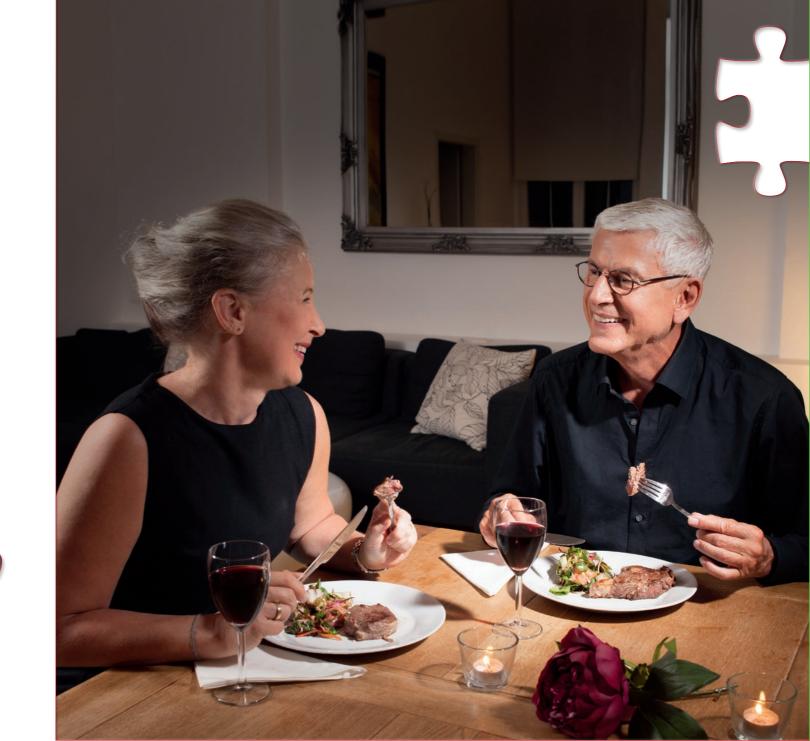
# Complete yourself.

How restoring your teeth can win back your life.



### Intro

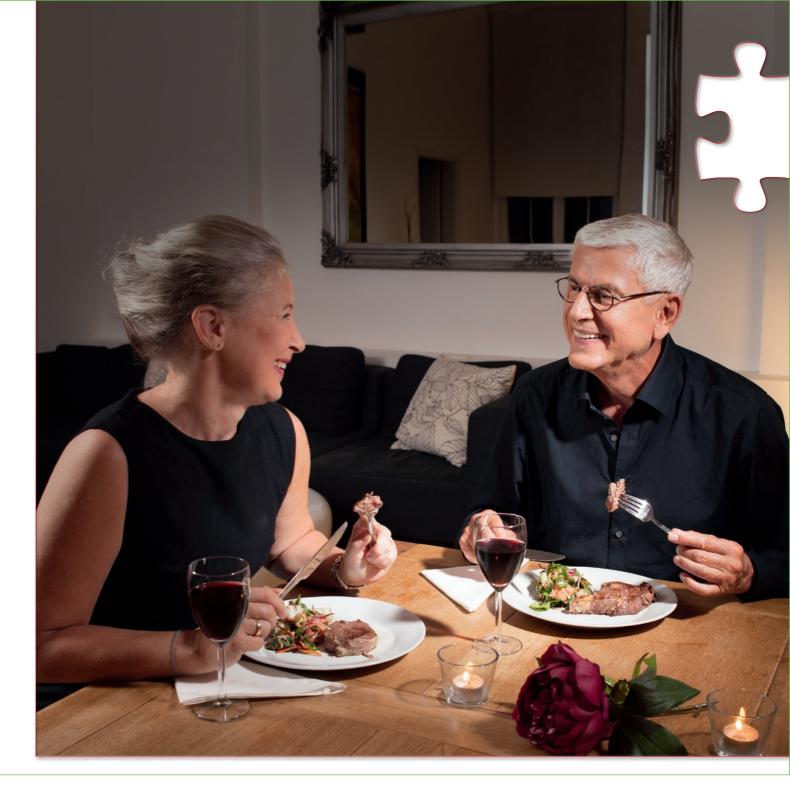






### Intro





# Why you shouldn't ignore missing or damaged teeth

Missing or damaged teeth affect our quality of life. They have a negative impact on how we eat and speak and can affect our appearance.







#### Confidence and well-being

- You might feel less confident to smile or laugh.
- You might avoid contact with other people.
- This can lead to feelings of depression, anxiety and loneliness.

#### Eating and speaking

- Eating hard, crunchy or sticky food such as nuts, fruit and vegetables can become very difficult.
- Shifting teeth and inflamed gums can cause pain and pressure on muscles and joints.
- You might find yourself frequently eating the same foods, which can have negative effects on your overall health.

#### A youthful appearance

- If you're missing a lot of teeth your jaw bone starts to shrink.
- Lips are no longer supported by teeth, so cheeks become hollow.
- Your face looks a lot older than it should.



# Why you shouldn't ignore missing or damaged teeth



Confidence and well-being



Eating and speaking



A youthful appearance

# ) How missing teeth affect the jaw bone and gums



#### One missing tooth

- A missing tooth disturbs the interplay between teeth and bone.
- The jaw bone starts shrinking and the gum pulls back.
- Neighboring teeth can collapse into the gap, while opposing teeth can grow into the gap.



#### Multiple missing teeth

- When multiple teeth are missing, bone loss can become so significant that it causes changes to the jaw line and facial appearance.
- A dental bridge can give short-term relief, but over time its movement can increase pressure on the jaw bone and worsen bone deterioration.

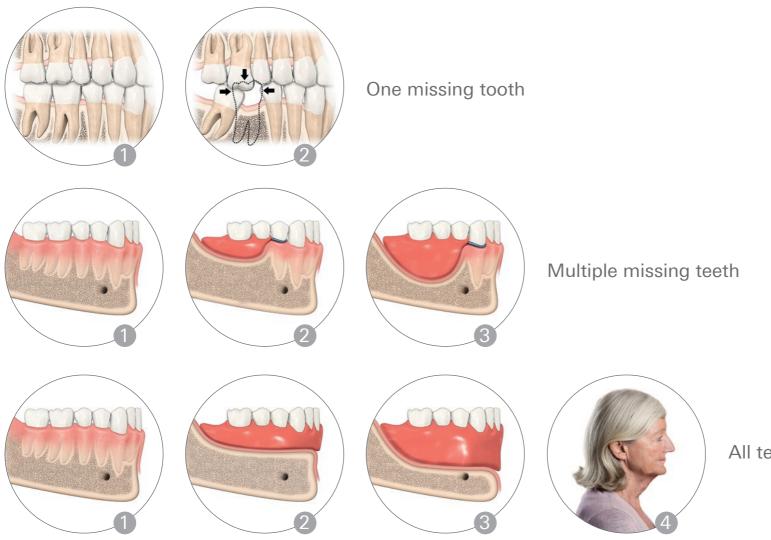


#### All teeth are missing

- When all your teeth are missing, bone deterioration can become so severe that facial structures can collapse.
- Dentures can give short-term relief, but over time their movement can increase pressure on the jaw bone and worsen bone deterioration.



### How missing teeth affect the jaw bone and gums



All teeth are missing

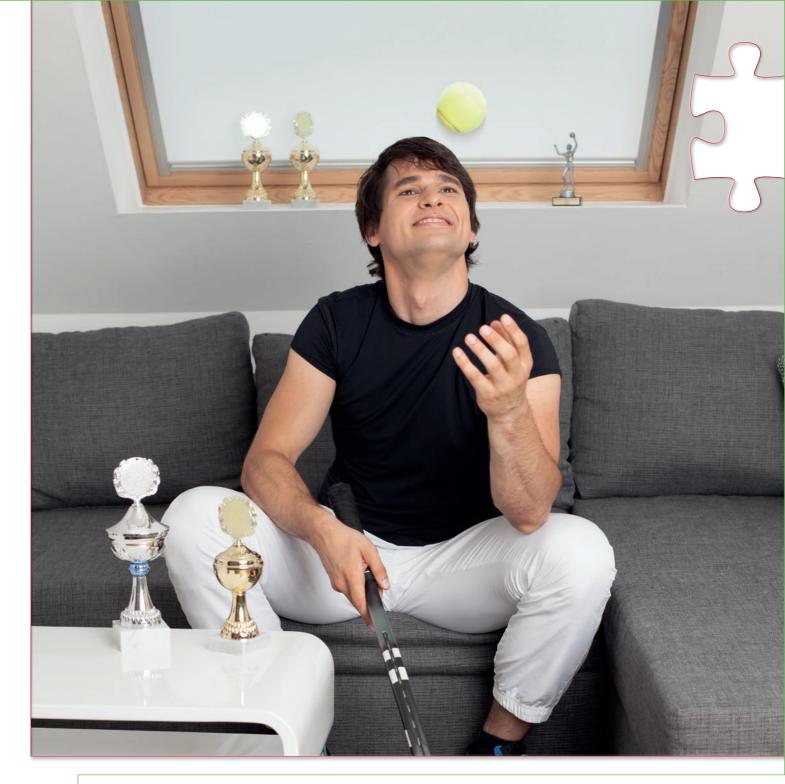
### Solutions







### Solutions





Solutions

#### Solutions for restoring a damaged tooth **(1**11)





#### **Dental crown**

- Chipped or cracked teeth should not be ignored.
- A dental crown is made of biocompatible material (such as ceramics) i.e. your body accepts it.
- A dental laboratory designs it to make it look and feel like your natural tooth.

#### Grinding down the tooth

Your old tooth needs to be ground down to build an anchor for the new crown.



### Solutions for restoring a damaged tooth



Dental crown



Solutions



Replacement teeth are available in different materials:





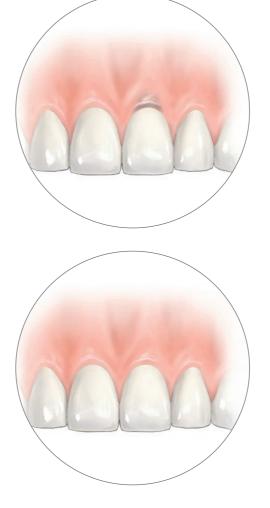
- Metal crowns are usually cheaper, but can lead to unsightly metal rims over time. This is due to the metal base shining through around the gum line or darkening the porcelain on top of it. It is more likely to happen in people who have receding gums, but should be taken into consideration when choosing the right crown.
- **Ceramic crowns** stay white along the rim and look more esthetic. The material is also thinner and well-accepted by the body.



### Ceramic or metal crown?



Dental crown



Solutions

# Solutions for restoring missing teeth



#### Dental bridge

- A bridge is a set of replacement teeth used to fill the gaps caused by one or more missing teeth.
- It prevents neighboring teeth from shifting and affecting your bite.
- It recreates a stable chewing surface.





#### Grinding down the teeth

- The bridge is anchored to neighboring teeth that need to be ground down.
- This can mean sacrificing neighboring teeth which might be healthy
- The movement of a dental bridge in your mouth can increase pressure on the jaw bone and worsen bone deterioration over time.



### Solutions for restoring missing teeth





Solutions



Replacement teeth are available in different materials:

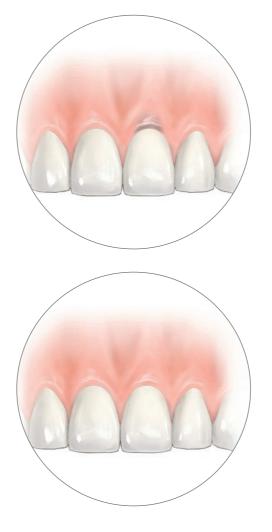


- Metal bridges are usually cheaper, but can lead to unsightly metal rims over time. This is due to the metal base shining through around the gum line or darkening the porcelain on top of it. It is more likely to happen in people who have receding gums, but should be taken into consideration when choosing the right bridge.
- **Ceramic bridges** stay white along the rim and look more esthetic. The material is also thinner and well-accepted by the body.



### Ceramic or metal bridge?





Solutions

# Solutions for restoring missing teeth

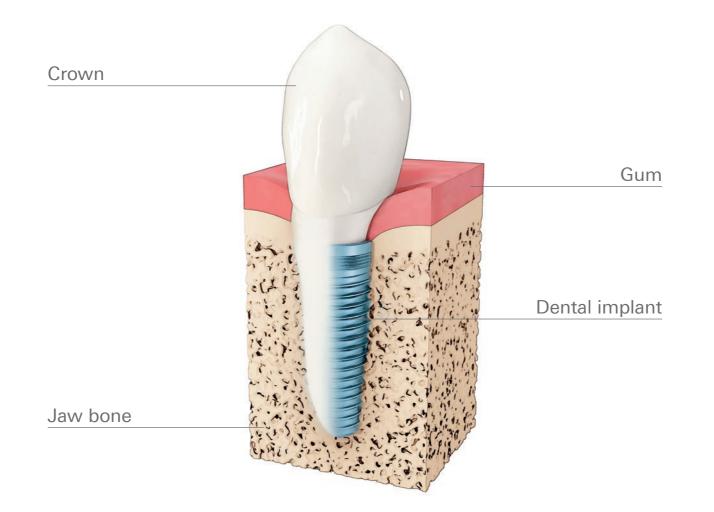


#### **Dental implants**

- A dental implant replaces the tooth root and builds a stable foundation for crowns, bridges or replacement solutions for a toothless jaw.
- It is only a few millimeters long and carefully engineered.
- It is firmly anchored and integrated in the jaw bone just like your natural tooth root, which keeps the new tooth stable.
- A crown or bridge is placed on top of the implant.



### Solutions for restoring missing teeth



Solutions





- A natural-looking smile
- Normal eating and speaking
- Neighboring teeth stay intact
- Stable and comfortable fit
- A long-lasting and proven solution

#### Please note:

Dental professionals are advised to always inform patients about potential risks of dental implant treatment based on their individual dental situation. For a list of potential risks, please refer to the Nobel Biocare patient website nobelbiocare.com/patients.

### Benefits of dental implants



- $\rightarrow$  A natural-looking smile
- → Normal eating and speaking
- → Neighboring teeth stay intact
- → Stable and comfortable fit
- → A long-lasting and proven solution

Implants for a single missing tooth

Self-confidence





### Implants for a single missing tooth





Implants single

# Placing a crown on a dental implant



A missing tooth is replaced by a crown placed on a dental implant.

- A dental implant replaces the tooth root and builds a foundation for the dental crown.
- The surface material of the dental implant can maintain existing jaw bone levels and prevent further bone loss.
- Neighboring teeth are kept intact, because the replacement tooth is directly connected to the implant.



### Placing a crown on a dental implant



Implants single









#### Dental crown on an implant

### Francesca B., 21:

"After the treatment I couldn't believe how completely my smile had changed. Thanks to my new tooth, my smile looks all natural. What is really incredible is that I can use it to eat exactly what I want – just like a natural tooth."

#### Case example:

Restoration of a single tooth with a NobelProcera Crown on an implant

This patient had a genetically missing tooth. With an orthodontic treatment, her dentist moved the misplaced tooth to create space to place an implant, onto which an all-ceramic crown was placed.



### Francesca's story



### Dental crown on an implant

### Francesca B., 21:

"After the treatment I couldn't believe how completely my smile had changed. Thanks to my new tooth, my smile looks all natural. What is really incredible is that I can use it to eat exactly what I want – just like a natural tooth."





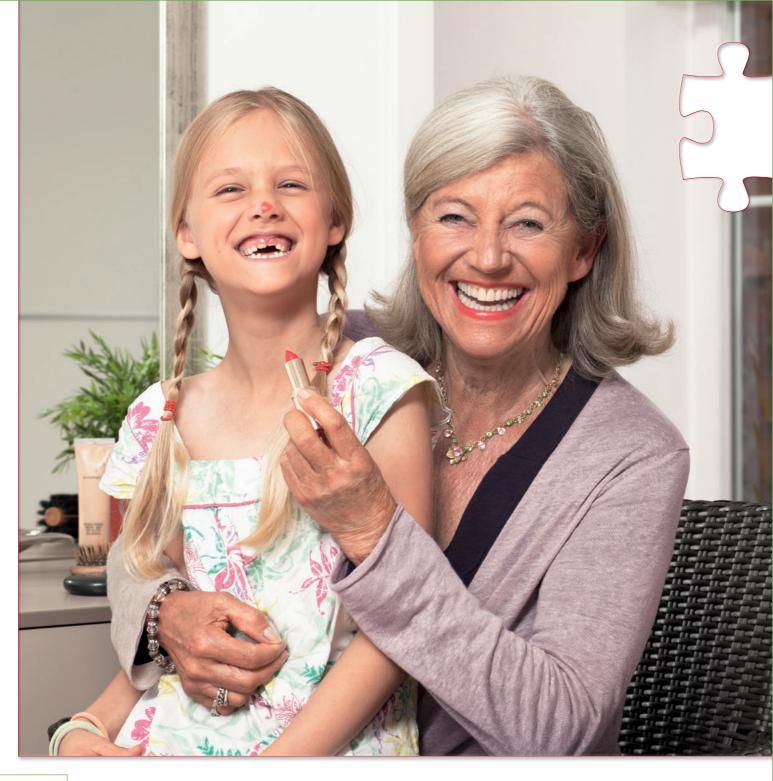
before

after

Implants single

Implants for several missing teeth

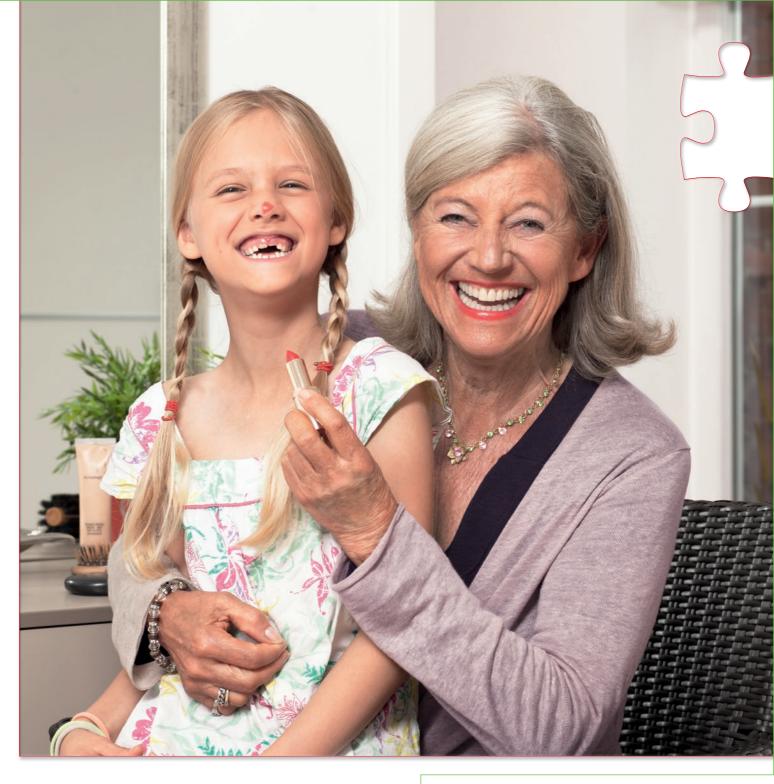






Implants for several missing teeth





Implant bridge

# Placing a bridge on dental implants



Missing teeth are replaced with a bridge anchored to dental implants

- A bridge is a set of natural-looking replacement teeth.
- It prevents remaining teeth from shifting and influencing your bite.
- It fully restores your chewing function.
- If it is secured on dental implants, neighboring teeth are left untouched.
- Correct chewing movements and the surface material of the dental implant can maintain existing jawbone levels to prevent further bone loss.



### Placing a bridge on dental implants



Implant bridge

# Andrea's story







#### Bridge on implants and natural teeth

### Andrea A., 42:

"My teeth were an embarrassment for most of my life. My new smile has not only improved my appearance, but it has also given a great boost to my confidence. It's definitely the best personal investment I've made."

#### Case example:

Upper jaw restoration with a NobelProcera Crown on natural teeth and a NobelProcera Bridge on implants.

After many years of wearing a partial-removable denture, this patient received all-ceramic crowns on her remaining natural teeth and an all-ceramic bridge on newly placed implants. Pink porcelain was used in areas to improve overall esthetics.

### Andrea's story





#### Bridge on implants and natural teeth

### Andrea A., 42:

"My teeth were an embarrassment for most of my life. My new smile has not only improved my appearance, but it has also given a great boost to my confidence. It's definitely the best personal investment I've made."

before

after

Implant bridge

### Implants for toothless jaws







### Implants for toothless jaws





Implants full-arch

# Solutions for a mouth without teeth

A jaw without teeth can be restored with either fixed-removable solutions or fixed solutions. The choice depends on factors such as your cleaning preference, the desired level of stability and costs.



Fixed-removable bridge on two implants



Fixed-removable bridge on an implant bar

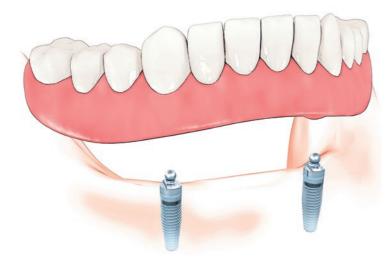
**Fixed-removable solutions** for toothless jaws use implants as fixed anchors. But you can easily remove the prosthesis yourself for cleaning. They offer many advantages compared with conventional dentures:

- No need to use denture adhesives.
- Secure fit in the mouth, providing better chewing and speaking function.
- Avoid irritation and inflammation of the gums often caused by conventional dentures.
- Look and feel like natural teeth.
- Can be removed for cleaning.



### Solutions for a mouth without teeth

#### **Fixed-removable solutions**



Fixed-removable bridge on two implants



#### Fixed-removable bridge on an implant bar

Implants full-arch

# Solutions for a mouth without teeth

A jaw without teeth can be restored with either fixed-removable solutions or fixed solutions. The choice depends on factors such as your cleaning preference and behavior, the desired level of stability and costs.



Fixed bridge on multiple implants



Fixed bridge on the All-on-4<sup>®</sup> treatment concept using four implants

**Fixed solutions** for toothless jaws use implants as anchors and securely fix the prosthesis to them. You cannot remove it yourself. They offer several advantages compared with conventional dentures:

- Securely fixed to four or more implants that are placed in the jaw bone and function like natural tooth roots.
- Maintain existing bone and positively impact further bone loss.
- All-on-4<sup>®</sup> treatment concept can make bone augmentation (see also section "Bone augmentation techniques") unnecessary.
- Avoid irritation and inflammation of the gums often caused by conventional dentures.
- Look and feel like natural teeth.

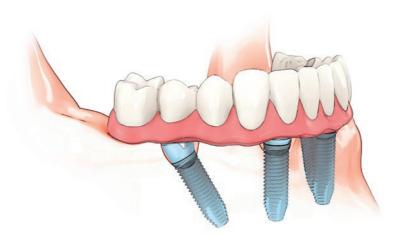


### Solutions for a mouth without teeth

#### **Fixed solutions**



Fixed bridge on multiple implants



Fixed bridge on the All-on-4<sup>®</sup> treatment concept using four implants

Implants full-arch









#### Replacing dentures with a new set of teeth

#### Edith R., 58:

"Finally, after all these years in dentures, I feel myself again. The new teeth on my implants feel and look better than my own teeth did. It's all about the quality of life - I feel younger and more self-confident. My entire outlook on life has changed."

#### Case example:

#### Upper and lower full-arch restoration: NobelProcera implant bridges.

The patient had been wearing complete dentures in both jaws for years and was dissatisfied with function, speech and appearance. Using treatment planning software and guided surgery, implants were placed in both jaws and immediately restored with provisional restorations. Because of the patient's high esthetic requirements, final implant-supported fixed NobelProcera ceramic restorations were fabricated for both arches.



### Edith's story



#### Replacing dentures with a new set of teeth

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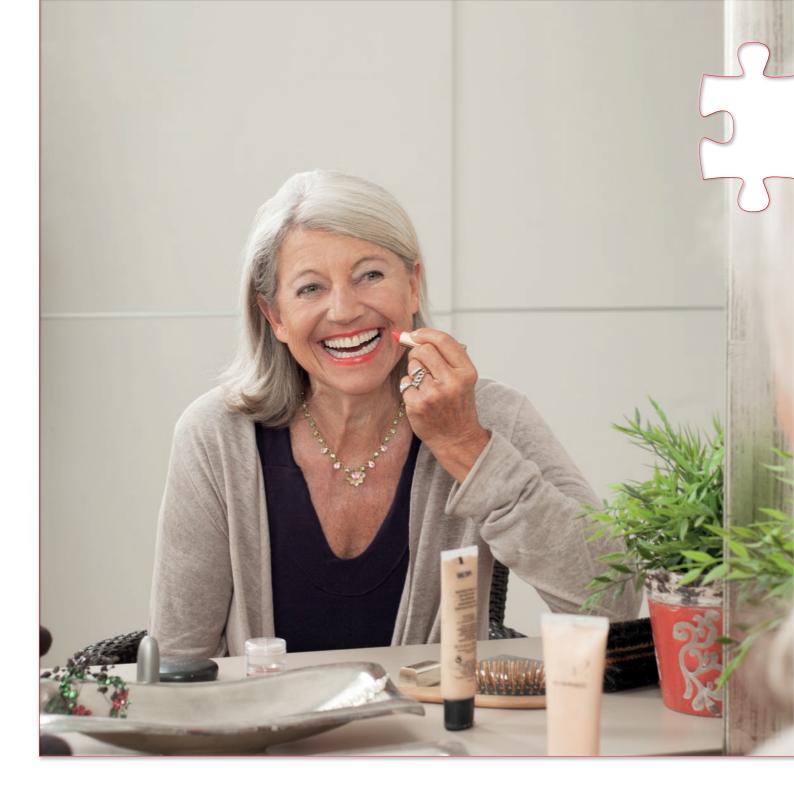


before

after

# Treatment steps







# Treatment steps

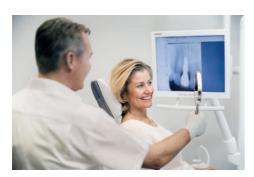




# What does treatment look like?







#### Consultation, diagnosis and treatment planning

- First your dentist needs to assess whether dental implant treatment is a suitable option for you. Your gums and jaw bone need to be free from inflammation or other conditions.
- During diagnosis, the type and quantity of jaw bone is also evaluated by X-ray. Depending on how long you're already living with missing teeth, your jaw bone can be severely reduced.
- Digital tools will help to plan your treatment by generating an exact 3D image of your mouth. Seeing the full height, width and depth of your jaws helps find the best position for your implant.

#### **Implant placement**

- Implant placement is usually an outpatient procedure, and, thanks to local anesthesia, you won't feel any pain during the procedure.
- Depending on the individual situation in your mouth, implants are placed in a one- or multiple-step procedure.

#### Temporary and final restoration

- Depending on your individual situation, a temporary crown or bridge can be put on top of the implant right after surgery or after the implant has healed in.
- Healing in means your jaw bone grows around the implant, a process called osseointegration (from Greek "osteon", bone) and can take anything from a few weeks to a few months.
- In the meantime, a dental laboratory designs and manufactures your final tooth, which is then attached directly to the implant with a small screw or cemented to an abutment.

### What does treatment look like?



Consultation, diagnosis and treatment planning



Implant placement

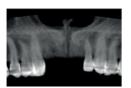


**Final restoration** 

# Digital diagnosis and treatment planning



 A dental health check and X-ray examination are needed to give a full overview of your dental situation.



 A classic X-ray image will only provide a 2D image of your jaw, important aspects of your anatomy are not visible.



 A Cone Beam CT scanner (CBCT) creates accurate 3D images of your jaw, which can then be viewed for diagnosis in special 3D planning software.



 With the help of this 3D planning software, a treatment plan is created to ensure accurate placement of the implant based on the height, width and depth of your jaw as well as the final shape of your prosthesis.



 Optionally, a surgical template can be created based on your individual treatment plan. This helps to ensure safe and accurate drilling (and implant placement in the case of fully guided surgery).

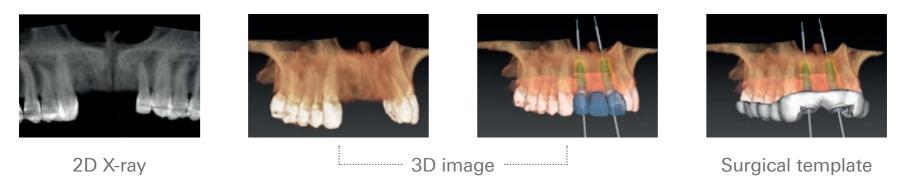
# Digital diagnosis and treatment planning

#### First examination



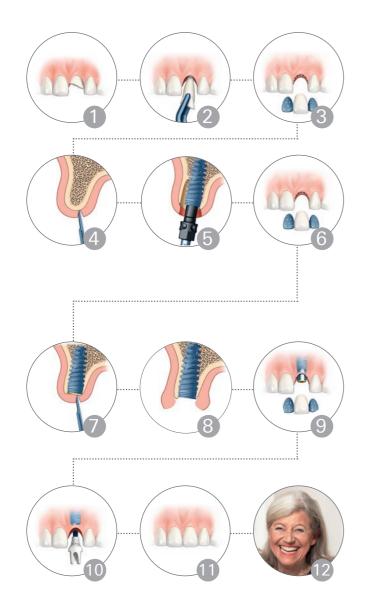
#### 3D planning and surgical template





# Conventional implant placement

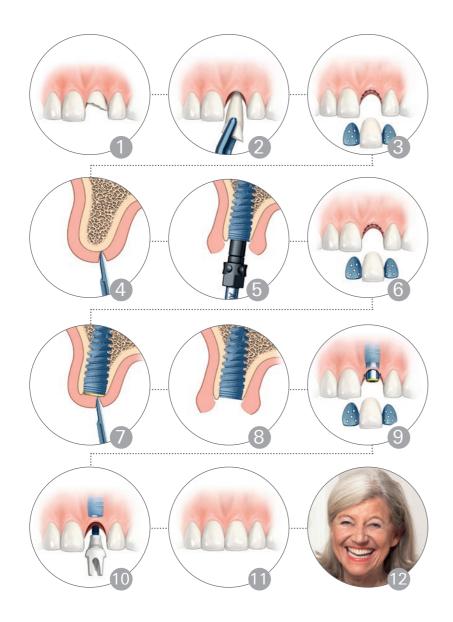
#### Treatment including tooth extraction



- On the day of extraction, the damaged tooth is removed and the wound is sewn up. A temporary restoration is fitted and glued to the neighboring teeth, while the wound heals.
- Two to three months after extraction, the healed site is opened again. Without a tooth or an implant, the bone will recede but an implant can be placed. The wound is closed with a few stitches and the implant is left to integrate with the bone. The temporary restoration is put back in place.
- The healed site is opened again to uncover the implant. A healing abutment is inserted and attached to the implant. After closing the wound, the temporary restoration is put back once again.
- The final crown arrives. The final restoration is placed on a special abutment. You can go back to your normal lifestyle after up to 10 months of living with temporary restorations.

## Conventional implant placement

#### Treatment including tooth extraction



The day of extraction

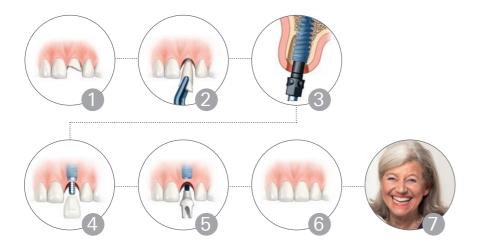
**1st surgery** Two to three months after extraction

**2nd surgery** Six to nine months after extraction

Another month later

# M Immediate implant placement and function

Treatment including tooth extraction



- On the day of extraction, the damaged tooth is removed and the implant is placed. If all conditions are met, a provisional crown is fixed on the implant. You can immediately chew and smile.
- Three months after implant placement, the final crown arrives and is placed. No surgery is needed. You can go back to your normal lifestyle.

(7)

### Immediate implant placement and function

Treatment including tooth extraction



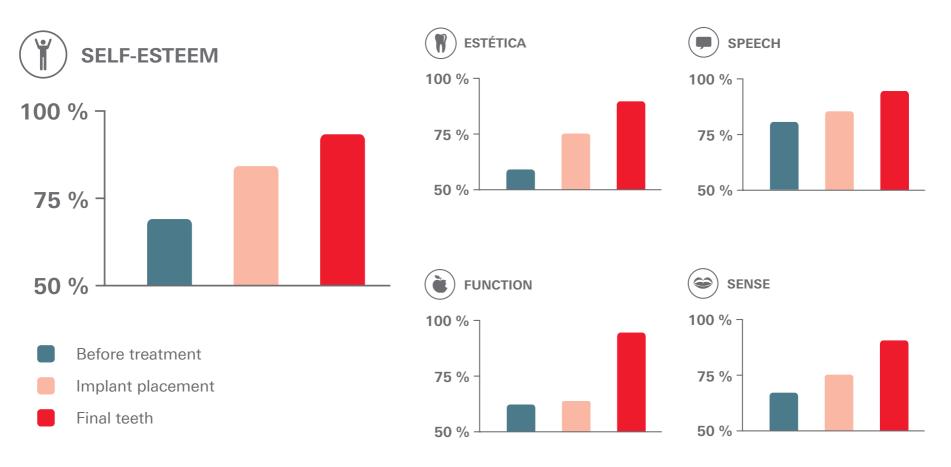
**1st surgery** The day of extraction

Three months after implant placement

. . . . . . . .

# Fixed teeth on the day of surgery

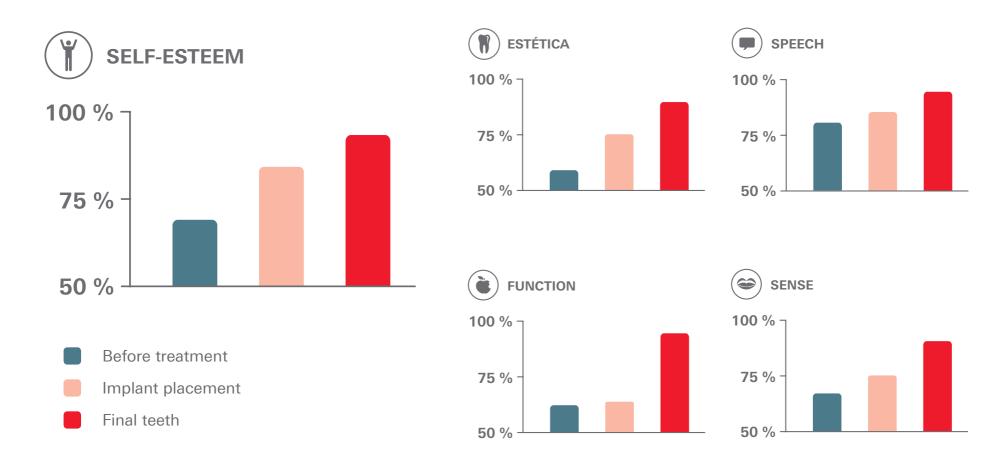
Immediate improvement in quality of life



Studies report excellent results on implant success, stable bone levels, good soft tissue health and patient satisfaction. The results on quality of life are also noteworthy, with significant improvements in patient self-ratings on esthetics, self-esteem, function, sense and speech. [Kolinski et al. 2013, De Rouck et al. 2009]

# Fixed teeth on the day of surgery

Immediate improvement in quality of life



[Kolinski et al. 2013, De Rouck et al. 2009]

# 🔊 Costs versus benefits of bridges and dental implants

dental impla patient usin	tion of costs versus benefits of bridges and ants can be customized for each individual g the provided pen. The scale ranges from zero to four (maximum) points as demonstrated in the this page.	BRIDGE	DENTAL IMPLANT
COSTS	Initial costs		
	Long-term costs after treatment		
BENEFITS			
	Durability		
	Keep healthy neighboring teeth	$\bigcirc$	
	Jaw bone is preserved		
<b>Please note:</b> Dental professionals are advised to always inform patients about potential risks of dental implant treatment based on their individual dental situation. For a list of potential risks, please refer to the Nobel Biocare patient website			

nobelbiocare.com/patients.



### Costs versus benefits of bridges and dental implants

		BRIDGE	DENTAL IMPLANT
COSTS	Initial costs		
	Long-term costs after treatment	$\bigcirc \bigcirc $	$\bigcirc \bigcirc $
BENEFITS	Durability		
	Keep healthy neighboring teeth		
	Jaw bone is preserved	$\bigcirc \bigcirc $	$\bigcirc \bigcirc $





# Bone augmentation techniques

Missing teeth and the resulting lack of chewing forces make bone shrink. Bone augmentation regenerates bone, often before implant placement. Bone material can be taken from other parts of your own body, another human being, animals or synthetic sources.

#### **Extraction socket preservation**

- A collection of techniques preventing soft tissue from growing into the gap left after tooth extraction.
- The gap can be filled with bone replacement material and after a certain healing time the implant can be placed.

#### Bone augmentation around the implant

Used around the implant after placement to improve stability.

#### Sinus floor elevation

- Used when too little bone is present for implant placement in the upper jaw.
- Additional bone material lifts the sinus floor and creates a new bone layer for implant stability.

#### Horizontal and vertical ridge augmentation

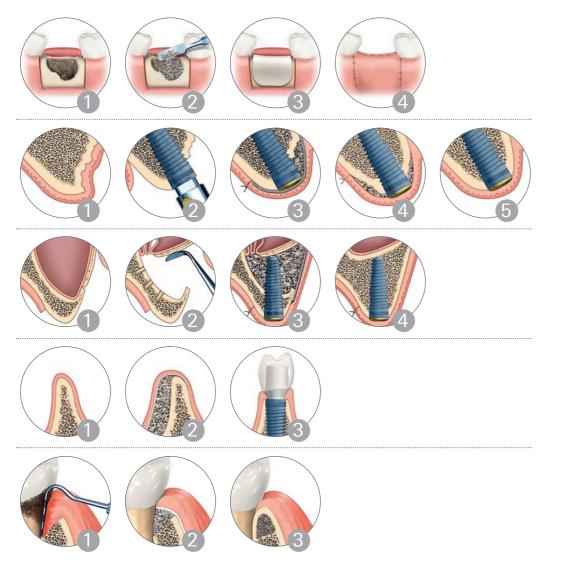
- Used when too little bone is present for implant placement in the lower jaw.
- Bone material creates more height or width for implant stability.

#### Guided tissue regeneration (GTR)

 A collection of techniques to preserve natural teeth by adding bone material around the tooth root.



### Bone augmentation techniques



Extraction socket preservation

#### Bone augmentation around the implant

Sinus floor elevation

Horizontal and vertical ridge augmentation

Guided tissue regeneration





Pioneer of dental implant treatment since 1965



Collaboration with leading experts



Excellent standards of practice with continuous training for dentists and dental laboratories



Scientific excellence focusing on safety and product performance



Global network of dental practices at your disposal wherever you are



Life-time warranty on dental implants.

# Why your dentist uses Nobel Biocare implants



• First dental implant patient in 1965



Collaboration with leading experts



Continuous training for dentists and dental laboratories



Scientific excellence



Global network of dental practices



Life-time warranty on dental implants



