



Interference Fields in the Oral Cavity

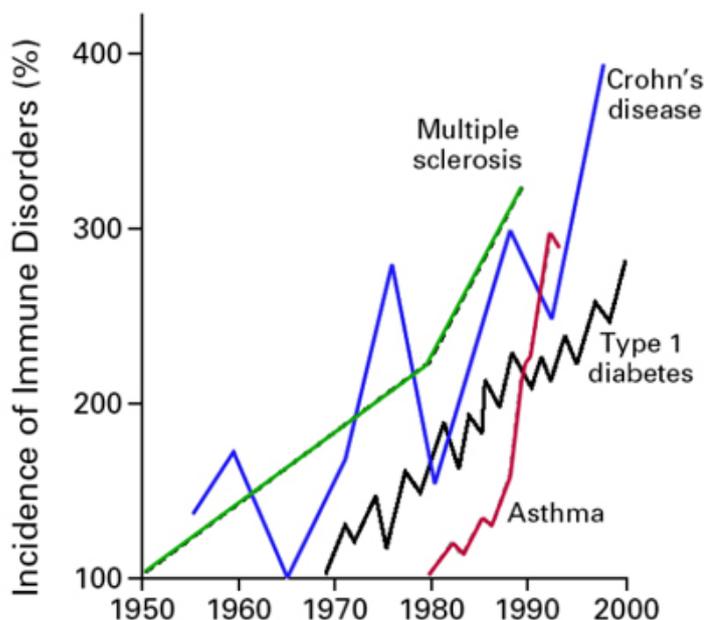
SWISS  BIOHEALTH®

The term interference field comes from the field of biological medicine and simply refers to a structural change. This includes scars and fractures, psychological trauma and, in the oral cavity, chronic centres of inflammation originating from teeth that have undergone root canal treatment and chronically inflamed areas in the jawbone, also called NICO's (neuralgia-inducing cavitational osteonecrosis).

Teeth that have undergone root canal treatment are inflammatory sources which may result in chronic problems locally, but more often at other locations in the body. Weston Price, a dentist and researcher, coined the term 'focal infection' over 100 years ago. Already back then, he identified a relationship between dead teeth and the chronic illnesses suffered by his patients. He recommended that his patients remove the teeth in question and implanted these teeth under the skin of rabbits. As a result, 80 % of the rabbits developed the same symptoms as the patient, and in the case of cardiac symptoms, there was even a 100 % correlation.

Chronic diseases are described as an epidemic of the 21st century. They include autoimmune diseases such as Hashimoto, type 1 diabetes, allergies, bowel diseases such as Crohn's disease or ulcerative colitis, but also serious neurological illnesses such as MS, Alzheimer's, Parkinson's and ALS, along with psychological problems. The environment and especially chronic inflammations and toxins present in patients' own bodies play a huge role in the development of these diseases.

Without being connected to and supplied by the blood, nervous, and lymphatic systems, a tooth is simply dead organic tissue without a function, which – due to its anatomy – is the perfect breeding ground for malicious (pathogenic) microorganisms. Each mm² in the tooth has between 30.000 and 75.000 tiny little tubes (dentine tubules). If we were to line up all the dentine tubules in one root, they would amount to approx. one kilometre. Malicious (pathogenic) bacteria reside in this vast network of tubules in dental roots, where they generate highly toxic sulphur compounds (thioether, mercaptan) [1-14], which in turn are capable of blocking processes essential for life. Because non-living, organic tissue begins to decompose over time, additional cadaveric poisons (putrescine and cadaverine) are generated as well which are also highly toxic.

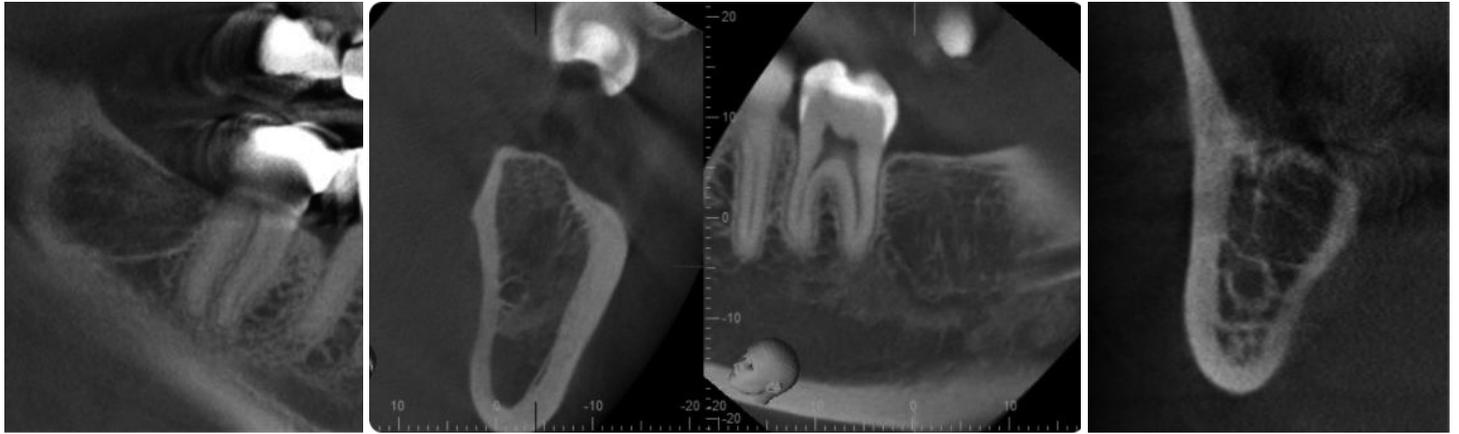


The natural immune system reacts to this infected tooth with an increased production of inflammatory messengers (TNF- α , IL-1, INF γ). This subtle activation of the phagocytes leads to chronic inflammation of the surrounding tissue, often accompanied by the formation of cysts. This is the body's attempt to seal the toxin-producing processes off from the rest of the organism. In addition to the toxicity of the hydrogen sulphide compounds (thioether/mercaptan), it is also not uncommon for the patient to have an allergic reaction to these compounds. The filling materials used in the root themselves often cause problems as well and usually contain classic allergens such as epoxy resin, Peruvian balsam or rosin. Problems generally do not present locally, but rather systemically, i.e. at other locations in the body, and thus are not always easy to diagnose.

Chronic inflammation in the jawbone is a common occurrence. Usually, these centres of inflammation are the result of old dental extraction wounds that have not healed optimally, tooth germs or foreign objects. Such cases are referred to as a NICO – neuralgia-inducing cavitation osteonecrosis. In addition to root canal treatments, these NICO's are another massive interference field for the entire body which often prevents the patient from recovering fully. The result is a fatty degenerative change in the bone. The metabolism changes, and fungi, viruses and other microorganisms begin to establish themselves. Similar to the situation in teeth after a root canal, toxins and inflammatory messengers are generated (TNF- α , IL-1, RANTES) which may result in a wide range of symptoms elsewhere in the body [15, 18-26]. These toxins can be transported into the brain via the main nerve, from where they then travel to all parts of the body (retrograde axonal transport) [16-17]. Patients with chronic fatigue syndrome (CFS), skin and bowel problems, as well as those with joint pain and mobility issues without a clear cause, should always suspect the presence of dental NICO's. In a 2014 study by Lechner and Baehr, NICO's are already discussed as being partly responsible for illnesses ranging from chronically inflamed breast tissue to the development of breast cancer. If suspected, a three-dimensional, digital volume tomography (DVT) allows them to be clearly diagnosed.



1. Diagnosis and preparations



1.1. DIAGNOSTICS

Radiological:

In some cases, inflammation and cysts at the tip of teeth that have undergone root canal treatment can already be seen on a conventional panoramic x-ray. However, they can often only be diagnosed with any degree of certainty with the use of a three-dimensional x-ray (DVT). Generally, a DVT should always be available for diagnosing interference fields. A NICO in particular cannot be clearly diagnosed without a DVT. To diagnose the extent of a NICO with regard to height, length and width, and to be prepared for the operation, a DVT is absolutely necessary, as it significantly reduces the risk of injuring the surrounding sensitive anatomical structures, such as the main nerve in the lower jaw (inferior alveolar nerve) and the sinuses in the upper jaw. Since the teeth treated with a root canal should be replaced directly with a ceramic implant wherever anatomically possible, a DVT is also highly recommended for the reasons listed above.

1.2. NEURAL THERAPY:

Test injection with 1 – 2 % procaine [27]:

The injection is basically a kind of temporary restart for the region in question. The viscerocutaneous reflex stimulates the brain into focus on that particular part of the body, and the potential interference field is 'de-coupled' from the corresponding organ for a certain period of time. In addition, procaine is enzymatically decomposed and broken down into two components locally (PABA and diethylaminoethanol). This results in increased blood circulation and the formation of new blood vessels in the corresponding area.

You will be asked to pay attention to all minimal changes in your condition for approximately 24 hours after the injection. Often, there is even a 'flash phenomenon' (Huneke) which occurs locally. Particularly in cases of shoulder-arm syndrome, this often leads to a spontaneous improvement. The effect should last for around eight hours in order to confirm the diagnosis of the tooth in question or NICO area as an interference field. The anaesthesia itself is only short-lived and starts to fade after around 30 minutes.



1.3. LABORATORY DIAGNOSTICS:

There is also the possibility of examining whether the immune system has been irritated by checking for messenger substances such as RANTES and the toxic breakdown products thioether and mercaptan. These additional examinations will be carried out by the medical department upon request.

2. Boosting the body's own regenerative abilities

NICO's arise primarily following the removal of wisdom teeth, but can also occur in any area without teeth. The reason for this is poor nutrition involving a lot of sugar, wheat and products made with cow's milk, or because of insufficient vitamins and nutrients: vitamin D3 (sunlight deficiency), zinc, magnesium and omega 3 fatty acids. Due to such deficiencies, the body is often overwhelmed during healing processes - as if in 'hibernation'. It is unable to form new tissue, since the required nutrients are simply missing. The NICO is therefore a symptom for an existing nutritional deficit.

It is precisely this general nutritional deficit that needs to be compensated for before every surgical intervention.

Already at 2 - 3 weeks before the scheduled operation, you will begin following our bone healing protocol, which we use ahead of all surgical operations to assist the body's own regenerative abilities (see 4. below).

Ingesting nutrients is crucial for bone tissue regeneration afterwards.

3. Therapy – removing interference fields

Treating NICO consists of the full surgical removal of this area which has been transformed by inflammation, followed by disinfection with ozone. Ozone only kills bacteria, fungi and viruses, but not your body's own cells.



The operation is designed to be as minimally invasive as possible. For this purpose, we employ piezosurgery, a procedure based on ultrasonic technology that maximally preserves the body's tissues and at-risk structures, along with special hand instruments.



For optimum regeneration, the use of a PRGF®-Endoret® membrane (platelet rich in growth factors) made of the patient's own blood has proven to be effective. To this end, blood is drawn shortly before the operation. The freshly drawn venous blood is then placed in a centrifuge for approx. 8 minutes and subsequently activated. The membrane is ready after 30 minutes.

The PRGF®-Endoret® technology is only derived from the patient's own body, making it 100 % biocompatible.

In addition, the wound is rinsed with a special medication for interference fields, which is also injected into the surrounding tissue to act as a reserve of neural therapy medicine.

Procaine from Steigerwald (free of preservatives), Notakehl® D5 (homoeopathic antibiotic), Selenase® 100 (antibacterial) and Arthrokehl® 'A' (the interference field medication of choice) are used. Following the operation, Traumeel® is injected.

Over a period of 24 hours before and after the operation, you will be administered a highly dosed, buffered vitamin C infusion (BTP infusion according to Volz/Nischwitz/Vizkelety).

At this high dose, vitamin C has an anti-inflammatory effect, and serves to protect from infection. Furthermore, it helps with collagen synthesis and thus wound healing. At the same time, vitamin C also protects against metabolic disorders and helps to detoxify the body, while also producing energy required for cells to heal. Thanks to a wide range of additional components, the infusion has been perfectly optimised for safety and effectiveness.

For this reason, an antibiotic is never needed.

The surgical procedure for removing foreign objects is identical. This protocol is also to be followed rigorously for removing teeth that have undergone root canal treatment and which cannot immediately be replaced with a ceramic implant (see the SCC info pamphlet). This ensures that the bone is optimally prepared for healing.

4. What you as the patient should pay attention to:

In the days – or weeks – before the operation, all detrimental nutritional influences should be eliminated. This means: no coffee, alcohol, tobacco, simple sugars, gluten or products made with cow's milk.

Water, healthy fats, all kinds of vegetables, and salads, plus a healthy lifestyle with lots of sleep, exercise and sun have a positive and stimulating effect.

Nutrition 1-3 weeks before the operation:

- Avoid tobacco, caffeine, alcohol, simple sugars and saturated fats, and do not consume food containing gluten or made with cow's milk.

Dietary supplements / medications:

- Vitamin C: 1.000 mg twice a day with meals
- Zinc (citrate, gluconate): 2 capsules in the morning and in the evening with meals
- Dekristol® 20.000 IU (vitamin D3): 1 capsule at breakfast (as prescribed) (medication)
- MK-7 (K2): 2 capsules at breakfast (1 capsule per 10.000 IU vitamin D3)
- Magnesium citrate: 2 capsules in the morning and in the evening with meals
- Omega 3 fish oil: 3 x 2 capsules with meals

Day of the operation:

- Only vitamin D3 (Dekristol® 20.000 IU) + MK-7 (K2) oral
- BTP infusion (incl. 50 g vitamin C)

For 4 weeks after the operation:

- **Dietary supplements / medications:** see above
- Additionally: Bromelain plus: 3 x 1 capsule between meals

Your cooperation is crucial. Please take the dietary supplements and medications as prescribed and adhere to the nutritional recommendations given. Take things easy for 14 days and listen to what your body is saying. The area of the wound should also be treated as gently as possible - do not suck on it or poke at it with your tongue. Do not touch or brush/clean the blood clot/PRGF for 3 days following the operation.

Swelling and bleeding after the operation is completely normal and no cause for alarm. Please cool the operation site for two days using a damp, cold cloth.

5. Bibliography:

1. Claesson et al.: **Production of volatile sulfur compounds by various Fusobacterium species.** Oral Microbiol. Immunol. 1990; 5:137-142
2. Langendijk PS, Hanssen JT, Van der Hoeven JS.: **Sulfate-reducing bacteria in association with human periodontitis.** J Clin Periodontol Dec 2000; 27(12):943-50
3. Persson S., Edlund MB., Claesson, R., Carlsson J.: **The Formation of hydrogen sulfide and methyl mercaptan by oral bacteria.** Oral Microbiology and Immunology 1990 August; Vol. 5 (4): 195-201
4. J.F. Siqueira, et. al., **Polymerase chain reaction-based analysis of microorganisms associated with failed endodontic treatment,** Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontology 2004; Vol. 97: 85-94
5. JF Siquiera, et. al.; **A Scanning Electron Microscopic Evaluation of In Vitro Dentinal Tubules Penetration by selected Anaerobic Bacteria,** Journal of Endodontics, June 1996; Vol. 22 (6)
6. Persson S., Edlund MB., Claesson, R., Carlsson J., **The Formation of hydrogen sulfide and methyl mercaptan by oral bacteria.** Oral Microbiology and Immunology 1990 August; Vol. 5 (4): 195-201
7. Lechner, J., **Mehrdimensionale Systemdiagnose des wurzelgefüllten Zahnes.** ZWR-Das Deutsche Zahnärzteblatt 2012; Vol. 121(12): 640-644
8. NM Chugal, et. al., **Endodontic infection: Some biologic and treatment factors associated with outcome** Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontology July 2003; Vol. 96 (1)
9. Richardson N, Mordan NJ, Figueiredo JA, Ng YL, Gulabivala K., **Microflora in teeth associated with apical periodontitis: a methodological observational study comparing two protocols and three microscopy techniques.** International Endodontic Journal 2009; October; Vol. 42(10): 908-21
10. JF Siquiera, et. al., **Bacteria in the apical root canal of teeth with primary apical periodontitis.** Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontology May 2009; Vol. 107 (5): 721-726
11. Nagaoka S., Miyazaki Y., Liu Hj., Iwamoto Y., Kitano M., **Bacterial invasion into dentinal tubules of human vital and nonvital teeth.** Journal of Endodontics 1995; Februar; Vol. 21 (2): 70-73
12. Lechner, J., Baehr, V.: **Hyperactivated Signaling Pathways of Chemokine RANTES/CCL5 in Osteopathies of Jawbone in Breast Cancer Patients.** Breast Cancer (Auckl). 2014 May 21; 8:89-96
13. **Mercury Poisoning from Dental Amalgam - A Hazard to Human Brain.** Stockholm: Störtebecker Foundation for Research 1985 (201 pages). ISBN 0-941011-01-1. Published in the USA by Bio-Probe, Inc., 1986; (213 pages)
14. Speranski, M.: **A basis for the theory of medicine.** International Publishers, New York and Moskau, 1935
15. Bouquot JE, Roberts AM, Person P, Christian J. NICO (neuralgia-inducing cavitation osteonecrosis): **osteomyelitis in 224 jawbone samples from patients with facial neuralgias.** Oral Surg Oral Med Oral Pathol 1992; 73:307-19
16. Lechner J. **Störfelder im Trigemusbereich und Systemerkrankung.** VGM Kötzing; 1999
17. Lechner J. **Fakt oder Fiktion - Dokumentation des NICO-Störfelds,** RegulationsMedizin. 8. Heft 2003; 2
18. Rathanaswami P, HachichaM, SadickM, Schall TJ, McColl SR. **Expression of the cytokine RANTES in human rheumatoid synovial fibroblasts.** Differential regulation of RANTES and interleukin-8 genes by inflammatory cytokines. J Biol Chem 1993; 268(8):5834-9
19. Liu C, Papewalis C, Domberg J, Scherbaum WA, Schott M. **Chemokines and autoimmune thyroid diseases.** Horm Metab Res 2008; 40(June (6)):361-8
20. Lechner J., Baehr, V. : **RANTES and fibroblast growth factor 2 in jawbone cavitations: triggers for systemic disease?.** Int J Gen Med. 2013; 6: 277-290. Published online 2013 Apr 22
21. Lechner J., Mayer W.: **Immune messengers in Neuralgia Inducing Cavitation Osteonecrosis (NICO) in jaw bone and systemic interference.** European Journal of Integrative Medicine 06/2010; 2(2):71-77
22. Lechner J.: **Zytokin RANTES zur Validierung zahnärztlicher Röntgendiagnostik bei „silent inflammation“ im Kieferknochen.** ZWR - Das Deutsche Zahnärzteblatt 2015; 124 (5): 216-221
23. Bach J.F.: **The effect of infections on susceptibility to autoimmune and allergic diseases.** N Engl J Med; 347:911-20 (2002)
24. Ronald S. Brown, et. al., **The anesthetic localization procedure is an aid in ruling out or confirming suspected primary sources of oral or dental pain.** JADA May 1995; Vol. 126
25. Stübinger S., Sader R., Filippi A.: **The use of ozone in dentistry and maxillofacial surgery: a review.** Quintessence Int. 2006 May;37(5):353-9

SWISS 
BIOHEALTH®

SWISS BIOHEALTH AG
Brückenstrasse 15 . 8280 Kreuzlingen/Schweiz

Tel. +41 71 678 2000
Fax +41 71 678 2019
reception@swiss-biohealth.com

www.swiss-biohealth.com