875056) <https://europepmc.org/abstract/med/27875056>

<sup>506</sup> Grossi SG, Genco RJ. Periodontal Disease and Diabetes Mellitus: A Two-Way Relationship. Ann Periodontology 1998;3(1):51-61. <https://doi.org/10.1902/annals.1998.3.1.51>

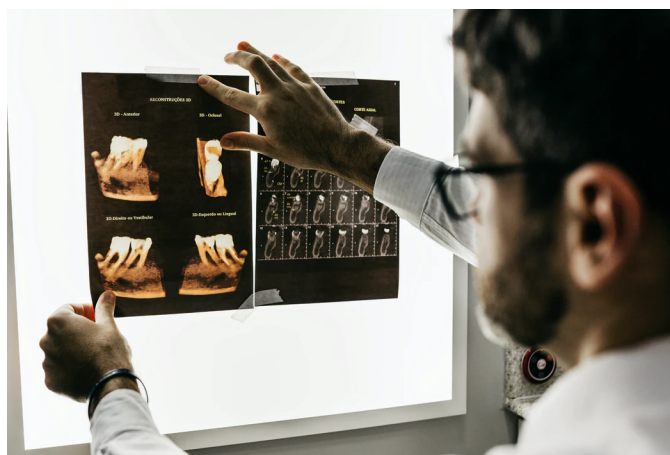
<sup>507</sup> Beck J, Garcia R, Heiss G, et al. Periodontal Disease and Cardiovascular Disease. J Periodontology 1996;67(10S):1123-1137. <https://doi.org/10.1902/iop.1996.67.10s.1123>

<sup>508</sup> Eke PI, Dye BA, Wei L, et al. Prevalence of Periodontitis in Adults in the United States: 2009 and 2010. J Dental Res 2012;91(10):914-20. doi:10.1177/0022034512457373

health. Currently, this gap between allopathic medicine and dental medicine is quickly narrowing, due to significant findings supporting the association between periodontal disease and other systemic conditions such as osteoporosis.<sup>509</sup> Significant effort has led to numerous advances revealing the etiological and pathological links between chronic inflammatory dental disease and systemic conditions. There is reason to hope that the strong evidence from these studies will guide researchers towards greatly improved treatment of periodontal infection that will also ameliorate these systemic illnesses. Hence, researchers must continue, not only to uncover more information about the correlations between periodontal and systemic diseases, but also to focus on positive associations that may result from treating periodontal disease as a means of ameliorating systemic diseases<sup>510</sup>

Published research studies using homeopathic medicines to treat patients with periodontal disease have shown positive results.

A 2006 report demonstrated that homeopathic treatment had maximal anti-inflammatory effects and is clearly indicated for comprehensive treatment of inflammatory periodontal diseases in patients with burdened allergic status.



A 2012 study of a topical homeopathic medicine, "rich in quercetin, carotenoids, lutein, lycopene, rutin, ubiquinone, xanthophylls, and other antioxidants... has anti-inflammatory properties...[and] has been shown to inhibit recombinant human matrix metalloproteinase (MMP) activity and decrease the expression of tumor necrosis factor- $\alpha$ , Interleukin-1B (IL), IL-6 and IL-8 in phorbol 12 myristate 13-acetate and calcium

ionophore-stimulated human mast cells," examined its effects on human gingival fibroblast mediated collagen degradation and MMP activity. The authors concluded that homeopathic treatment effectively inhibited Human Growth Factor-mediated collagen degradation and MMP activity more than the corresponding concentration of quercetin alone would have allowed. This study attributed additional properties to homeopathic medicine beyond what its chemical components would have accounted for.

<sup>511</sup>

A single-blind randomized controlled clinical trial with 60 subjects aged between 35 and 70 years old, compared 40 subjects with chronic periodontitis (CP) against 20 healthy volunteers (HG). Patients were treated with either conventional periodontal treatment alone, or conventional periodontal treatment plus homeopathy. Assessments were determined at baseline and after 90 days of treatment. The local and systemic responses to the treatments were evaluated by clinical and laboratory parameters, respectively. After treatment, patients receiving conventional periodontal treatment with homeopathic treatment experienced some reduction in LDL cholesterol, while those who received only conventional periodontal treatment without homeopathy did not demonstrate these health benefits. The authors concluded that homeopathy, as an adjunctive to conventional periodontal treatment, has significant additional benefits compared with conventional treatment alone.<sup>512</sup>

A randomized double-blinded controlled trial was performed one-year after the above trial, and included 50 patients with chronic periodontitis (CP) who were assigned to one of two treatment groups: scaling and root planing alone, or scaling, root planing plus homeopathic treatment. Assessments were made at baseline and after 3 and 12 months of treatment. The local and systemic responses to these treatments were evaluated by clinical and serologic parameters, respectively. Both groups displayed significant improvement, but the homeopathically treated group demonstrated statistically significantly greater clinical improvement in HDL, LDL, Total Cholesterol, Triglycerides, Glucose and Uric acid, from baseline to 1 year. Both the homeopathic and conventional groups experienced reduced periodontal pockets, suggesting that conventional periodontal care is effective locally. The findings of this 1-year follow-up randomized clinical trial suggest that homeopathic medicines, as an adjunctive to conventional scaling and

<sup>509</sup> Geurs N, Lewis CE, Jeffcoat MK. Osteoporosis and periodontal disease progression. *Periodontology* 2000 2003;32(1):105-110. <https://doi.org/10.1046/.0906-6713.2003.03208.x>

<sup>510</sup> Kim J, Amar S. Periodontal disease and systemic conditions: a bidirectional relationship. *Odontology* 2006; 94(1):10-21. doi: 10.1007/s10266-006-0060-6 [https://www.cdc.gov/oralhealth/periodontal\\_disease/index.htm](https://www.cdc.gov/oralhealth/periodontal_disease/index.htm)

<sup>511</sup> Saini P, Al-Shibani N, Sun J, et al. Effects of *Calendula officinalis* on human gingival fibroblasts. *Homeopathy* 2012;101(2): 92-8. <https://www.ncbi.nlm.nih.gov/pubmed/22487368>

<sup>512</sup> Mourao LC, Moutinho H, Canabarro A. Additional benefits of homeopathy in the treatment of chronic periodontitis: A randomized clinical trial. *Complement Ther Clin Pract* 2013;19(4) 246-50. Doi: 10.1016/i.ctco.2013.05.002.

root planing, provide significant local and systemic improvement for chronic periodontitis patients.<sup>513</sup>

A clinical study of a homeopathic medicine evaluated bleeding and plaque index as a means of investigating its effect on gingivitis. Gingival inflammation and plaque formation are major health problems worldwide.<sup>514</sup> The objective of this study was to determine the effects of homeopathic treatment on bleeding and plaque index in gingivitis. Thirty gingivitis patients were randomly assigned to homeopathic treatment or control groups. All subjects were instructed to use toothpaste twice daily for 6 months. Clinical data, which included an analysis of plaque, gingivitis and bleeding upon probing were assessed at baseline, 3 and 6 months. Results demonstrated a significant improvement in all the clinical parameters in the homeopathic treatment group ( $p=0.001$ ) compared with the control group. Repeated-measures also demonstrated significant differences ( $P.0001$ ). The authors concluded that homeopathic treatment led to significant mean reductions in all measured indices of gingivitis during and after homeopathic treatment.<sup>515</sup>

## Oro-facial pain and Opioid abuse

According to a study from the Stanford University School of Medicine, teenagers and young adults who receive initial opioid prescriptions from their dentists or oral surgeons have a 15 fold higher risk of developing an opioid addiction over the next year than those who aren't prescribed this class of drug. The lead researcher of this study, which reviewed records of 15,000 young adults, asked: "Why are we prescribing such a high quantity of opioids so frequently?"<sup>516</sup>

Trigeminal neuralgia (also known as Tic Douloureux) is a neuropathic disorder of the trigeminal nerve that causes episodes of intense pain in the eyes, lips, nose, scalp, forehead, and jaw. This ailment tends to develop after the age of 40, though there have been cases with patients who are much younger. Trigeminal neuralgia is considered to be among the most painful conditions, and is therefore labeled "the suicide disease," due to the significant number of people who have taken their own lives as a

result of being unable to control their pain with either medications or surgery.<sup>517</sup>

Using visual analogue scales and descriptive criteria, a group of 15 patients with physician-confirmed trigeminal neuralgia were found to exhibit statistically significant reductions in pain intensity and attack frequency ( $P<0.001$ ) during and after four months of individualized homeopathic treatment. The researchers observed overall reductions in pain intensity by more than 60% using homeopathic treatment and concluded that homeopathic treatment is an effective and safe method for the treatment of this condition.<sup>518</sup>

A placebo controlled study on dental neuralgia (a stabbing, burning, and often severe pain), carried out at the Faculty of Medicine in Marseilles, France, determined that homeopathic treatment was effective for people suffering from this condition. The study, which included 60 subjects, found that twice as many (76%) responded favorably to homeopathy compared to only 40% who responded to placebo.<sup>519</sup>

Paresthesia is an abnormal sensation (e.g., a tingling, pricking, chilling, burning, or numb sensation) and paralysis is a loss of muscle (motor) function in one or more muscles, which can be accompanied by a loss of sensation if sensory nerves are damaged. Both conditions can originate from injuries to the trigeminal nerve and its terminal branches, which sometimes occur as a result of dental implants and other surgical procedures. A report published in 2013 concluded that homeopathy is an effective adjunct therapy in treating postoperative paresthesia in the dental setting. Homeopathic treatment appears to act locally at the site of damaged nerves, but was also found to contribute to overall health improvement, which was cited in reports as increased confidence and reduced stress. The authors of this study concluded that homeopathic treatment is effective as an adjuvant therapy in cases of post-surgical paresthesia, contributing to the reversal of local oral symptoms as well as improving overall health.<sup>520</sup>

In addition to success in treating periodontal disease and oro-facial pain, homeopathy demonstrates promise in

<sup>513</sup> Murao LC, Cataldo DM, Moutinho H, et al. Additional effects of homeopathy on chronic periodontitis: A 1-year follow-up randomized clinical trial. *Complement Ther Clin Pract* 2014;20(3):141-6. DOI: 10.1016/j.ctcp.2014.03.003

<sup>514</sup> Tonetti MS, Jepsen S, Jin L. Impact of the global burden of periodontal diseases on health, nutrition and wellbeing of mankind: A call for global action. *J Clin Periodontology* 2017;44(5):456-462. DOI: 10.1111/jcpe.12732

<sup>515</sup> Reddy ES, Sharma PK, Raj P. A clinical study on effect of *Plantago* in gingivitis by assessing bleeding and plaque index. *Indian J Res Homeopathy* 2018; 12:132-8. <http://www.ijrh.org/article.asp?issn=0974-7168;year=2018;volume=12;issue=3;page=132;epage=138;aulast=Reddy>

<sup>516</sup> Schroeder AR, Dehghan M, Newman TB, et al. Association of Opioid Prescriptions From Dental Clinicians for US Adolescents and Young Adults With Subsequent Opioid Use and Abuse. *JAMA Intern Med* 2019; 179(2):145-152. doi: 10.1001/iamainternmed.2018.5419

<sup>517</sup> Wu N, Lee J, Zakrzewska, et al. Trigeminal neuralgia: pharmacotherapy and surgical treatment patterns in the United States. *J Pain* 2017;18(4)(suppl):69S. doi: <https://doi.org/10.1016/j.jpain.2017.02.352>.

<sup>518</sup> Mojaveri YN, Mosavi F, Mazaherinezhad A, et al. Individualized homeopathic treatment of trigeminal neuralgia: an observational study. *Homeopathy* 2007;96(2):82-86. DOI:10.1016/j.homp.2007.02.006

<sup>519</sup> Albertini H, Goldberg W, Sanguy B, et al. Homeopathic treatment of dental neuralgia by *Arnica* and *Hypericum*. *J American Institute Homeopathy* 1985; 3:126-129. [https://www.researchgate.net/publication/269103523\\_Homeopathic\\_Medicine\\_An\\_Adjuvant\\_For\\_Dentistry\\_A\\_Review](https://www.researchgate.net/publication/269103523_Homeopathic_Medicine_An_Adjuvant_For_Dentistry_A_Review)

<sup>520</sup> Mourao LC, Moutinho HM, Canabarro A. Role of homeopathy in post-surgical dental implants paresthesia — a case report, *J Case Studies Homeopathy* 2013;1(1):6-10.

managing xerostomia (dry mouth), aphthous ulcers and other oral conditions.

Twenty-eight patients with xerostomia were included in a double-blind, placebo-controlled randomized longitudinal study with crossover, utilizing individually chosen homeopathic medicines. Most patients in this study had concomitant systemic illnesses, including rheumatoid arthritis and/or Sjogren's syndrome, and took daily medications. Eighty-six percent of the homeopathic treatment group experienced a significant reduction of xerostomia, while no benefit was seen in the placebo group. In an unblinded, open follow-up crossover period, those subjects who had received placebo in the first phase (and failed to improve) were treated with individually prescribed homeopathic medicines and demonstrated improvement of xerostomia. The authors concluded that individually prescribed homeopathic medicine is a valuable adjunct to the treatment of oral discomfort and xerostomia.<sup>521</sup>

A randomized, single blind, placebo-controlled clinical trial of individualized homeopathy was performed in 2009 to clinically investigate the efficacy of homeopathy in the treatment of minor recurrent aphthous ulceration. One hundred subjects with minor aphthous ulceration were treated with individualized homeopathic medicines and evaluated for pain intensity and ulcer size. Results conclusively demonstrated a statistically significant difference between homeopathic treatment and placebo at day 4 and day 6 ( $P < 0.05$ ). No adverse effects were reported. The authors concluded that homeopathic treatment is an effective and safe method in the treatment of aphthous ulcers.<sup>522</sup>

It is clear from this brief review of some of the available science, that the use of homeopathy is associated with significant benefit in the field of dentistry. At the same time it is remarkable that many investigators also noted that homeopathic treatment contributes toward improvements in overall global health. The use of homeopathy holds promise since it is safe, inexpensive and easily applied. Much more research is needed in this field.

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<sup>521</sup> Haila S, Koskinen A, Tenovu J. Effects of homeopathic treatment on salivary flow rate and subjective symptoms in patients with oral dryness: a randomized trial. *Homeopathy* 2005; 94(3): 175-181. <https://www.ncbi.nlm.nih.gov/pubmed/16060203>

<sup>522</sup> Mousavi F, Mojaver YN, Asadzadeh M, et al. Homeopathic treatment of minor aphthous ulcer: a randomized, placebo-controlled clinical trial. *Homeopathy* 2009; 98(3): 137-41. <https://www.ncbi.nlm.nih.gov/pubmed/19647206>