



**NATURALESTHETICS**  
BIOMEDICAL ENGINEERING IN DENTISTRY

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[www.BIORTHOSIS.com](http://www.BIORTHOSIS.com)



# BIORTHOSIS<sup>®</sup>

The first occlusal splint  
with a unique provisional veneer

Aesthetic  
appearance  
during TMD  
treatment



A brand of



**NATURALESTHETICS**  
BIOMEDICAL ENGINEERING IN DENTISTRY

# NO MORE HIDING!

BIORTHOSIS® – the first  
occlusal splint with a unique  
provisional veneer



# HIGHLIGHTS

- Successfully used in the treatment of temporomandibular disorder (TMD).
- Unique provisional veneer for an aesthetic appearance even during treatment!
- Made from crystal clear, biocompatible material so the appliance is dimensionally stable and virtually invisible
- State-of-the-art digital manufacturing technologies made in Germany enable a fitting accuracy within 0.015 mm!
- Very comfortable to wear:  
tasteless, does not impair speaking or breathing!
- Time saving: No lengthy patient appointments
- and much, much more ...



BIORTHOISIS®

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# BIORTHOSIS® ...



... is a next-generation occlusal splint that is used successfully in the treatment of temporomandibular disorder (TMD).

Unlike conventional bite splints, BIORTHOSIS® already has an integrated provisional veneer. This makes the desired objective of the treatment immediately visible, thus creating an aesthetic appearance even during treatment! The customized splint made from a crystal clear, dimensionally stable material is nearly invisible so that the treatment is practically imperceptible to the eye.

Thanks to state-of-the-art digital manufacturing technologies, BIORTHOSIS® appliances can be produced to fit with an accuracy within 0.015 mm. This means maximum comfort for the wearer without any impairment.

BIORTHOSIS® - High quality made in Germany!

BIORTHOSIS®



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## TEMPOROMANDIBULAR DISORDERS

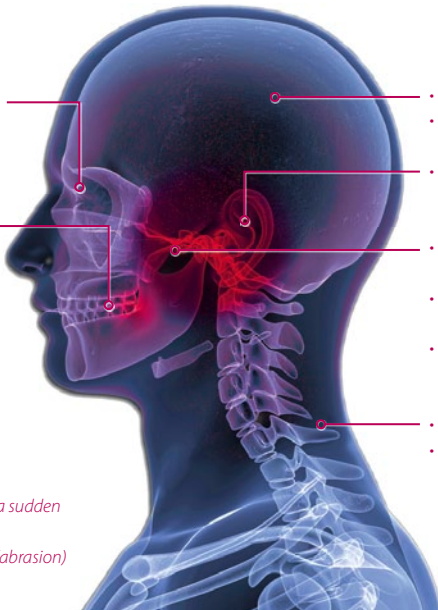
When the upper and lower jaw do not work together in harmony, a person's ability to speak, eat, chew, swallow, make facial expressions, breathe can be affected and cause pain. Grinding noises, cracking and locking of the jaw are other possible symptoms of temporomandibular disorder (TMD). In fact, malalignment of the TMJ can even have a negative effect on the equilibrium of the entire body.

BIORTHOSIS® permanently sets your TMJ in a relaxed position. The splint is worn for as little as a few weeks and sometimes longer, based on the individual requirements of some patients. It gradually corrects the positioning of your jaw to help release the tension caused by the misalignment.

## TYPICAL TMD SYMPTOMS

- Facial pain
- Hypersensitivity to light / eyes flicker
- Ocular pressure

- Unexplained toothaches
- Pressure sensitivity
- Bruxism (grinding of teeth)
- Speech impairments
- Loosening of teeth
- Tooth Migration
- Receding gums
- Numbness
- Burning tongue
- Difficulty chewing or a sudden uncomfortable bite
- Excessive tooth wear (abrasion)



- Headaches
- Migraines
- Tinnitus (ringing of the ears)
- Limited movement or locking of the jaw
- Painful clicking, popping or grating
- Pain or tenderness in the jaw joint area
- Neck tension/strain
- Tense muscles



## HOW IT WORKS

BIORTHOSIS® is a key component in the treatment and correction of TMD and has nothing in common with the so-called “bite splints”, “bite guards” or “night guards” that are often used indiscriminately and non-specifically for a variety of functional problems. These splints are usually basic vacuum-formed splints with simple designs that are not adapted to patients’ joints and lack a biomechanically adequate design.

Conversely, BIORTHOSIS® trains the masticatory muscles thanks to its specific design features and enables simulation of a biomechanically efficient chewing process. This allows the TMJ, masticatory muscles and teeth to work together just as they would in the presence of an ideal equilibrium of forces.

**The medical advantages of BIORTHOSIS® are:**

- Protection of enamel from excessive wear
- Relief of temporomandibular joints by reducing the pressure
- Relaxation and pain relief for tense muscles of mastication
- Teeth grinding (bruxism) is prevented

**The BIORTHOSIS® fulfills the following functions:**

- It stops the further joint damage (osteoarthritis)
- Reduces TMJ clicking
- Increases a low bite
- Corrects the position of the jaw joints / joint of the disc and it stabilizes
- Switches disturbing contacts in bite out or compensates missing contact surfaces

## TREATMENT

Treatment with BIORTHOSIS® takes place in a series of steps. Your dentist will determine the duration of treatment based on your individual needs.

**1. Construction of a precise model of your dentition**

Your BIORTHOSIS® dentist creates a model of your teeth as a basis for designing and making the first splint.

**2. The appliance is worn round the clock**

Due to the physical nature of BIORTHOSIS®, you will not experience any difficulties in breathing, eating or speaking.

**3. Inspection and reevaluation**

Your teeth are inspected and reevaluated on a regular basis to create a newly adapted splint. This process is repeated as many times as is necessary to achieve the treatment objective.

## TREATMENT CONCEPT

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The BIORTHOSIS® is worn 24 hours a day 7 days a week for as long as it takes the mandible to stabilize. Stabilization is variant depending on the complexity of the case. **Most cases stabilize between 6 and 18 weeks.**





# INTEGRATED VENEER

Every BIORTHOSIS® appliance is custom made for the patient and comes with a unique provisional veneer. This creates an aesthetic appearance even during treatment and has pleasant benefits:

- **The treatment result is immediately visible**

This gives the patient a new aesthetic feeling and increases discipline in wearing the splint since the motivation for reaching the treatment objective is very high.

- **The treatment is nearly imperceptible to the eye**

This makes wearing the splint that much more comfortable.

## BENEFITS



Conventional bite splints



BIORTHOSIS®



# BIOCOMPATIBLE AND DIMENSIONALLY STABLE

Conventional bite splints are often made of thermoplastic material, which has a negative effect on stability and hardness, and may lead to more problems due to the high chewing force. When it comes to patient safety, there is no room for compromise. BIORTHOSIS® is made using biocompatible, dimensionally stable PMMA. This material has many advantages ...

- **Excellent physical properties**  
300% higher Vickers hardness than conventional materials for superior dimensional stability during the entire treatment period.
- **Minimal wall thickness for maximum patient comfort**  
Special manufacturing processes enable the thinnest designs.
- **No unpleasant aftertaste**  
The dense microstructure guarantees low plaque vulnerability and makes BIORTHOSIS® completely tasteless.

BENEFITS

CRYSTAL CLEAR AND  
COMPLETELY TASTELESS!



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# DIGITAL MANUFACTURING TECHNOLOGIES

State-of-the-art digital manufacturing technologies enable fast and efficient production and guarantee the highest quality – made in Germany!

- **High-end scan technology for digital analysis**  
Scan accuracies within 0.009 mm in solids enable precise digital analysis of the complete dentition.
- **Revolutionary CAD design possibilities**  
Feels natural to wear; does not impair speaking or breathing!
- **5-axis milling according to the latest industry standards**  
Fitting accuracy within 0.015 mm for maximum comfort.
- **Digital quality management**  
Strict quality control ensures perfect fitting accuracy.

BENEFITS



MADE IN  
GERMANY



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# SHORTER TREATMENT TIMES

TMD therapy with BIORTHOSIS® is a type of minimally invasive treatment. Patient appointments are kept to a minimum; time-consuming dental worksteps are eliminated.

- **Less labor-intensive steps during treatment**

No post-processing of the splint is necessary thanks to the high fitting accuracy.

- **No lengthy patient appointments**

Follow-up appointments are limited to scanning part of the dentition.

- **Future oriented development**

We are constantly working on new technologies in close collaboration with research institutes. You can rest assured that your treatment plan is always based on the latest methods and technologies.

BENEFITS



 BIORTHOSIS®

The logo consists of a stylized, pink, three-lobed shape resembling a triangle with rounded corners, enclosed within a circular outline. To the right of this symbol, the word "BIORTHOSIS" is written in a clean, black, sans-serif font, with a registered trademark symbol (®) at the end.

[www.BIORTHOSIS.com](http://www.BIORTHOSIS.com)

## BIORTHOSIS® DENTISTS

A list of all partner dentists who use BIORTHOSIS® successfully in their offices can be found at: [www.BIORTHOSIS.com](http://www.BIORTHOSIS.com)

### **Can't find your dentist?**

Then talk to him about BIORTHOSIS®, or send us an email with the name of your doctor and we will contact him.

PARTNER DENTISTS



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