



MAKING THE WORLD A HEALTHIER PLACE

# EDUCATION ABOUT HEALTH RISKS THROUGH ROOT-TREATED TEETH

## Scientific bases

About 8 million root canal treatments are performed in Germany every year.

Both chronic inflammatory diseases and so-called autoimmune diseases have been increasing rapidly in all industrialized nations for decades. The cause is often unclear. Holistically thinking dentists and doctors see significant improvements in these diseases if root-treated teeth and other interfering fields in the oral cavity are consistently removed and the immune system is strengthened. Where does this connection come from? The answer is simple: pathogenic bacteria and highly toxic degradation products.

**How are teeth involved in the development of chronic diseases?**

Root canal treated teeth are dead teeth. Even the best micro-endodontics will hardly ever be able to realize a completely bacteria-tight root. Accessory side canals and the Endo-Paro connection via the dentinal tubules remain. The dead tooth, which was once an organ with its own nerve and blood supply, remains as a dead pillar in the oral cavity. It is caused by different, partly unknown species of anaerobic, pathogenic bacteria which colonize the remaining organic tissue decompose and secrete harmful metabolic products (toxins).

### Toxins

These pathogenetic bacteria produce from the amino acids cysteine and methionine as by-products of the anaerobic metabolism highly toxic and potentially carcinogenic hydrogen sulfide compounds (thioether / mercaptan). These toxins can be caused by irreversible inhibition at the active site of many of the body's vital enzymes systemic and organ diseases. The inhibition of important enzymes in the respiratory chain of mitochondria was demonstrated in vitro. During every chewing process these bacteria and especially their toxins are released into the lymphatic system of the surrounding tissue. From here they enter the bloodstream (focal infection) and the entire body.

**Which bacteria lurk in dead teeth?**

In a study by Siqueira et al., microorganisms were detectable in all endodontically treated teeth with apical inflammation, suggesting the suspicion of chronic infection. Richardson et al. detected 75 different strains of bacteria in root-treated teeth with apical ostitis. Particularly common in and around dead teeth are enterococcus faecalis, capnocytophaga ochracea, fusobacterium nucleatum, leptotrichia buccalis, gemella morbillorum and porphyromonas gingivalis. Four of these named species infest the heart, three the nervous system, two the kidneys and brain, one the maxillary sinus. If an inflammation of the root tip is visible on the X-ray, the failure rate of a root canal treatment is significantly increased due to the chronic infection.

### Immune response

The vital, healthy pulp and thus the immune system play a decisive role in the defence against these germs. Frequently, the chronic infection caused by colonization develops into a chronic inflammation of the surrounding bone and the immune system is permanently activated. The macrophages activated in the course of the non-specific immune reaction release so-called inflammation mediators such as TNF-alpha, IL-1, growth factors, prostaglandins (PGE2) and leukotrienes, which circulate in the bloodstream.

These inflammatory mediators promote the development or worsening of chronic inflammation and autoimmune diseases. In addition, T-lymphocytes are stimulated, which in turn produce TNF-beta, which is also suspected to promote chronic inflammation and cancer. TNF-beta has been shown to increase the risk of postmenopausal breast cancer. T. Rau from the Paracelsus Clinic was able to prove a clear correlation between breast cancer and teeth. He found root-treated teeth on one or more teeth of the stomach meridian in more than 96% of breast cancer patients, compared to 35% in healthy patients.

## Diagnostic

### What are interference fields?

The concept of the „interference field“ in the human system is based on the assumption that an inflammatory process at one location in the body can cause a reaction at another location or lead to resistance to therapy (chronification). The classical interference field detection is carried out by the dentist by evaluating x-ray images / clinical findings and assigning them to medical findings of the respective treating specialty.

### Interference Field Diagnostics

The teeth are one of the most important subsystems within a network of self-regulating sub-areas of the organism. Teeth and their associated periodontal apparatus (odonton) have a relationship to other physical structures and organs. Reinhold Voll coined the term „Odonton“ and direct and close interrelations between individual odontons and the different areas of the body is identified. Interactions and positive as well as negative influences in the sense of a remote effect are possible in both directions: a disturbed organ can have a pathological effect on the associated odonton and, conversely, a diseased tooth or its periodontal apparatus can disrupt the organ correlating with it (see page 7: Meridian system).



## Extraction

## Therapy

Many root-treated teeth show some kind of inflammation of the surrounding tissue. This can be seen particularly well on the DVT (three-dimensional X-ray image). The cyst at the tip of the root is nothing more than a kind of capsule that the immune system itself forms around this infected area to shield it from the rest of the organism. Especially poisonous teeth often ankylose with the surrounding bone. The metabolism on site is shut down - like in a kind of prison, the body builds a wall around the tooth.

The only way to avoid this chronic intoxication is to surgically remove the dead teeth. The surrounding inflamed or cystic tissue must be completely removed. Soft bone should be removed without residue. This is followed by disinfection of the tissue with ozone. Implant placement adjacent to still existing root-treated teeth should be carefully evaluated to avoid possible failure due to focal infection, according to the authors Brisman et. al.

### Zirconia ceramic implants

Ceramic implants made of zirconium oxide from SDS Swiss Dental Solutions offer an aesthetic and immunologically perfect solution. Zirconium oxide is an electrically neutral biocompatible ceramic without any interference field character. In contrast to grey titanium it is metal-free and highly aesthetic due to its white color. Zirconium oxide implants combine best biocompatibility with perfect aesthetics.

### Perfectly suited for immediate implant placement

Ceramic implants from SDS Swiss Dental Solutions are designed so that teeth can be extracted and ceramic implants placed within one session.

# Biological dentistry

Biological dentistry is a dentistry which considers the organism „human“ „bio-logically“. We recognize that the chewing organ is very closely connected to the entire body and is located in the direct vicinity of eminently important organs. After all, almost all the sensory organs are arranged around the chewing organ and the brain is in close proximity. The importance of the masticatory system is also shown by the fact that the fifth brain nerve (trigeminal nerve), which controls the chewing system is the largest cranial nerve. It occupies 50% of the space of all cranial nerves.

A further aspect is the cross-linking of the masticatory system with the entire organism through the system of the meridians. These do not only run through the dental system, but are constantly activated by the approximately 15,000 tooth contacts daily. Toothlessness therefore leads to atrophy of the associated meridian, which can only be partially compensated by acupuncture or reflexology. This is why it is so extremely important that gaps between teeth are closed as quickly as possible with neutral ceramic implants so that the affected meridians are reactivated appropriately.

The situation of the temporomandibular joint also plays a major role. Both the statics of the spine and the blood flow to the brain and its venous outflow depend on it. A loss of bite height compresses the region of the large brain-supplying vessels in the neck. This restricts the blood flow to the brain. A loss of bite height of 1 mm reduces the blood flow to the brain by about 50%! A connection between loss of bite height and neurodegenerative diseases such as dementia and cognitive disorders has also been recognized. On the other hand, toxins and waste products can only be drained from the brain via a sufficiently wide jugular vein. This is all the more important because the brain does not have a lymphatic system, but rather the removal is carried out by the so-called „glymphatic system“: at night, the brain cells shrink by up to 60% and thus generate a cavity between the cells through which these toxins can drain off. A prerequisite for the functioning of this system, however, is that all sources of stress are turned off at night. This includes all EMF sources such as mobile phones, WLAN etc.

Apart from the oral system, there is no other organ or region of the body in our organism that is interspersed to such an extent with heavy metals, alloys, toxic materials, dead body organs and inflammations. For example, dentistry is the only medical discipline that tolerates leaving a dead organ in the body. Another fatal disruptive factor of modern times is that the gums belong to the ectoderm (outside of the body), but the bone belongs to the mesoderm (inside of the body). If we eat something poisonous, then this is in the oral cavity, stomach and intestines still outside the ectoderm, i.e. on the outside of the body. Only when it has been absorbed is it located in the mesoderm or endoderm. If the bond between gums (ectoderm) and bone (mesoderm) is destroyed, as in the case of periodontitis in almost all modern people, then pathogens and toxins can enter the body directly like a Trojan horse.

This is a shock to the immune system and the reason why gum disease maximizes the risk of heart disease. The ceramic implant has the outstanding property that the gums grow to the ceramic and thus firmly close the „immunological door“ again. In contrast to this, the gums never grow on titanium, which means that the immunological door is open for life through a titanium implant.

In summary of the factors mentioned, it is understandable why experts assume the involvement of disruptive factors in the dental field in over 60% of all chronic diseases. At the center of this knowledge of the connections between disorders in the masticatory system and the rest of the organism is „focal infection“. This means nothing else than that there is a focus at one point of the organism, which causes a reaction or disturbance at a completely different point.

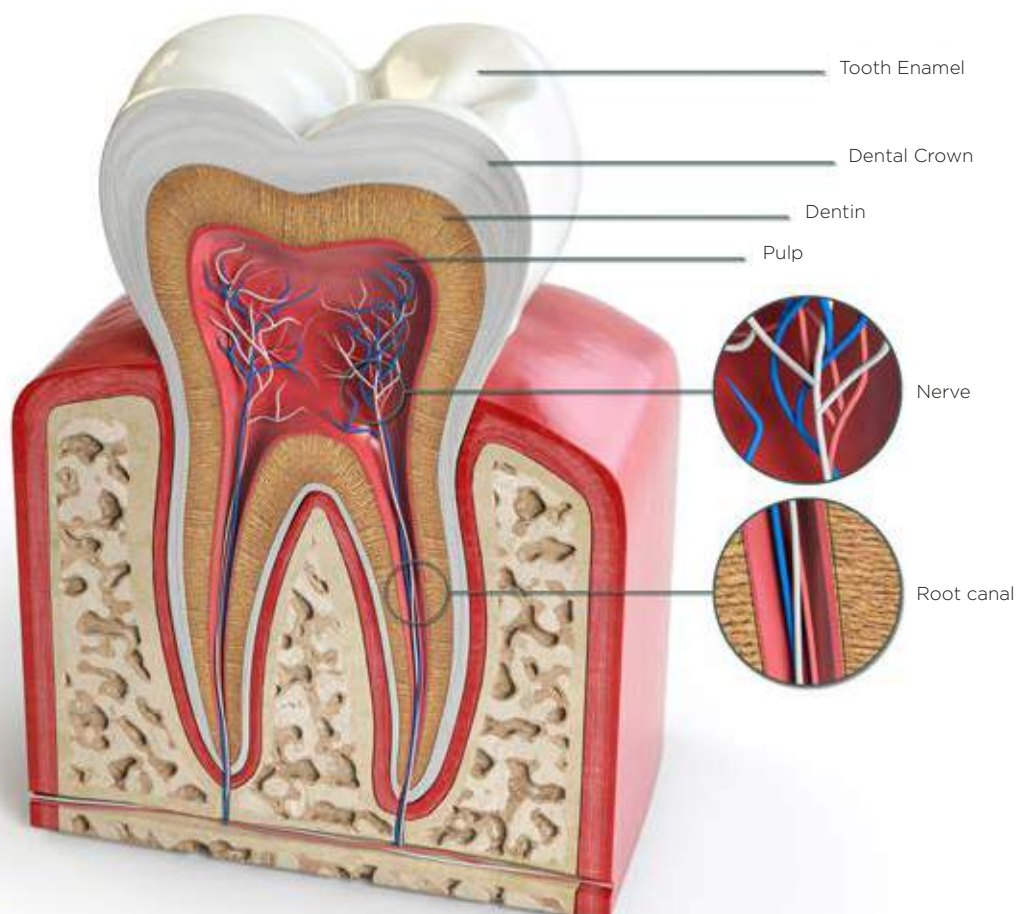
This term was coined by the most famous dentist of all time, Dr. Weston Price, who was President of Research and Education of the ADA American Dental Association for over 30 years and who had long been aware of the need to rehabilitate this focus. His work has been and continues to be supported by biological dentists and doctors such as Thomas Levy, Johann Lechner, Boyd Haley, Ulrich Volz, Dietrich Klinghardt, Joachim Mutter and many others.

The dilemma so far, however, has been that at the end of the „necessary clean-up work“ there is often a „field of devastation“ left behind, where gaps then have to be further treated with prostheses and bone augmentation. Patients were often unable to socialize for weeks, suffered intense pain and massive swelling, and in some cases spent years trying to regain a halfway anatomical and aesthetically pleasing condition.

This was the handicap of holistic dentistry in the past: patients understood the need for radical therapy on the way to recovery, but could not be optimally treated with the available solutions.

The approach of biological dentistry provides an answer to this shortcoming and consists in comprehensively recognizing the logical relationships presented, incorporating them into all actions and deriving from them a treatment concept that is both simple and highly efficient. In the first step, all non-biological or non neutral materials are removed under maximum protective measures, as well as all dead organ parts and inflammations. In this process

the immune system is activated and not further weakened by the use of oral chemical drugs. The second step is the preservation and reconstruction of the masticatory system using metal-free and neutral materials, always with the aim of preserving or restoring the anatomy, bone, soft tissue and thus the aesthetics.



## Ceramic implants for highest demands

Implants have long since established themselves as the most attractive type of dental prosthesis. They offer security and look good, they provide more self-confidence and quality of life. Implants replace lost teeth so well that they usually last longer than your own teeth. Whether only a single tooth is replaced or a fixed set of teeth is restored with several implants - the material should remain stable, neutral and compatible for decades. The high-performance ceramic zirconium oxide, which has long been used in orthopedics for artificial hip joints, meets these requirements like no other material. Zirconium oxide ceramic is a white, metal-free, immunologically neutral and biocompatible material with many advantages over metal. Whether a titanium incompatibility or a general discomfort with metals in our body suggests a metal-free solution - the highly aesthetic white ceramic implants made of the biocompatible high-performance material zirconium oxide are always an excellent choice and are classified as equivalent to titanium implants according to current studies.

Beautiful white teeth and pink gums are an expression of health, energy, zest for life and self-confidence. The ceramic implants from SDS Swiss Dental Solutions are white through and through, come very close to the natural tooth color and can help to maintain or restore a radiant smile. In contrast to implants made of titanium, disturbing grey edges at the gum line or a grey shimmering through are excluded. Even if the covering gum is extremely thin or recedes, the implant remains completely white. This is one of the reasons why ceramic implants are ideal for use in the anterior region. While the use of metals in the oral cavity can have a negative impact on the entire organism, ceramic implants are excellently tolerated because they are completely metal-free and 100% biocompatible.

Thanks to the optimal tissue compatibility, the gum regeneration around the implant proceeds very well and the zirconium dioxide can even bond with the gum. Because ceramics are completely new and effective structures of its surfaces, the formation of bacteria and plaque and thus the risk of gum inflammation is significantly reduced - the risk of inflammation is even lower than with your own teeth. The patented SDS surface structures together with the thread forms adapted to the bone allow the implants

to heal excellently and to be loaded after only a few weeks. Implants from SDS Swiss Dental Solutions are available for all requirements. This enables the dentist to always select the perfect implant. In addition, he can do without metal completely when implanting the implants, as SDS instruments are already made of the same high-tech ceramic as the implants and crowns. This also means that no traces of metal are left in the bone.

Founded by the ceramic pioneer and implantologist Dr. Ulrich Volz, SDS Swiss Dental Solutions is today regarded as the innovation leader in the field of ceramic implants. The Swiss company at the Lake of Constance stands for unique ceramic competence, many years of expertise and outstanding treatment successes. A key success factor is the development „from the practice, for the practice“. SDS Swiss Dental Solutions places the highest demands on its products. They are certified according to current standards, bear the CE mark and have been approved by the FDA (Federal Drug Administration) in the USA since the end of 2019. Since the introduction of ceramic implants made of the high-performance material zirconium dioxide by Dr. Ulrich Volz, biological dentistry has been revolutionized, as for the first time it was able to offer its patients a biological solution for the increasing problem and the growing number of root-treated teeth. The material zirconium dioxide is 100% metal-free, is harder than steel and can only be processed with diamonds. As a „finally reacted material“, zirconium dioxide has no free electrons on its surface, is therefore absolutely neutral, cannot form any bonds and is without any interference field character. Zirconium dioxide implants combine best biocompatibility with perfect aesthetics. The material can only be etched with hydrofluoric acid and has a melting point of over 2,680 °C.

# Meridian system for self analysis

SENSORY ORGANS	inner ear	tongue/taste	nose/olfactory sense	eye	nose/olfactory sense/frontal sinus	nose/olfactory sense/frontal sinus	eye	nose/olfactory sense	tongue/taste	inner ear
JOINTS	shoulder elbow	jaw	shoulder elbow	rear knee		rear knee		shoulder elbow	jaw	shoulder elbow
	hand ulnar foot plantar toes	anterior knee	hand radial foot big toe	hip	sacrum-coccyx	sacrum-coccyx	hip	hand radial foot big toe	anterior knee	hand ulnar foot plantar toes
SPINAL CORD SEGMENTS	Th 1 C8 Th 7 Th 6 Th 5 S3 S2 S1	Th 12 Th 11 L1	C7 C6 C5 Th 4 Th 3 Th 2 L5 L4	Th 8 Th 9 Th 10	L3 L2 S4 S5 Co	L3 L2 S4 S5 Co	Th 8 Th 9 Th 10	C7 C6 C5 Th 4 Th 3 Th 2 L5 L4	Th 12 Th 11 L1	Th 1 C8 Th 7 Th 6 Th 5 S3 S2 S1
VERTEBRAE	B 1 C7 B6 B5 S2 S1	B 12 B 11 L1	C7 C6 C5 B4 B3 L5 L4	B 9 B 10	L3 L2 Co S5 S4 S3	L3 L2 Co S5 S4 S3	B 9 B 10	C7 C6 C5 B4 B3 L5 L4	B 12 B 11 L1	B 1 C7 B6 B5 S2 S1
ORGANS	right heart	pancreas	lung	right liver	right kidney	left kidney	left liver	lung	spleen	left heart
YIN	11-13 h	9-11 h	3-5 h	1-3 h	17-19 h	17-19 h	1-3 h	3-5 h	9-11 h	11-13 h
	duodenum allergies	right stomach	colon	gall-bladder	right bladder urogenital region	left bladder urogenital region	left bile ducts	colon	left stomach	jejunum ileum allergies
YANG	13-15 h	7-9 h	5-7 h	23-1 h	15-17 h	15-17 h	23-1 h	5-7 h	7-9 h	13-15 h
ENDOCRINE GLANDS	anterior pituitary	parathyroid thyroid	thymus posterior pituitary		epiphysis	epiphysis	posterior pituitary	thymus	thyroid parathyroid	posterior pituitary
OTHER	CNS psyche	right mammary gland			back pain headache	back pain headache			left mammary gland	CNS psyche
OTHER	energy balance		right mammary gland					left mammary gland		energy balance
ENDOCRINE GLANDS VASCULAR SYSTEM	peripheral nerves	arteries veins	lymphatic vessels gonads		adrenal gland	adrenal gland	gonads	lymphatic vessels	veins arteries	peripheral nerves
YANG	11-13 h	3-5 h	9-11 h	1-3 h	17-19 h	17-19 h	1-3 h	9-11 h	3-5 h	11-13 h
YIN	13-15 h	5-7 h	7-9 h	23-1 h	15-17 h	15-17 h	23-1 h	7-9 h	5-7 h	13-15 h
	right heart cardiovascular system	right lung	pancreas	right liver	right kidney	left kidney	left liver	spleen	left lung	left heart cardiovascular system
ORGANS	right ileum allergies	right colon ileosacral area	right stomach pylorus	gall-bladder	right bladder urogenital area	left bladder urogenital area	left bile ducts	left stomach	left colon	jejunum ileum allergies
VERTEBRAE	C7 B1 B5 B6 S1 S2 hip	C7 C6 C5 B4 B3 L5 L4	B12 B11 L1	B9 B10	L3 L2 Co S5 S4 S3	L3 L2 Co S5 S4 S3	B9 B10	B12 B11 L1	C7 C6 C5 B4 B3 L5 L4	C7 B1 B5 B6 S1 S2 hip
SPINAL CORD SEGMENTS	Th 1 C8 Th 7 Th 6 Th 5 S3 S2 S1	C7 C6 C5 Th 4 Th 3 Th 2 L5 L4	Th 12 Th 11 L1	Th 8 Th 9 Th 10	L3 L2 Co S5 S4	L3 L2 Co S5 S4	Th 8 Th 9 Th 10	Th 12 Th 11 L1	C7 C6 C5 Th 4 Th 3 Th 2 L5 L4	Th 1 C8 Th 7 Th 6 Th 5 S3 S2 S1
JOINTS	shoulder - elbow		anterior knee	posterior knee		posterior knee		anterior knee	shoulder - elbow	
	hand ulnar foot plantar toes	hand radial foot big toe	jaw	hip	sacrum-coccyx foot	sacrum-coccyx foot	hip	jaw	hand radial foot big toe	hand ulnar foot plantar toes
SENSORY ORGANS	ear/retina	ethmoidal cells/nose/olfactory sense	sinus maxillaris/tongue/sense of taste	eye/visual sense	frontal sinus/nose/olfactory sense	frontal sinus/nose/olfactory sense	eye/visual sense	sinus maxillaris/tongue/sense of taste	ethmoidal cells/nose/olfactory sense	ear/retina

Dental correspondence after consideration of the references according to Bahr-Schmid, Voll-Kramer and the findings of TCM.

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