

Patient information
Q&A on dental implants



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"Naturally white implants"

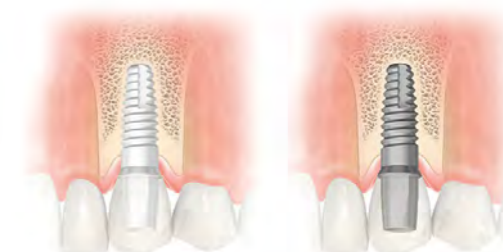
Dear Patients,

There are many reasons for tooth loss, but whatever the cause, your quality of life is impaired. Impaired chewing and speech frequently occurs, especially when more than one tooth is lost. Constant bone degeneration of the jaw can also cause lasting problems.¹

Implants as tooth root replacements can be the ideal solution in this case. They can replace individual teeth, restore a set of teeth and bridges and serve as a basis for fixed dentition or a removable denture.

For many years the use of dental implants has been a reliable treatment method and is scientifically recognised.² As every person, every patient is unique, there are a whole host of questions that arise. In this brochure we would like to address the most common of these. The brochure has been developed in collaboration with dentists with many years of experience in dental implantology.

87% opt for white!



"In a survey, Zeramex asked 1000 participants about their opinion on the colour of dental implants. The result was clear – 87% of those surveyed would opt for a white dental implant."



"Tooth loss – now what?"

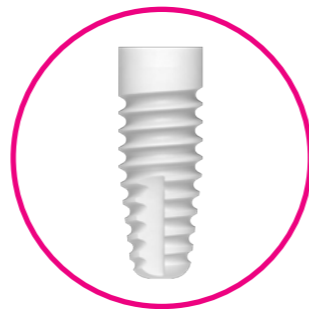
A sports accident, decay, periodontitis or a secondary condition of a disease. There are many reasons for tooth loss.³ What is evident is that tooth loss is always painful. The good news, however, is that there are various options to close gaps in the teeth with functional and aesthetic efficiency.

Primarily, teeth are responsible for grinding down food and help us articulate. They also have a wide range of other functions and are crucial to the preservation of the jawbone.

We should also remember that our teeth play a key part in achieving a harmonious facial expression and contribute to a well-groomed appearance. Beautiful and healthy teeth mean quality of life. Unfortunately, we often do not know

what we have until it is gone. We take the functions and aesthetic value of our teeth too much for granted.

Taking into account your wishes and your individual situation, your dental care provider will show you the available treatment options in a non-binding consultation and will give you all the details you need. Every situation has a range of solutions – and there is bound to be one that suits you.



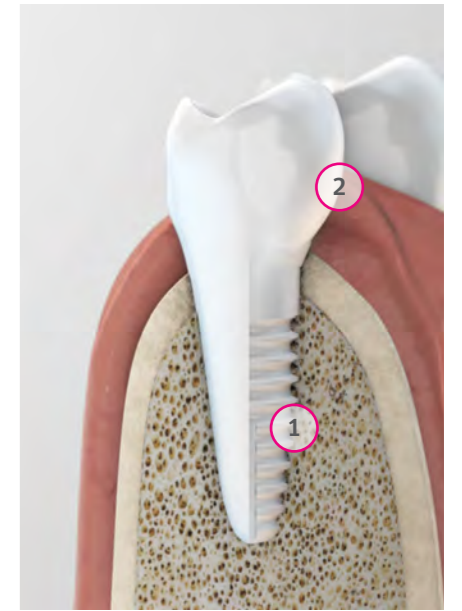
"What are dental implants?"

A dental implant (1) is an artificial tooth root that grows into the surrounding bone, anchoring firmly in place. After the time required for healing, the implant is provided with an abutment, on which the actual crown (2) or bridge is placed. In fully edentulous situations where a patient has lost all their teeth, implants form a stable anchor for the removable dentures. This then restores the aesthetics and functions of your teeth.

For you, the patient, this means chewing without being cautious and smiling unselfconsciously.

Modern implants made of ceramic such as the Zeramex implant system grow into the bone in the same way as titanium to firmly anchor the restoration and to counteract bone loss.⁴

Ceramic implants have some additional advantages over titanium implants. One is striking: the white colour creates the best conditions for aesthetic results. There is no risk of the grey metal edges becoming visible,⁵ or of the dark core of the implant shimmering through the gums around the edge of the crown as you may have observed with titanium implants.⁵



"100% metal-free – no corrosion, optimum blood circulation to the gums, no grey edges – a ceramic implant from Zeramex improves your quality of life."

"When are dental implants used?"

Suitable for single-tooth restoration

If only one tooth is missing, the dental implant is fitted with a crown. This single-tooth restoration blends seamlessly and invisibly into the natural dental arch. Your own teeth do not have to be ground down as is the case with conventional bridges, and your natural tooth substance is retained.

1. The gap is clearly visible, the bones and gums are healthy.
2. The artificial tooth root (implant) is inserted into the jawbone.
3. The abutment is securely connected to the implant, and the crown is secured on top. The gap is closed, and function is restored.

The ceramic crown and metal-free tooth root replacement deliver an aesthetically pleasing result.



Fits into gaps in the teeth

If several teeth are missing and the gap is larger, this can be "bridged" in the true sense of the word. At least two dental implants ensure that the bridge is firmly secured. The number required to ensure that there are no gaps in the teeth can vary depending on the clinical situation.

1. Missing teeth must be replaced and to do so, the bone and gums must be healthy and there must be sufficient bone available.
2. The artificial tooth roots (implants) are inserted into the jawbone.
3. The abutments are securely connected to the implants, and the bridges are secured on top. The gap is closed, and function is restored.

The aesthetics of bridges and metal-free root replacements perfectly match your dental arch. The neighbouring teeth are not ground.



Stable foundation for restorations with removable dentures

Even if all teeth are lost, dental implants offer a reliable and attractive solution. Firmly seated within the bone, they offer a secure base for your removable dentures. Depending on your wishes and the clinical conditions, several treatment options are available. Dental implants are specifically designed to be more comfortable to wear, so that you can take a big bite and talk and laugh without worrying.

1. Missing teeth must be replaced, provided there is sufficient bone available in which to securely anchor the implants.
2. The artificial tooth roots (implants) are inserted into the jawbone. Depending on the concept, 2, 4 or more implants are planned.
3. The abutments are securely connected to the implants. These special abutments support the restoration, which you can simply insert and remove yourself. Your dental arch is complete, and function is restored.



"Implant treatment, step by step"

1. Diagnosis

Implants are individual solutions for dental restorations. Before any treatment, your dentist will carefully check which treatment options are available in your specific case. The recommendations are based on a comprehensive dental history, x-rays (if the bone situation is unclear, CT or DVT images may be taken) and take into account your own wishes and requirements. Usually models are produced for precise analysis or function tests are carried out. Your dentist will discuss with you which solution is best for you and will carefully weigh up the options. Ask about the advantages, disadvantages and potential risks. There are a small number of pre-existing conditions that in rare cases can mean that implant treatment is not a suitable option. Your experienced dental team will then advise you about possible alternatives.



"The easy route to a lasting, healthy smile"

"Inserting dental implants is a matter of routine nowadays. Your dentist will inform you of the individual options and risks in a one-on-one discussion."

2. Pre-treatment

Generally, pre-treatments are required for an implant restoration. These ensure that the treatment is successful and improve your oral health in the long term. These may be, for instance, professional teeth cleaning, removing decay or gingival pockets and sometimes also orthodontic treatment or bone grafts.

A strong foundation is essential for the stable anchoring of the implant, i.e. the available jawbone must be sufficiently wide and high. This is not always the case, as a gap that has existed for a long time often means that the bone breaks down in this area. If there is not a sufficient amount of bone available, the jawbone is first restored. The choice of a suitable procedure depends very much on the nature and the extent of the bone loss. Your dentist can give you detailed information about this.

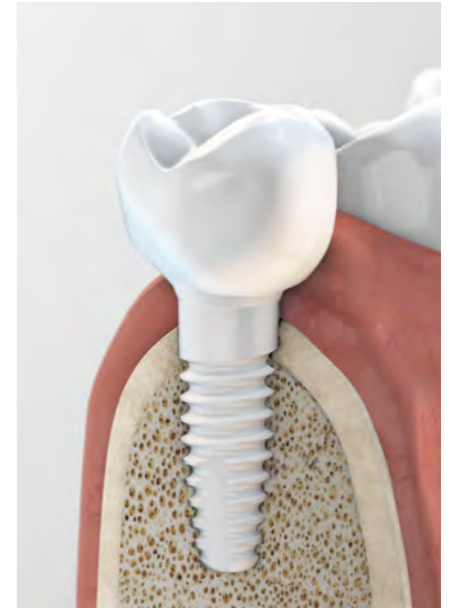
You, as a patient, can also play an active part during the pre-treatment phase to ensure that the subsequent implant therapy is successful. Your practice team will help and advise you.



Examples of a bone graft in the maxillary sinus region of the upper jaw

3. The implant

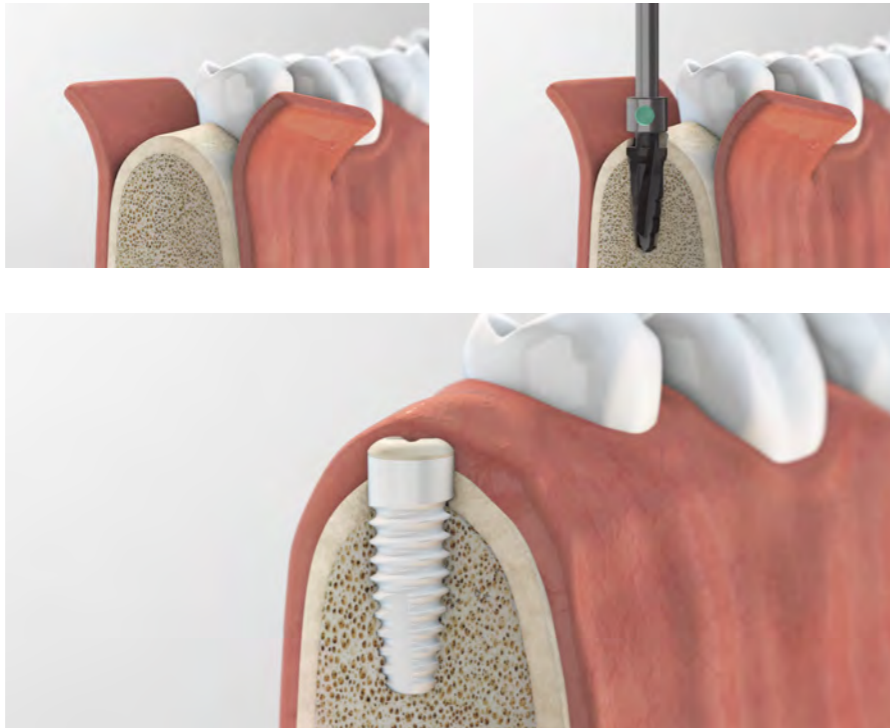
The Zeramex implant system consists of several components: the part that is not seen, i.e. the artificial tooth root (Zeramex implant) and the part that is seen, what is called the prosthetic restoration (crown/bridge/prosthesis) which is later individually manufactured, usually in the dental laboratory. Both parts are connected using the abutment. The abutment also serves as a holder, so that the prosthetic restoration is firmly secured.



"You, as a patient, can also play an active part during the pre-treatment phase to ensure that the subsequent implant therapy is successful."

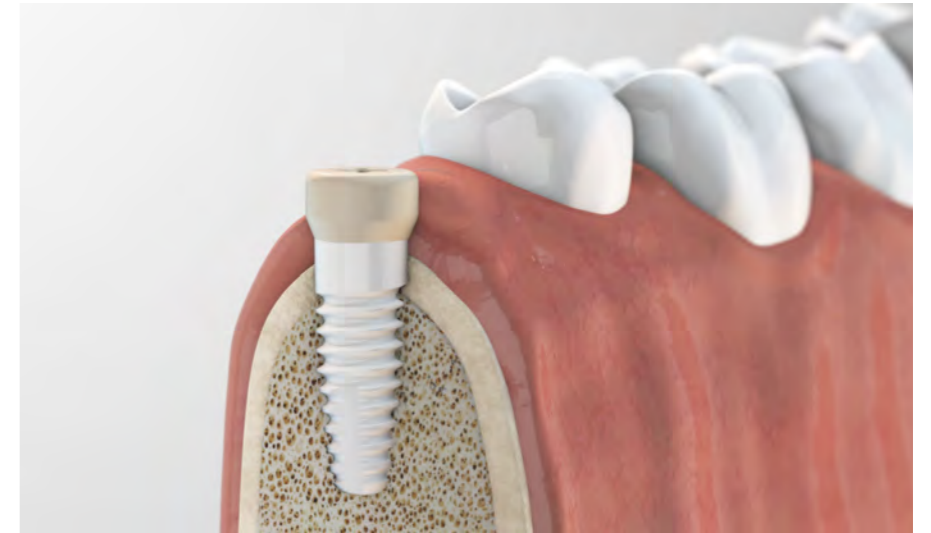
4. Implantation

Although we can consider implantation to be a routine procedure these days, it is always a surgical procedure and is performed as gently as possible with the latest anaesthetic and implantation methods. Initially, in most cases a local anaesthetic provides sufficient anaesthesia to prepare a suitable implant bed in the jawbone. The artificial tooth root is then introduced into the bed. During the weeks following the implantation, the body works at integrating the implant into the surrounding bone. Osteoblasts, the cells that form new bone, start to build up on the implant so that it is gradually enveloped in young bone. This process is called osseointegration. Your dental care provider will explain what you need to bear in mind before or after an implantation.



5. Healing

In order for the implant to become securely embedded in the jawbone, it is covered and stays under the gum until the subsequent restoration. The healing phase (which generally takes 3 to 6 months) can vary and is specified by your dentist. In isolated cases, the inserted implant can also be treated with a provisional restoration immediately. In other words, a provisional treatment made of plastic is used as a temporary solution so that you can dazzle people with your smile directly after the implantation.



"In order for the implant to become securely embedded in the jawbone, it is covered and stays under the gum until the final restoration."

6. Restoration

Once the time for healing is over, your dentist will first place the abutment on the implant, which is followed by the permanent restoration (e.g. the crown). To produce the restoration tailored for you, an impression is taken of your upper and lower jaw and sent to the laboratory. This impression provides the dental technician with all the information he or she needs to tailor a restoration (crown, bridge or prosthesis) specifically for you. To achieve the best possible result, it may be necessary to do this in several steps such as trying on the restoration before it is completed. Your practice team will inform you in due course.

For a full restoration in an edentulous situation, holders are inserted to which the removable dentures are then anchored. These make it easy to remove the dentures, for example for cleaning, and also ensure that the prosthesis is secured firmly in place.



Single-tooth restoration



Bridge with two implants



Removable restoration with Zeramex Docklocs®



Four single-tooth implants

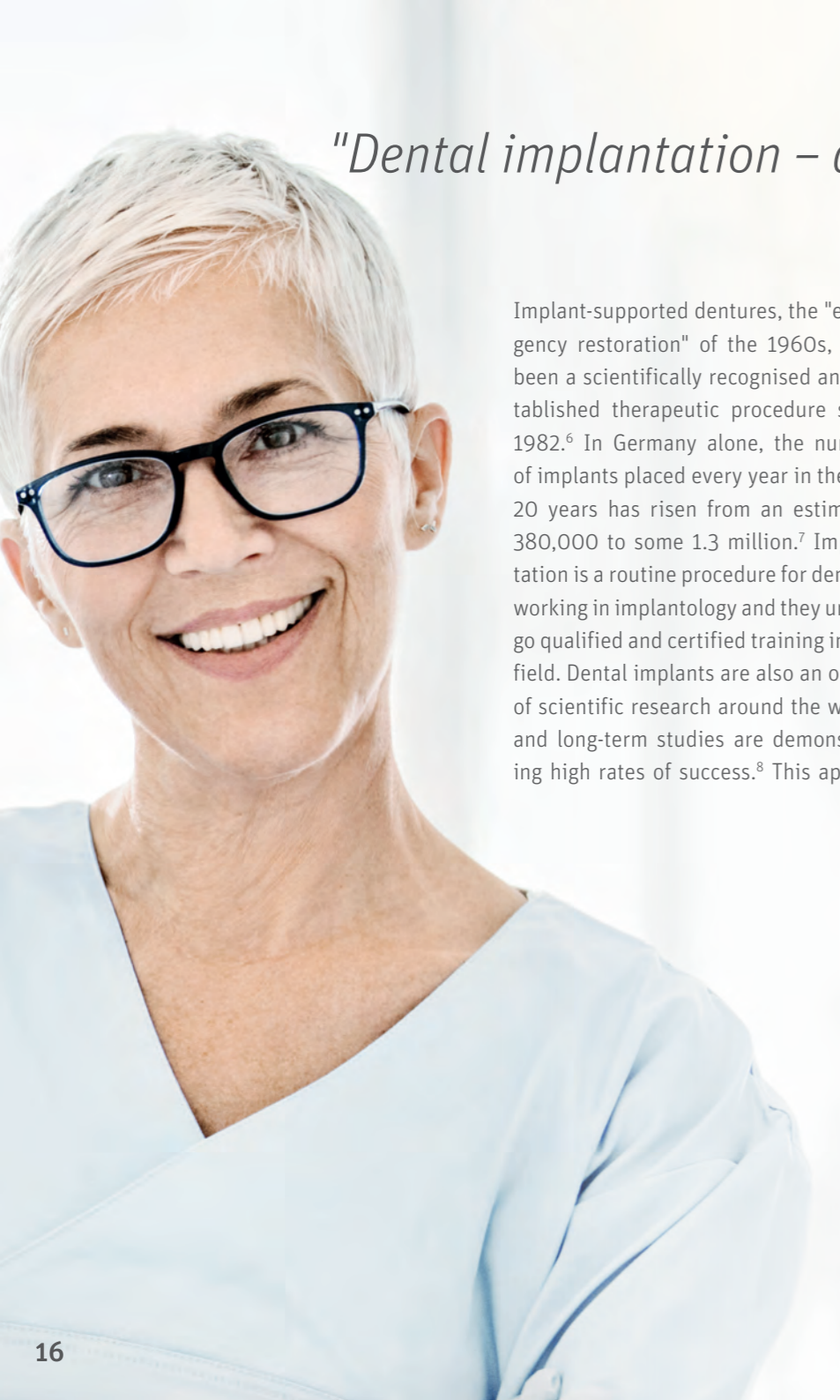
7. Care and monitoring

Dentures also require routine care and should be regularly checked by your dental care provider. Alongside normal daily dental care with a toothbrush and other products to clean between the teeth, regular professional teeth cleaning in your dental practice is an important investment in the life of your implants. After the implantation, your practice team will offer you tips and useful products for daily cleaning. Good cleaning and regular checks ensure the long-term success of your implant treatment. This also applies to natural teeth and the periodontium. Avoid the risk of gum disease or gingival pockets and help to preserve your oral health far into the future.

Every patient is given his or her own personal Zeramex implant pass after treatment with a Zeramex ceramic implant. This details the Zeramex ceramic implant used and the label ensures it is fully traceable. Bring your personal implant pass with you to appointments or treatments.



"Dentures also require routine care and should be regularly checked by your dental care provider."



"Dental implantation – a routine procedure?"

Implant-supported dentures, the "emergency restoration" of the 1960s, have been a scientifically recognised and established therapeutic procedure since 1982.⁶ In Germany alone, the number of implants placed every year in the last 20 years has risen from an estimated 380,000 to some 1.3 million.⁷ Implantation is a routine procedure for dentists working in implantology and they undergo qualified and certified training in this field. Dental implants are also an object of scientific research around the world, and long-term studies are demonstrating high rates of success.⁸ This applies

equally to the ceramic implants from Zeramex, with a success rate of over 96%.⁴ This success is having an effect: patient demand for ceramic implants is constantly rising.

From the very first step to closing the wound, placing dental implants generally takes less than one hour. You should not feel any pain during or after the procedure.

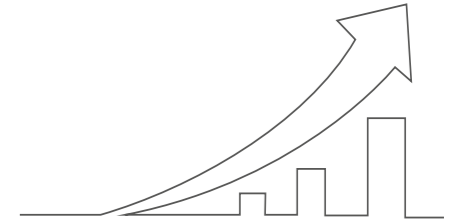
Usually the dentist decides with the patient after the consultation which type of pain elimination is suitable. In most cases, a local anaesthetic is sufficient. The low medical risk and the short time and low costs required are advantages of local anaesthesia.

For more complex or longer treatments, a growing number of practices now offer laughing gas as an alternative. In patients who are anxious or more sensitive individuals, this can be particularly beneficial.

A third option for pain elimination is a general anaesthetic, which is used, for example, if many implants have to be placed or if substantial bone grafting is required. During a general anaesthetic, you will be attended by an experienced anaesthetist throughout the entire procedure, including the induction and recovery phase.

With the latest methods, surgical procedures can nowadays be carried out using minimally invasive techniques, which ensure rapid wound healing. Your dental care provider will go through the details of your individual options in a one-on-one meeting.

Find your nearest trusted dental consultant at [zeramex.com/zahnarztsuche](https://www.zeramex.com/zahnarztsuche). Just enter your postcode and get started!



1.3 million
implants placed every year

"In Germany alone, the number of implants placed every year in the last 20 years has risen from an estimated 380,000 to some 1.3 million.²⁰"



It's not just older people who are affected by the problem of missing teeth. Young patients have to deal with the issue of dental restorations for a variety of reasons, such as an accident. If conventional dental treatment is not an option, you are often faced with a multitude of questions. What can you do if your dentist indicates that the affected tooth cannot be saved?

Which dental restoration is the best? How can I protect my remaining healthy teeth? And what will be easiest to manage on a day-to-day basis?

There are various options for dental restorations. Almost every option has its own advantages and disadvantages. Alternatives for edentulous situations, such as the classic removable dentures

"Dental implants – the best alternative?"

that are only supported by the existing bone and the soft tissue, are often perceived as a foreign body. In many cases, they cause pressure points or do not sit properly. Taste, texture and temperature perception is limited.

Quality of life is often significantly enhanced if this prosthesis is supported on dental implants. Often this only requires two implants.⁹ Thanks to the many advantages, more and more patients are opting for dental implants to restore chewing function and appearance.

Implantology is now the fastest-growing discipline in dentistry. Several million patients around the world are now benefiting from the advantages of an implant-supported dental restoration. Despite the success rates, developments are forging ahead. Digital treatment methods are being increasingly integrated into implantology concepts

- for even greater precision and patient convenience. From impression-taking through to treatment planning and prosthetic treatment, individual steps and even the full treatment can now be fully digitalised. Ask your dentist which options are available to you.



"Implantology is now the fastest-growing discipline in dentistry. Several million patients around the world are now benefiting from the advantages of an implant-supported dental restoration."



"Is a dental implant worth it?"

Dental implants go unnoticed, doing their job effectively and reliably 24/7, 365 days a year. They are part of you, and as such are a worthwhile investment in your health, your quality of life and will last your entire life if you look after them.

Chewing function is fully restored with dental implants. Dental implants represent the only "real" and "complete" dental restoration and help to preserve the jawbone, which could recede without implants.¹ The costs of an implant restoration consist of the surgical services as well as the dentist's and dental technician's services. Treatment varies depending on the patient and thus the costs and extent of the treatment also vary greatly. It is important that you

compare the costs and the long-term benefits with other dental restoration alternatives.

The quality of life bonus that dental implants provide is of lasting value.



"Dental implants represent the only 'real' and 'complete' dental restoration and help to preserve the jawbone, which could recede without implants.¹"

"Why Zeramex ceramic implants?"

Since an implant is a permanent solution, the materials used must of course be biocompatible and must not be identified as foreign bodies by your immune system. Implants made of high-performance ceramic, known as zirconium dioxide, are ideally suited and are becoming increasingly popular. This material is especially biocompatible in the human body and can therefore be a



good treatment option, especially in patients with pre-existing conditions and allergies.

Metal-free and corrosion-resistant

Zeramex ceramic implants are safe. Zirconium dioxide ceramics are highly biocompatible and corrosion-resistant, i.e. they are not broken down by the body. Furthermore, ceramic implants are not affected by contact with certain oral bacteria or other dental materials. This reduces the risk of inflammation of the surrounding gums.¹⁰

Gums love ceramics

The biocompatibility of the ceramic leads to natural blood circulation in the gums and reduced inflammation and bone resorption.

Studies have shown that the blood flow of the gums around ceramic is similar to that of a natural tooth.¹¹ Titanium, on the other hand, significantly reduces the blood supply to the adjacent gums by nearly one fifth (18%) compared to a natural tooth.¹² Studies also show that bacteria are less likely to adhere to ceramics than to titanium.¹³ This promotes oral hygiene and helps patients prevent gum inflammation.¹⁴

Minimise risks

Ceramic implants from Zeramex reduced two of several risk factors that can lead to inflammation around the implant in the long term.

1. Metallic corrosion¹⁵: Ceramic implants from Zeramex are 100% metal-free and corrosion-resistant.
2. Plaque¹⁶: Zeramex ceramic implants have a lower plaque affinity.¹⁴

Simply attractive

The demands placed upon dental restorations have changed within recent years. In addition to health considerations, aesthetics are now an important criterion when it comes to selecting the right solution. The 100% metal-free Zeramex ceramic implants are aesthetically and functionally impressive as artificial tooth roots. The white colour of the zirconium dioxide is visually superior to the grey titanium, as there is neither a grey margin around the restoration nor a dark implant core that can shine through the restoration.¹⁷

Clinically successful

The stability and longevity of Zeramex implants have been tested and the results meet the highest standards.^{18,19} Zeramex implants have proven themselves in clinical use and have an excellent success rate of more than 96% in

osseointegration.⁴ In product development, Zeramex relies on collaboration with experienced practitioners from dentistry as well as from university research.

The Vicarbo screw

Tried and tested in spinal surgery, and unique in dental implantology: the holding screw made of carbon fibre-reinforced high-performance plastic.



"The centrepiece of the Zeramex implant system is the Vicarbo screw - the only one of its kind in the world. It enables an absolutely tension-free, strong and 100% metal-free connection between implant and abutment (for your dental crown)."

Zeramex – dental implants Made in Switzerland



Jürg Bolleter
Founder Dentalpoint AG

Zeramex is a unique brand from the Swiss company Dentalpoint AG. Founded in 2005, Dentalpoint sets future-orientated standards in dentistry and is a world leader in the field of metal-free two-piece ceramic implants.

“As a pioneer, Dentalpoint makes a substantial contribution to the ongoing development of natural dental restorations. All Zeramex implants are produced in Spreitenbach according to the highest quality requirements “Made in Switzerland”. The high product quality can be seen in the successful certification of our quality management system according to ISO 13485.

All Zeramex implant systems are 100% metal-free, biocompatible and are manufactured from high-performance materials in unique production processes. Every single implant is tested before delivery. Zeramex stands for aesthetics, compatibility, functionality and highest quality.”

Jürg Bolleter, founder of Dentalpoint AG

Talk to a dentist you trust

The first step towards a healthy and aesthetically pleasing restoration is a meeting with your dental service provider. The Zeramex website has a list of Zeramex providers in your area as well as plenty of interesting information on ceramic implants. Simply enter your postcode in the patient area/dentist search section and start the search. Your local dentist can provide you with comprehensive information on 100% metal-free solutions from Zeramex. Your dentist will also provide you with comprehensive information about all Zeramex warranty services.



“All Zeramex implant systems are 100% metal-free, biocompatible and are manufactured from high-performance materials in unique production processes.”

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