

DIO Implant Guide Book

for Patient Consultation



Contents

Part 1. What are Dental Implants?	1-1. Implants are your second permanent teeth	05
	1-2. How do implants differ from natural teeth?	06
	1-3. What happens if you don't replace a missing tooth?	08
	1-4. What benefits can you expect from having an implant surgery?	10
	1-5. How long is the lifespan of implants?	13

Part 2. Types of Implant Surgeries	2-1. General process of implant treatment	14
	2-2 Types of Implant Surgeries	16
	① Anterior aesthetic implant	
	② Immediate placement	
	③ Full mouth implant	
	④ Implant with bone graft	
	⑤ Implant with sinus lift	

Part 3. Types of Restoration	3-1. Types of restoration and abutments	22
	3-2. Types of prosthetic loading	23

Part 4. Why are DIO Implants Special?	4-1. Superior technology and quality	25
	4-2. DIO UFII Implant?	26
	4-3. Unique surface treatment	27

Part 5. Implant Surgery Cases	CASE 01	31
	CASE 02	32
	CASE 03	33
	CASE 04	34

Part 6. Post Operative Care	Post-op instructions	36
	Precautions after Sinus Lifting Procedure	37

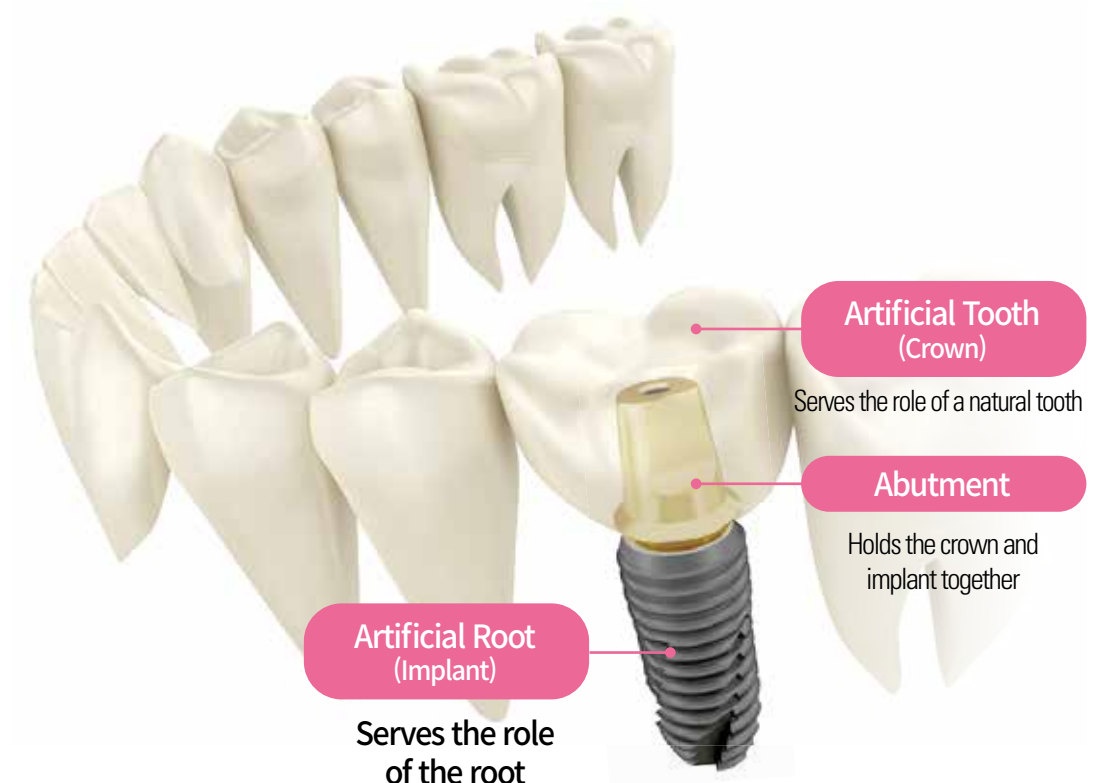
Part 1.

What are dental implants?

1-1.

Implants are your second permanent teeth

Implants are artificial tooth roots that are placed on the sites where teeth are missing, to be loaded with artificial teeth to provide a safe treatment solution that can provide similar functionality as natural teeth.



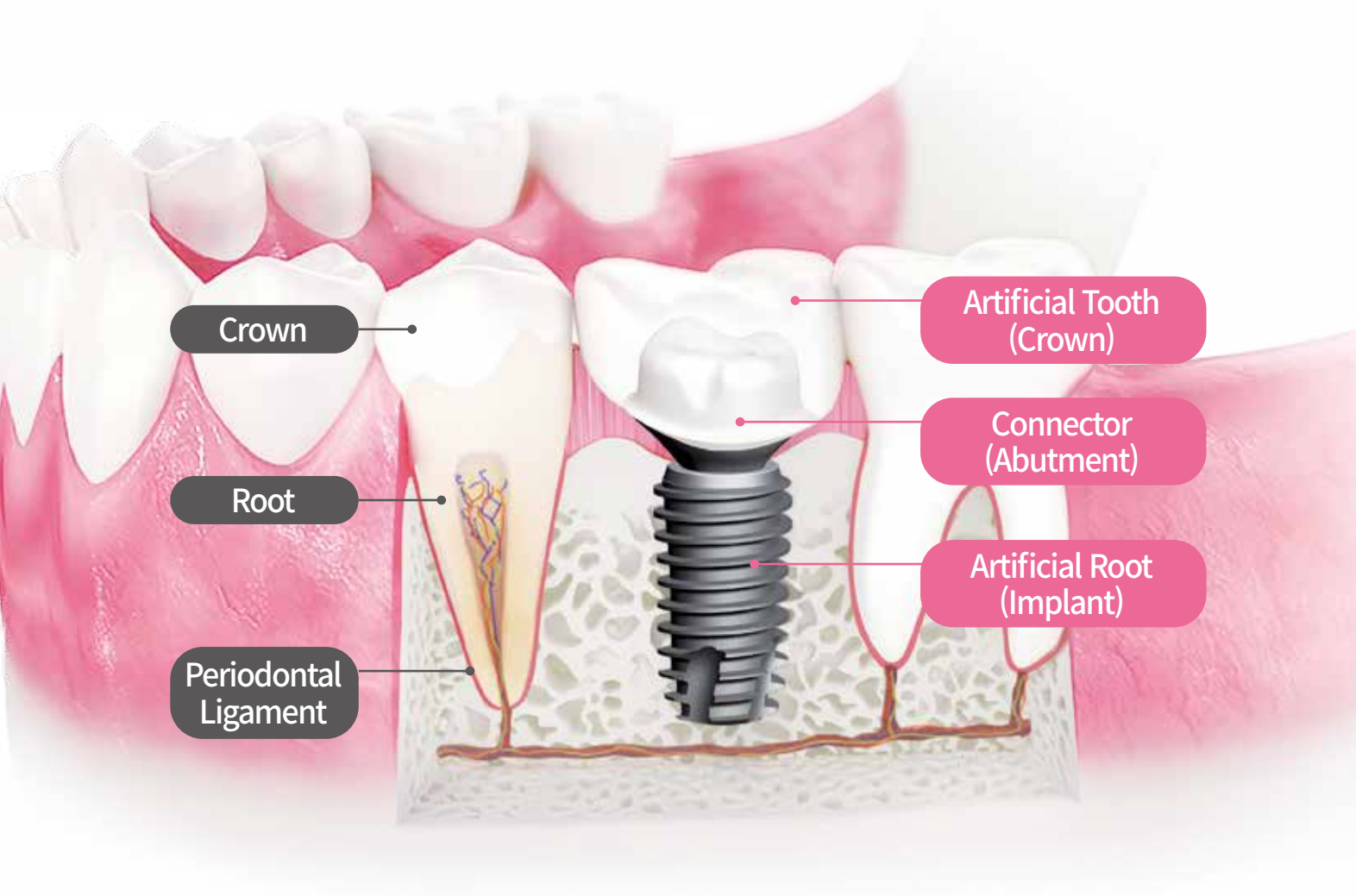
* Material : Titanium

A metal that has excellent biocompatibility and used in many other medical device applications

The most critical factor of a successful implant procedure is whether the implants are securely integrated with the bones.

1-2.

How do implants differ from natural teeth?



Natural Teeth	vs	Implant
Absorb external impact from damaging teeth roots		Firmly fixed and integrated to the jaw bone (The chewing ability is similar to natural teeth)
Feel sensory stimuli e.g. touch or movement		Cannot feel pain, fine senses, or texture of food
Regenerate bone tissues and shift teeth to maintain balance		May require artificial bone grafting in case of lacking bones (Does not develop cavities and can be used semi-permanently)

1-3.

What happens if you don't replace a **missing tooth**?

01



Misalignment

Adjacent teeth lean or shift into the missing gap, causing misalignment and ultimately damaging the jaw bones.

02



Overeruption of opposite tooth

When you are missing a tooth in the lower jaw, the absence of opposing force causes the opposite tooth on the upper jaw to overerupt out of normal occlusion.

03



Deterioration of digestive function

Food is not properly chewed and hence does not digest well in the stomach.

04



Malnutrition

Balanced intake of nutrition is difficult as the food that you can eat are limited.

05



Depression

You are discouraged as you cannot make a confident smile due to loss of tooth.

06



You look old

You look much older than your age as the face changes due to loss of alveolar bone.

1-4.

What benefits can you expect from having an implant procedure?

You can maintain healthy dentition around the surgical site.

Implants have long lifespan and near-permanently used.

Implants prevent bone absorption and maintains healthy bones.

Implants look natural and beautiful.

You can enjoy food better than using a denture.

Masticatory force is comparably similar to natural teeth.



	Implant	Bridge	Denture
Treatment Process	Insertion of an artificial tooth root into the bone	Delete adjacent teeth and cover end to end with connected artificial teeth	Fabricate a standardized teeth model
Damage	No damage to adjacent bones	Involves partially deleting natural adjacent teeth	Jaw bones are absorbed over time
Treatment Period	3 to 6 months	Short	Short
Replacement	Semipermanent (Subject to individual maintenance)	Replaced every 5 to 10 years	Replaced every 3 to 4 years
Chewing strength	Similar to natural tooth	Weak	Difficult to eat tough or hard food
Cost	High initial cost; long life	Low initial cost	Low initial cost; periodical replacement cost
Satisfaction	Minimal foreign sensation and highest satisfaction rate	Involves damaging adjacent teeth and short	Severe foreign sensation and aesthetically poor

※ Bridges and dentures take shorter treatment period compared to implants, but periodically require additional treatment and procedures due to loss of adjacent teeth and surrounding bones.

1-5.

How long is the **lifespan**
of implants?



You can extend the lifespan of your implant
by seeing your doctor regularly for periodical
maintenance and chekcups.

Part 2.

Types of Implant Surgeries

2-1.

General process of implant treatment



Implant treatment takes **about 3 to 6 months** depending on the patient's oral condition, health, and method.



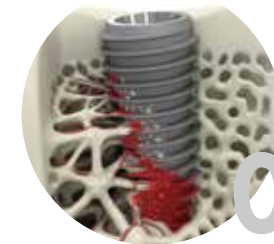
Diagnosis and Treatment Plan

Examine site for placement and bone density
- Panoramic X-ray



Implant Placement

Depending on the bone and gum conditions, the procedure and schedule may vary.



Integration of Bones and Implants (Osseointegration)

On average, it takes 2 to 4 months for lower jaw and 4 to 6 months for upper jaw, while it takes over 6 months for many bone transplants.



Abutment Placement

Once implant is securely integrated with the jaw bone, we place abutment where the crown will be loaded



Prosthesis Loading

Artificial crown (prosthesis) is designed to look similar to adjacent teeth and loaded on the abutment.



Regular Examination

Post-surgery examinations are important to maintain the implant a healthy condition.

2-2.

Types of Implant Procedures

1 Anterior aesthetic implant

The anterior absorbs alveolar bone quickly, making implant surgery difficult. In this case, it is important to perform bone graft and treat it as similar to natural teeth as possible.



We recommend
this procedure if :

- A tooth in a prominent area is missing due to a cavity
- You are missing front teeth naturally or are concerned about its shape
- If you lose part of your front teeth due to an accident
- If a serious gum disease requires anterior tooth extraction

Types of Implant Procedures

2 Immediate placement

This method has the advantage of preventing gum bone absorption and less bone loss because implants are immediately placed on the day of tooth extraction. This procedure is appropriate the tissues around the teeth are healthy and free of inflammation.



Method 1 Implant placed
on the day of extraction

Method 2 Implant placed after
3 to 6 months after extraction

Method 3 Implant placed after
1 to 2 months after bone grafting

We recommend
this procedure if :

- You are too busy for dental treatment
- Your tooth fell out recently
- You have systemic medical condition such as high blood pressure and diabetes
- Your jaw bone is sufficient and the damage is not severe
- You plan to have tooth extraction

Types of Implant Procedures

3 Full mouth implant

To restore a full dentition when you only have a few teeth left, one requires a major surgery involving 3 to 20 implants. Since it is a complex implant surgery, it requires highly skilled clinicians and staff.



Benefits of full mouth implant

- ① Aesthetics similar to natural teeth
- ② Relieve the discomfort of dentures
- ③ implantation and bone graft at the same time.
- ④ Semi-permanent lifespan
- ⑤ Chewing ability similar to natural teeth

We recommend this procedure if :

- You are missing multiple teeth due to aging
- You face extraction of multiple teeth due to periodontal disease or accident
- You want alternative solution to wearing denture
- You have naturally weak teeth

Types of Implant Procedures

4 Implant with bone graft procedure

If you have been without teeth for a long time or if your jaw bones are soft, you can restore your bones through bone transplantation to help your implants firmly settle into the bones.

Insufficient bones in a wide range | Block bone graft



Implace placement with small amount of bone graft



Severe shortage of bones | 1st stage bone graft and 2nd stage implant surgery



We recommend this procedure if :

- The alveolar bone has been severely absorbed due to periodontal disease
- You have been missing teeth for a long time
- Your gums have become thin after using dentures for a long time
- Your jaw bone have been damaged due to trauma or tooth decay

Types of Implant Procedures

5 Implant with sinus elevation

If implant placement is difficult due to thin or insufficient bones inside sinus, an empty space inside the maxillary bone, bone transplantation is performed through maxillary sinus elevation for implant placement

Crestal Approach |

Appropriate if sinus is elevated by less than 4 mm



Lateral Approach |

Appropriate if sinus is elevated by more than 4 mm or crestal approach is unavailable



We recommend
this procedure if :

- Sinus has dropped low and your bones are not thick enough for implant surgery
- You have been missing upper teeth for a long period of time
- You have extracted upper molars and did not get a restoration after
- Bones are absorbed by the long-term use of dentures,

Part 3.

Types of Restoration



3-1.

Types of restoration and abutments

Types of restoration



Gold Crown
PFG



Porcelain
PFM



Zirconia



3D printed prosthesis
DIOnavi-P. MAX

Types of abutment



Stock Abutment



Hybrid abutment
Digital Abutment

Available only at
DIO Implant!



Customized Abutment

3-2.

Types of prosthetic loading

Types of prosthetic loading



01. Cement type prosthesis

Dental cement is used to hold the abutment and artificial crown together



02. Screw type prosthesis

A screw connects the abutment and the artificial crown



03. SCRP type prosthesis

(Screw & Cement Retained Type)

Both cement and screw are used to hold the abutment and artificial crown together

Part 4.

Why are DIO Implants Special?



4-1.

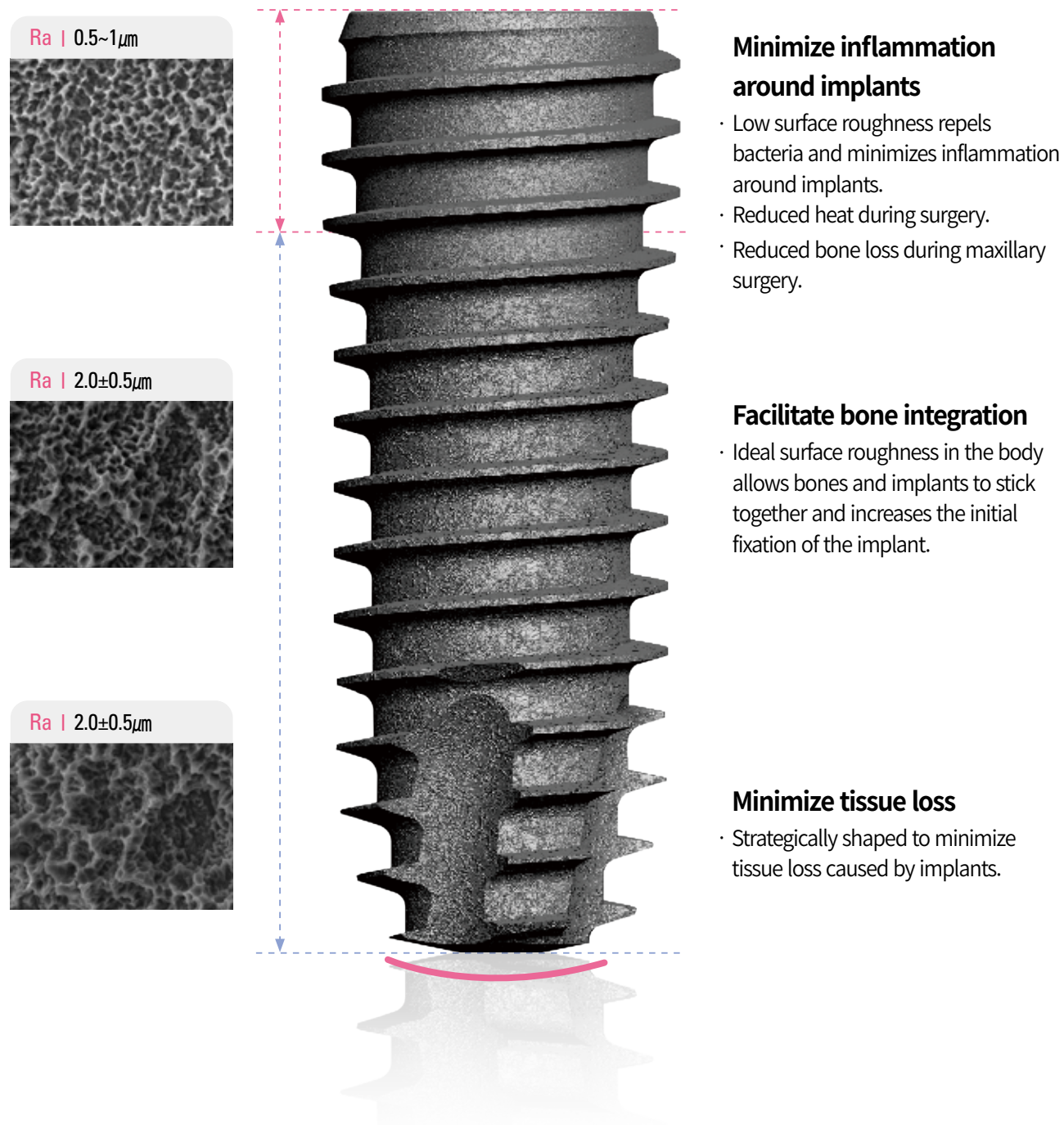
Superior technology and quality

- 01 Widely used globally**
We manufacture state-of-the-art implants and provide treatment solutions used in more than 70 countries.
- 02 12 step process of sterilization and quality control**
Delivery in perfect sterilization with zero residue with strict cleaning care.
- 03 Excellent surface treatment technology**
Surface treatment technology that boosts implant success rate
- 04 Excellent implant design**
Anti-inflammation around implants inducing strong bone integration
- 05 Proven clinical results**
Clinically proven through long-term clinical and joint studies worldwide
- 06 DIO issues a certificate of authenticity for each case.**
We provide after-care services if you have placed a DIO implant

4-2.

DIO **UFII** IMPLANT

Hybrid surface treatment leads to a stronger integration of bones and implants.

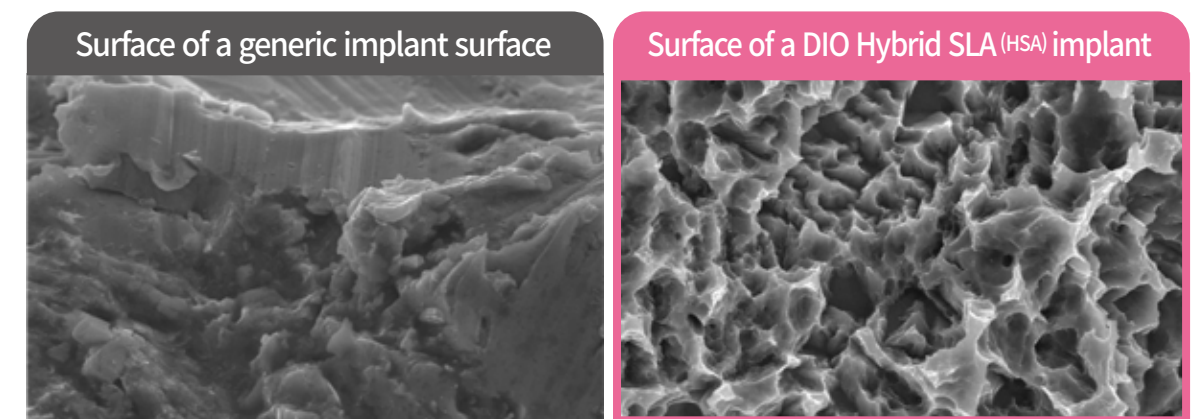


4-3.

Unique hybrid surface treatment

The DIO UFII implant makes bone integration faster and easier, speeding up the entire treatment period so you can go back to your daily life.

Difference in implant surface treatment technology



- I. Excellent initial fixation.
- II. Minimize bone absorption around the implant.
- III. Improve affinity with surrounding soft tissue.
- IV. Minimal inflammatory response to surrounding bones.

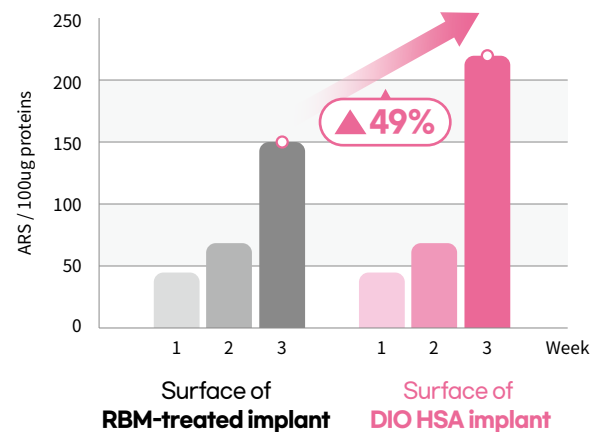
DIO implants are manufactured in a **hybrid SLA (HSA)** method that implements a rough surface.

The surface treatment technology of DIO implants increases the contact area between bones and implants, integrating bones and implants securely.

Surface Technology at DIO Implant Hybrid SLA (HSA)

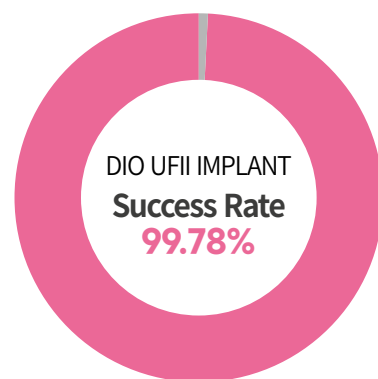
Bone formation speed increased up to **49%**

Three weeks after implantation, DIO's surface treatment (HSA) shows that **bone formation rate is 49% activated compared** to general implant surface treatment (RBM)



Success rate of implant surgery using DIO Implant is **99.78%**

Successful integration of gums and **implants achieves 99.78% success rate** of implant surgery.

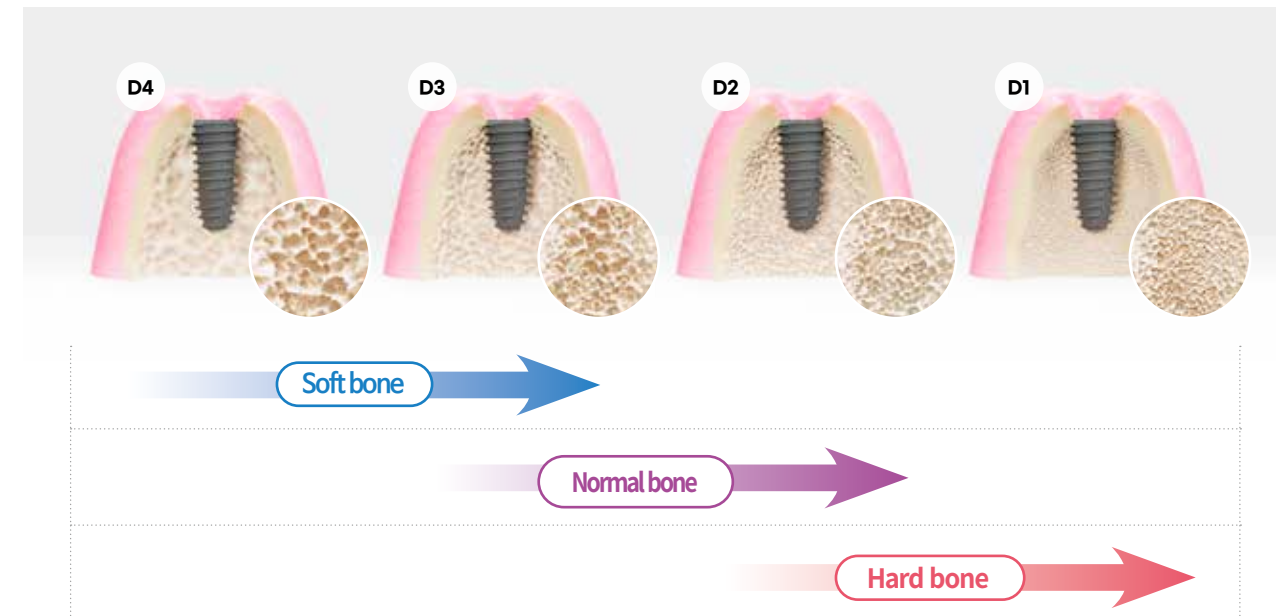


■ Success
■ Failure

Out of 2,644 implants,
2,638 were successful
and 6 failed

Source | 'S' dental clinic
Implant Brand | DIO UFII Implant

DIO Implant can be placed into all bones



For successful implantaion, healthy gums are more important than your age.

The decrease in gum bones due to aging is natural.

Using **artificial bone grafting**, implant surgery is possible even if the gums are insufficient or weak.

If you suffer from systemic diseases such as high blood pressure, diabetes, osteoporosis, or are on medication, sufficient **consultation is required before surgery**.

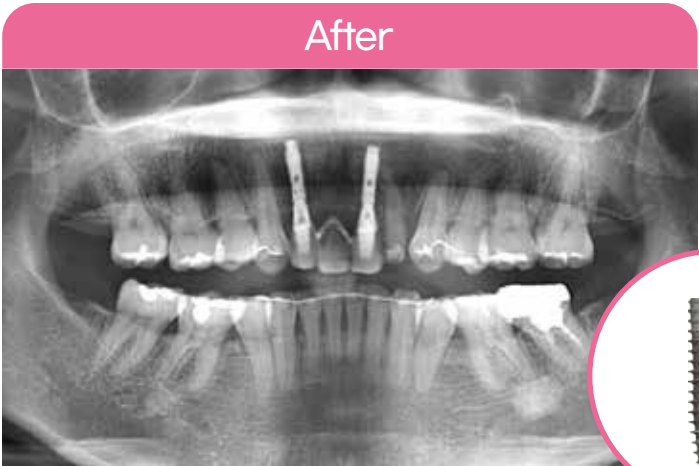
DIO Implant has the world's best implant design and surface treatment technology.

Part 5.

Implant Case Examples

CASE 01 49 year old female patient

- Treatment plan | Anterior Immediate loading for anterior narrow case
- Implant | **UFII Narrow Fixture** (for narrow anterior)



• Treatment Process

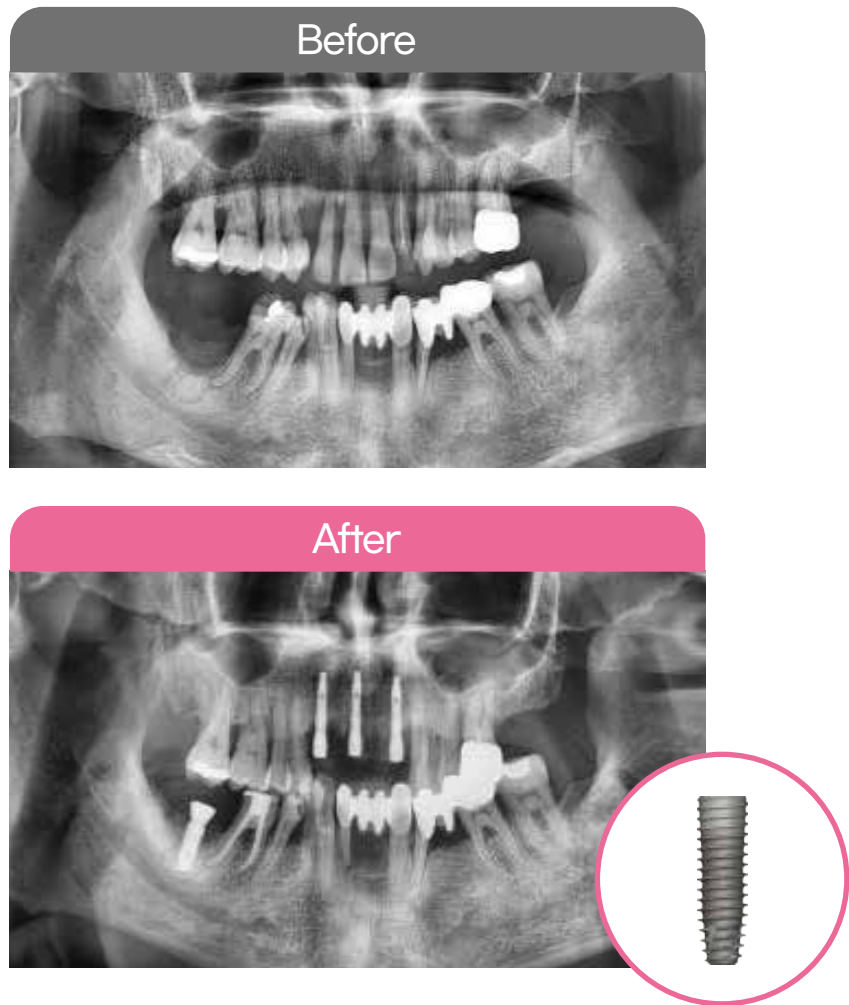


1. Removal of bridge and teeth extraction 2. Abutment placement 3. Temporary crown loaded on the same day 4. Final crown fabricated

※ The above image is a treatment case, and the procedure may vary depending on the patient's oral condition during the actual procedure.

CASE 02 65 year old male patient

- Treatment plan | Anterior Immediate placement for anterior narrow case
- Implant | UFII Narrow Fixture (for narrow anterior)



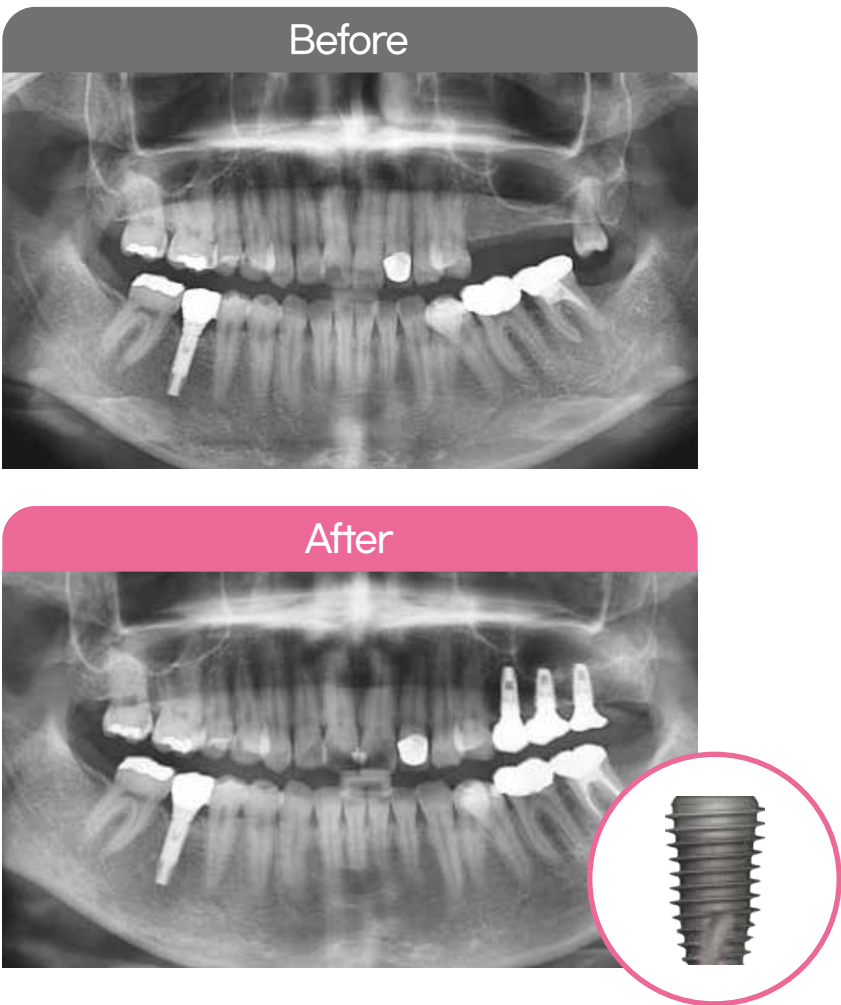
• Treatment Process



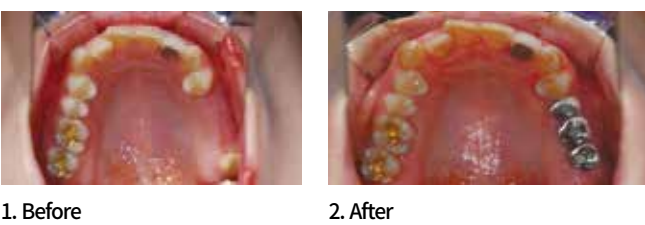
※ The above image is a treatment case, and the procedure may vary depending on the patient's oral condition during the actual procedure.

CASE 03 28 year old female patient

- Treatment plan | Sinus elevation procedure to treat insufficient bones in maxillary posterior region.
- Implant | UFII Wide Fixture (for molars)



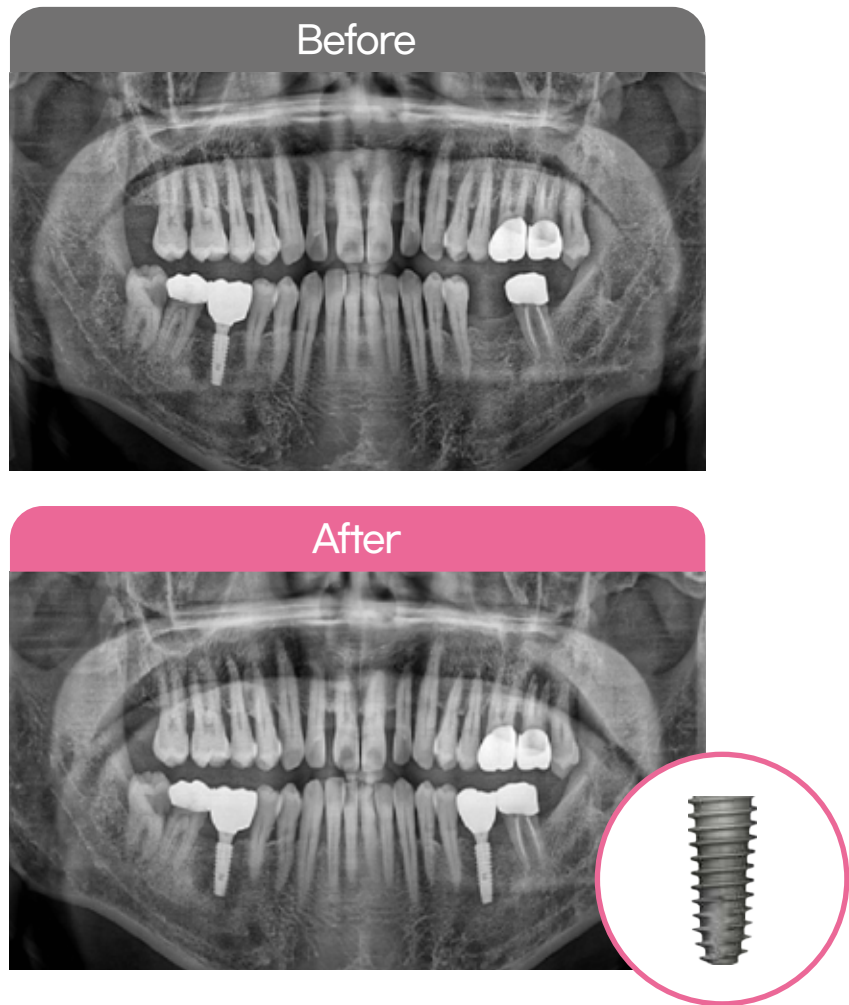
• Treatment Process



※ The above image is a treatment case, and the procedure may vary depending on the patient's oral condition during the actual procedure.

CASE **04** 55 year old male patient

- **Treatment plan** | Mandibular posterior case for missing teeth and soft bones
- **Implant** | **UFII Regular Fixture** (for molars)



• **Treatment Process**



※ The above image is a treatment case, and the procedure may vary depending on the patient's oral condition during the actual procedure.

Part 6.

Post
Operative Care



Precautions after having an implant procedure



Prescription and taking medicine

Please take the medicine according to the prescription.



Pain

The pain may last for two to three days after surgery, so apply a cold(ice) pack.



Drinking and Smoking

Avoid alcohol and smoking for one to two weeks as they can inhibit the supply of necessary nutrition to the surgical site and cause inflammation.



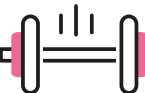
Brushing Teeth

Be careful not to irritate your gums. After brushing your teeth, use a disinfectant gargle solution.



Diet

Eat mainly soft food and avoid complex food for about a week.



Exercise/Bath

Avoid intense exercise, sauna, or bath for a week.



Regular Checkup

We strongly recommend checkups every three to six months after the procedure.

※ Above is general recommendation. Consult your dentist for detailed precautions.

Precautions after Sinus Lifting Procedure



Bleeding

You may experience bleeding or taste the blood in your throat. This is normal and temporary, you don't have to be alarmed.



Runny nose

If you have a nosebleed or runny nose, wipe your nose without blowing to prevent pressure.



Sleeping

You can minimize swelling by using a higher pillow than the one you normally use.



Daily Activities

Do not lower your head or shake left and right, and avoid using a straw.



White Substance

You may experience white powder (bone graft) coming out of your nose or mouth. It's an artificial bone material and safe, so you can either swallow or spit it out.



Sneezing

If you sneeze, do not block or hold your nose and you must let the sneeze come out lightly by having your mouth slightly open.

※ If you have further questions or feel any abnormalities after the procedure, please contact your doctor.

