

ORAL HEALTH

QUEENSLAND POSITIVE PEOPLE



queensland
positive
people

Oral Health: Natural Therapies & Prevention

Oral Health refers to taking care of your mouth, teeth and gums, and is a very important, yet often overlooked, part of maintaining general health. There may be some complementary therapies you can use to help minimise or prevent problems with your oral health. Always consult with your doctor, oral health-care professional, or a qualified health-care practitioner for any alternative or complementary treatments you use, to ensure that:

- there is sufficient strength of evidence for their use (i.e. proven);
- they are safe, non-toxic, and specific for the condition you wish to treat or prevent;
- they are appropriate and beneficial to your particular health care needs;
- guidance is provided in the proper dosing and/or use of the treatment;
- there are no possible adverse interactions with any other medical treatments you may be taking.

Consultation with a dietician with knowledge of HIV is important before taking any nutritional supplements. There are many things to consider and seek guidance for, including:

- whether or not you have a deficiency of a particular nutrient;
- whether or not supplementation with that nutrient will improve your condition, regardless of whether you have a deficiency or not;
- Consideration of the toxicity, safety, and effects of long term use of certain supplements.

Calcium

- at least 99% of the total body content of calcium is located in the skeleton and teeth. Calcium is essential to building and maintaining of healthy bones and teeth, giving them strength. Food sources of calcium are most readily available from dairy food* sources (milk, cheese, yogurts, etc). Grain cereals, nuts, seeds, and many vegetables, and some fruits (e.g. figs) also contain appreciable amounts of calcium. Canned deep sea (red flesh) fish (with bones included such as salmon, mackerel, and tuna) are

also rich sources of calcium. Shell-fish (oysters, clams, mussels, etc.) provide the richest sources, but these sources also contain high levels of dietary-cholesterol, so they should be limited if your body-cholesterol levels are already high. Diets with adequate calcium do not require supplementation with calcium, although increased supplementation may assist where there is malabsorption (gut absorption problems), or a deficiency in bone density such as in osteoporosis. However, the regulation of calcium in the body is complex and dependant on a number of hormone substances, so advice from your doctor or dentist should be sought before considering a calcium supplement.

** Dairy Foods contain Lactose (a dietary sugar). Some people are lactose intolerant. Lactose Intolerance is a reaction to the sugar (lactose) contained in milk and dairy food, which, for some people, can cause digestive upset (e.g. diarrhoea, stomach pain, bloating, etc), due to deficiency of the enzyme (lactase) responsible for breaking down lactose. Try substituting high-lactose foods, such as cow's milk and dairy desserts, with low-lactose dairy foods, or choose calcium fortified soy milk or other non-dairy sources of calcium.*

Zinc

plays a crucial role in normal cell division and growth. It improves the rate of wound healing, although this may be less evident where there is no deficiency of zinc in the body. Oral lesions and ulcers which fail to heal, or are slow healing, through other treatments may be assisted by the addition of a zinc supplement. Zinc supplementation may also assist in correcting altered taste sensation, as deficiencies in zinc are associated with diminished sense of taste and smell, and appetite loss. Lack of zinc is also associated with parasitic diseases that can affect the oral and gut linings. The toxicity of zinc is low, but large doses may cause gastric irritation leading to vomiting and diarrhoea. Zinc is more easily absorbed in the diet from proteins of animal origin (meat, fish, milk, eggs), than through vegetarian (or especially vegan) diets which may not achieve the recommended daily intake (RDI)*, although nuts and seeds are good sources of zinc.

General References:

- Leonard Mervyn. The Dictionary of Minerals, The Complete Guide to Minerals and Mineral Therapy. Lothian Publishing Company Pty. Ltd. ISBN 0 85091 222 9.
- Philip C. Calder and Samantha Kew. The immune system: a target for functional foods? British Journal of Nutrition (2002), 88, S165-S176.
- Rebecca B Costello; Judith Grumstrup-Scott. Zinc: What role might supplements play? American Dietetic Association. Journal of the American Dietetic Association, Chicago, Mar 2000.

** The Recommended Daily Intake (RDI) of Zinc (for men and women) is 12mg. It is unknown whether people with HIV have increased requirements for zinc. Zinc is an important immune system nutrient that may be deficient in people with HIV - particularly those with absorption problems. Zinc helps resist against infections, but excessive intakes can impair immune responses and can upset the balance of other important immune system nutrients (e.g. copper).*

Vitamin C

has long been known as an essential nutrient - essential because the human body does not manufacture its own vitamin C, and because of its vital nutritional role. Vitamin C's primary role involves the manufacture and maintenance of connective tissue for both skin and bone (including teeth); It is therefore important in wound healing, and may assist healing of some oral lesions (ulcers) or inflammation in the mouth and bleeding gums. As an antioxidant, Vitamin C is also a potent scavenger of 'free radicals', protecting against body tissue damage caused by chemical pollutants, cigarette smoke and environmental toxins, which can affect the oral cavity and teeth condition. Vitamin C can be found abundantly in many fruit and vegetable food sources such as acerola cherries, blackcurrants, blackberries, guavas, lychees, strawberries, tomatoes, along with herbs such as parsley, and vegetables such as cabbages, watercress and lettuce. Increased requirements of Vitamin C are helpful during times of stress, after surgery (including dental surgery), and to counter the effects of tobacco smoking and consumption of alcohol.

General References: Leonard Mervyn. The Dictionary of Minerals, The Complete Guide to Vitamins and Vitamin Therapy. Lothian Publishing Company Pty. Ltd. ISBN 0 85091 191 5.



Golden Seal

is a famous North American Indian herb. Golden seal is useful as a mouthwash or gargle to combat infected gums, sore throats, and mouth ulcers associated with infections such as *Candida albicans* (thrush) and *trichomonas* (oral and intestinal parasites, with some species found particularly around the tarter of teeth). Golden seal's major constituents (hyrastine & berberine) both exhibit a strong anti-viral action, and the herb can be taken internally - however take separate doses for mouth gargling and rinsing.

Warning: Golden seal should **not** be taken when pregnant, as berberine stimulates the uterus to contract.



Tea Tree Oil

is a natural anti-fungal agent, which used as a diluted (1% added to water) mouthwash can also help guard against fungal infections and protect against infection into ulcerated wounds in the mouth. Do not swallow this oil - lightly gargle and spit out only.

Cider Vinegar

used as a mouthwash may also help in this regard.

General Reference: Vazquez JA and Zawawi AA. Efficacy of alcohol-based and alcohol-free *Melaleuca* oral solution for the treatment of fluconazole-refractory oropharyngeal candidiasis in patients with AIDS. HIV Clinical Trials 2002; 3 (4): 379-385.

Fresh Parsley

chewed after meals helps cleanse the teeth and palate of food odours and freshens the breath.

Salt water gargle

can assist to sterilise infections in the mouth and throat. While it may sting, it may also assist in healing small wounds and open cuts in the mouth.

Clove Oil

is strongly antiseptic. Applied with a cotton-bud to tooth decay that is causing you pain, it can assist with pain management as you await further dental care for the problem.

Warning: Clove Oil applied to the mucosa (surfaces of the mouth) or gums may cause burning and subsequent ulceration. Thus, it is imperative to use clove oil with caution and only in the most extreme circumstances - i.e. when other relief or immediate treatment is not available. A safer alternative to the concentrated oil, is to crush and finely grind some cloves and make into a fine paste by adding a little boiling water in a sterilised container, then apply the paste with a cotton-bud to the tooth cavity which is causing you pain.

General Reference: Richard Mabey, with Michael McIntyre, Pamela Michael, Gail Duff & John Stevens. The Complete New Herbal. Penguin Books. ISBN 02141 12439 5.

Propolis

is a resinous substance bees use to construct and maintain their hives. Propolis and other bee products (e.g. bee pollen, royal jelly) have been shown to be non-toxic, although reports of allergic reactions are not uncommon¹ when propolis is ingested (e.g. asthma, hay fever, hives, or serious life-threatening shock). These allergy reactions can be very serious and unpredictable, so the use of propolis is best restricted to EXTERNAL applications ONLY. Nevertheless, if using propolis as a topical (external surface) ointment, caution should also



be exercised if you have a history of allergies and skin rashes.

Propolis has exhibited antifungal, antiviral, anti-inflammatory, and

anti-tumour properties^{1&2}. For these reasons, particular emphasis has been given to the use of propolis in oral hygiene. In one double-blind clinical trial of propolis mouthwash in patients with gingivitis and periodontal disease there was significant improvement after four weeks as assessed by the degree of plaque formation and gum inflammation³. Results were confirmed by cytological examination (a medical test) of the gum epithelia (lining).

Propolis has been traditionally used to treat mouth ulcers⁴. One problem with treatment of mouth ulcers is that medicating agents are readily washed away by saliva. The healing resins in propolis adhere to the skin and mucous membranes, protecting an ulcer from the moisture of saliva. If an alcoholic tincture of propolis is used, it may stain these surfaces yellow because the resin acts as a fixative for the flavonoids (natural coloured pigments) in propolis. While this is not harmful, the stain may be slow to release and not readily removed by water.

Warning: Any attempt to heal mouth ulcers with any natural product should be limited to small and incidental ulcers only, and ONLY under the supervision of medical treatment. ALWAYS advise your doctor or dentist if you suspect you have a mouth ulcer.

Topical (external surface) and oral (ingested) use of propolis has been reported to be effective against Herpes simplex virus Type 1 (oral herpes)^{4,8,9}. Correspondingly, another study on genital herpes virus (Type 2) in 30 patients demonstrated that topical ointment treatments with bee propolis healed the viral lesions faster than acyclovir (topical ointment)⁵. Oral herpes lesions around the mouth & lips may also benefit from the topical

application of propolis ointment*, and subsequently avoid further infections entering the mouth causing an additional impact to oral health.



However, the application of such an ointment may only be of benefit in acute (early) and initial attacks, and have less effect in recurrent (repeated attacks of) herpes lesions, particularly where immune levels are low, which will require more potent medical antiviral drugs.

** Likely indication given the associations of the two type types of lesions from the herpes simplex virus (HSV) family - one usually found around the mouth and commonly called "cold sore", and the second type usually found around the anus or genital areas.*

Propolis is also active against the fungal yeast's such as *Candida albicans*⁶, although it may not be as potent compared to topical medical treatments for candida (e.g. Nystatin)⁷. One prominent study, reported in the *Journal of Oral Health Science*, collected samples of *Candida albicans* strains from HIV-positive individuals and found that propolis inhibited all strains significantly greater than most antifungal drugs, particularly where there was resistance to these drugs¹⁰. Multiple in vitro (test tube) studies of propolis demonstrate a broad-spectrum antimicrobial activity for propolis, which is relevant, at least, to its topical (external) application. This may also apply to its effects in the gastrointestinal tract, where propolis has been shown in other studies, reported in reputable medical journals, to have antibacterial effects against some gut infective bacteria². However, systemic (whole body) antibiotic effects of propolis have not been established, and therefore remain unknown.

1. Burdock GA. Review of the Biological Properties and Toxicity of Bee Propolis. *Food & Chemical Toxicology* 36: 347-363, 1998.

2. Boyanova L, Derejian S, Koumanova R, Katsarov N, Gergova G, Mitov I, Nikolov R, Krastev Z. Inhibition of *Helicobacter pylori* growth in vitro by Bulgarian propolis: preliminary report... *J Med Microbiol.* 2003 May;52(Pt 5):417-9.

3. Schmidt, H. et al. *Stomatol DDR* 30, 491, 1980.

4. Vosnjak, M. "The Miracle of Propolis", Thorsons, UK (1978).

5. Vynograd N, et al. A comparative multi-centre study of the efficacy of propolis, acyclovir and placebo in the treatment of genital herpes (HSV). *Phytomedicine* 7 (1):1-6, March 2000.

6. Cizmarik, J and Trupl, J. *Pharmazie*, 30, 406, 1975.

7. Metzner, J. et al. *Pharmazie*, 34, 97, 1979.

8. Huleihel M, Isanu V. Anti-herpes simplex virus effect of an aqueous extract of propolis. *Isr Med Assoc J.* 2002 Nov;4(11 Suppl):923-7.

9. Amoros M, Lurton E, Boustie J, Girre L, Sauvager F, Cormier M. Comparison of the anti-herpes simplex virus activities of propolis and 3-methyl-but-2-enyl caffeate. *J Nat Prod.* 1994 May;57(5):644-7.

10. Martins RS, Pereira ES Jr, Lima SM, Senna MI, Mesquita RA, Santos VR. Effect of commercial ethanol propolis extract on the in vitro growth of *Candida albicans* collected from HIV-seropositive and HIV-seronegative Brazilian patients with oral candidiasis. *J Oral Sci.* 2002 Mar;44(1):41-8.

General Reference: Propolis: A Natural Antibiotic. *Mediherb, Professional Newsletter*, December 1988. Registered by

Australia Post Publication No. QBH 4788.

Manuka Honey

marketed as Medihoney and other brands, has proven antibacterial and wound healing properties, which may represent beneficial use in certain oral health conditions of the mucosa (mouth linings) and skin. It may be most suited to external areas of the mouth and lips, as within the mouth it would be washed away by the action of saliva. However, regular consumption of this honey (along with the advice of a dietitian) may assist to overcome some susceptible bacterial infections within the mouth cavity. Manuka honey, is derived from *Leptospermum scoparium* flower sources, and is proven effective against a range of bacterial microbes. There are other sources of honey that demonstrate antibacterial activity, but few have been noted as highly active as Manuka honey. The difference between floral sources of honey and their antibacterial activity is said to be quite significant.

Note: A resource entitled "Oral Health and Your Mouth, Teeth, and Gums" is available on request from QPP, or from most Sexual Health Clinics and HIV Community Services in Queensland. This resource contains further medical and professional advice about oral health conditions and their approved oral health-care treatments and remedies. The information contained in this article is subordinate to that resource as the peak information reference.

Disclaimer:

This information in this article is intended as a guide only, and should not be used as a substitute for direct oral health-care advice and treatment from a qualified doctor or oral health-care professional provider.