



DENTAL IMPLANTS-SIMPLIFIED

Everything you need to know about dental implants

The objective of this Ebook is to give every possible information you would need to know about dental implants in a single handout and in an easy to read format.

We hope this Ebook clears all the doubts surrounding implants.

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Dental Implants – Back ground

Introduction

When a person loses one or more tooth and wants to get it replaced, an artificial tooth root placed in their jaw area, which would hold the artificial replacement teeth (prosthodontics), this artificial tooth root, usually made of titanium or ceramic material, is called implants.

Implanting tooth is based on human bone's natural ability to fuse on implant materials over a while. Dental implants have numerous advantages over conventional treatments using dentures and bridges anchored to the adjacent tooth.



Enough bone mass and healthy gums are the prerequisites to receive dental implant treatment. If you lack any of those parameters, you might require additional procedures before proceeding to dental implants. Check out bone grafting (augmentation) or sinus lift section to understand more.

Doctor. TK. Prabu would decide your treatment options based on various parameters like your

bone density of jaws and gum health using multiple sophisticated instruments like CAD/CAM Simulation and computed tomography and stents.

Background

Though many advancements made on dental implant techniques, it is not a new thing and has been practised over the last 60 years. In 1965 Brånemark placed his first titanium dental implant into a human volunteer. He termed the clinically observed adherence of bone with titanium as "osseointegration" Since then, implants techniques have evolved so much (Excerpts from Wikipedia).

Interesting Facts

There is archaeological evidence that humans have attempted to replace missing teeth with root form implants for thousands of years. Remains from ancient China (dating 4000 years ago) have carved bamboo pegs, tapped into the bone to replace lost teeth, and 2000-year-old remains from Egyptian mummies were found to have transplanted human teeth.

An archaeological site in Honduras dating back to 600 AD found a young Mayan woman with three missing teeth replaced by pieces of seashells with Bone growth around two of that implants (seashell), indicating that they were functional well as esthetic. (Excerpts from Wikipedia).

Oral health condition is crucial

Why tooth loss has to be attended to immediately

Fruits, vegetables, nuts and meat, are nutrient-rich in nature and are essential for a healthy living but this kind of nutrient foods cannot be eaten by somebody that has lost significant number teeth already or people with loose teeth. Their improper dentition makes it difficult for them to chew hard food



People with loose teeth will also suffer from bite force loss and often avoid eating hard and chewy foods. Persons with inadequate dentition (the arrangement or condition of the teeth) find it challenging to chew thoroughly and eat some hard foods like fresh fruits and vegetables, apples, pears, carrots, nuts etc. They even find difficulties in eating cooked food such as meats and seafood.

Lots of studies have found that people with less than 20 teeth are consuming fewer amounts of nutrients than their daily requirement which makes them frailer compared to a normal person of health.

Read more on our website <https://careyoursmile.info/dental-connect> to understand the importance of maintaining oral hygiene and various chronic diseases linked to tooth loss. Though we cannot control the tooth loss beyond a point, it doesn't mean that one has to suffer from all the chronic diseases related to that by not treating the dental issues appropriately on time.

Importance of chewing food

Chewing thoroughly is as essential as having nutritiously balanced diet for proper nutrient absorption and smooth digestion, which helps the body to release digestive enzymes that converts the food particles in to energy.

There are vitamins which body can store and use it later but there are vitamins which can only be obtained the food we have on a daily basis. Hence eating nutritiously balanced food and chewing it completely is very crucial for a healthy living and avoiding chronic diseases like diabetes.

Dental implants for every one

Advantages of Dental implants (medical uses)

1. It is permanent, with no inconvenience of removing and cleaning, which is a case of temporary dentures.
2. Improved facial appearance and bite force (ability to chew well)
3. Allows you to eat healthy, nutritious food once again.
4. Speech delivery improves.
5. Important for oral bone health
6. Avoids serious infections arising out of missing tooth
7. Rebuilds confidence to have social interactions

Who can get the implants?

The implant is the only restoration technique that closely resembles the natural teeth in every possible way, including their look, functionality and stability. It depends on the human bone's ability to infuse with the implant material called Osseointegration naturally.

An implant derives its strength from the process mentioned above and offers the permanent solution for somebody who lost single tooth/multiple teeth. Many international studies have [linked tooth loss](#) with significant chronic health conditions like diabetes and its management.

Who is not suitable for getting dental implants

Some medical prerequisites to dental implants and some other conditions make it impossible for some patients to get their implant done.

- The presence of a healthy jawbone is a prerequisite. If a patient has lost a significant amount of bone mass, and their medical condition also constraints them from getting a bone graft. (more on bone grafting in a while)
- Chronic health conditions like uncontrolled diabetes or cancer affect their ability to going through surgeries which require a significant amount of time to heal.
- Bone cancer and other bone diseases may affect the osseointegration process, which forms the basis of an implant procedure
- Smoking habit also affects the bone's natural ability to infuse with implant material.

The dental implant procedure

What is an implant procedure?

Dental implant procedure refers to the series of steps involved in a modern dental restoration (replace missing teeth) technique. In most cases, an implant material (made of titanium) is placed surgically on a patient's jawbones. This implant acts as a root on which an artificial tooth (prosthetics) is fixed.

Before surgery

- Smoking can negatively impact the stability of the dental implants, and patients may require forgoing that habit completely for the procedure's success.
- Patients may be advised to take antibiotics or antibacterial mouthwash before the surgery to avoid early implant rejection/infection.



Step by step Implant Procedure

Planning

An implant planning starts with X-rays, 3D imaging, and intraoral scanning to assess the end to end requirement planning.

Preparation for Surgery

Implant surgery usually doesn't require the patient to be admitted and generally performed with Painless (local) anaesthesia or general anaesthesia

The Surgery

The procedure starts by removing the remains (root/parts) of the lost tooth and ends with the implants inserted into the jaw bone with specialized drills. This process usually takes an hour to two to complete.

Additional procedures required based on the patient's need

- Apart from the commonly involved two steps above, if there isn't enough bone present in the patient's jaw to hold the implant, an additional **bone grafting** procedure is performed before the standard method.
- If the teeth have to be replaced on the upper jaw, then **Sinus lifting** is needed for some patients to create the tooth implant space.

Life with Dental Implants

After surgery

The patient would not feel any pain normally during the procedure but they would feel the pain as soon as they become conscious. In most cases, the pain would be manageable over the counter painkillers. The patients would also be prescribed antibiotics and mouth rinse after the surgery.

They will be allowed to start eating soft foods/drinks an hour after surgery and be advised not to take hot and spicy food or drink for several hours.

Following are restricted for the first few weeks after the surgery

- Smoking
- Drinking liquids with a straw
- Hard to eat, chewy and abrasive foods.

Implant healing

After the implant procedure, the patient has to wait for their implant to heal. During this period (in 3-6 months), the jaw bone grows inside and surrounding the implant and holds it firmly. The patient will be wearing temporary teeth (dentures) throughout this time.

Teeth replacement (Fixing permanent prosthetics)

We at Prabu dental, after confirming the stability of the implant , perfectly matching (measurements and size) prosthetics are created with state of the art CAM/CAD milling machines.



Life with Implant

Along with aesthetics and convenience, once again, the patient's ability to cherish the food wholeheartedly also gets restored with dental implant surgery.

They need to brush and floss their mouth regularly, as anyone would do with their natural tooth.

Types of Dental Implants

Broad classification of dental implants

Implants are broadly classified as implant-supported dentures and implant-supported bridges.



Implant-supported denture

our dentists consider various parameters before deciding on the suitable restoration option for you. When you have lost all of your teeth but still has a healthy jaw bone with enough mass to hold an implant firmly, he might suggest you with Implant-supported dentures.

Better appearance, cost, convenience and shorter procedure time are some of the patient side

considerations for selecting this procedure over other restoration options.

Implant-supported bridge

As the name suggests, the implant is placed in the gap created by the tooth; the crown is placed on the Implant (Instead of the adjacent Tooth)

It is the most reliable form of bridge. It avoids unnecessary pressure being created on the healthy tooth on the adjacent, which usually is a cause of concern in traditional bridges.

Further classification of dental implants

Every patient requirement (Age, bone health and pre-existing medical conditions) is unique and requires a custom made dental restoration plan to suit them.

This complexity is the reason for wide variety of dental implants as listed below

1. No.of Tooth to be replaced – Single or multiple teeth
2. No.of stages involved in the procedure – Single or two-stage
3. Existing bone (oral) health – Endosteal, subperiosteal, zygomatic implant
4. Alternative methods: Mini, immediate load implants.
5. Additional procedures required - Sinus lifting, bone augmentation
6. Implant material – Surface, coating, connectors, width etc

Conventional Alternatives for implants

Bridges and dentures are the traditional dental restorative procedures and prescribed when the patient's medical condition is not suitable for going through the extensive processes involved with the dental implants.



Bridges

A dental bridge covers/bridges the gap in your tooth line. A bridge primarily consists of two parts.

- 1) Pontic – An artificial tooth that would be placed in the gap of a missing tooth
- 2) Crown – An dental cap placed on healthy,

adjacent teeth (each side)of a gap provides pontic support.

Dental bridges are fixed on your existing with dental cement and usually lasts for 10-15 years.

A pontic or artificial tooth can be made of precious metals and usually made of **porcelain** to match the colour of the natural teeth. The adjacent teeth on which crowns are placed are called abutment teeth

Dentures

Dentures are artificial teeth and gums used to replace single or multiple teeth. They usually are made of porcelain resins placed on your gums with the help of suction and denture adhesive. However, dentures can offer immediate solution to your dental problems that are inherent arises out of this procedure. Traditional dentures need to be replaced over a period.

How it compares with dentures and bridges

Criteria	Dentures	Bridge	Implants
Life of the procedure	5-7 years	7-10 years	Lifetime
Preservation of (healthy) adjacent teeth	Yes	No	Yes
Bite force Transmission to	adj teeth/gums	adjacent teeth	bone
Prevent future jaw bone loss	No	No	Yes
Periodic Adjustments/Replacements needed	Yes	Yes	No
Adjacent teeth loss	Yes	Yes	No
Restoration of facial appearance	No	No	Yes

Infographic

FOUND IN
MAYANS &
EGYPTIANS
MUMMYS

ALL ABOUT DENTAL IMPLANTS

FIRST
IMPLANT
AT 1965

WHAT IS DENTAL IMPLANT?

An artificial dental root made of titanium.

WHO CAN GET THE IMPLANT?

CAN

Person with good jaw bone density

CANNOT

Person with bone diseases/cancer

KEY BENEFITS

- Permanent
- Medically important to facial structure & preserve adjacent bone

HOW IT IS DONE?

- Painless Surgery
- Takes 3-6 hours

AFTER SURGERY

- Discomfort for few hours
- Take soft foods

LIFE WITH IMPLANTS

- No Smoking
- No corrosive foods
- Maintain as usual

THE BEST OPTION

- Best natural looking permanent teeth
- Restoration at affordable cost

Implant
Supported
Bridge

Implant
Supported
Denture

RISKS

- Bleeding
- peri-implantitis
- Osseointegration failure

DIGITAL DENTISTRY

- Precise
- Safe radiation levels
- Avoids cross infection
- Increased Satisfaction



Few more things to know

Risk and failure

Excessive bleeding and nerve damage is some of the risks associated with this procedure. Apart from that, failure of Osseointegration (bone's failure to attach) and peri-implantitis (inflammation on soft tissues surrounding implants) can also occur in few patients. Regular follow up meetings and the execution of the procedure by expert physician can significantly reduce those from happening.

Cost involved

Implant procedures are highly customized in nature and usually varies from patient to patient based on their oral health conditions. Still, today, with the advancement in implant techniques, starting a new life with a new set of permanently fixed teeth is affordable to everybody.

Please speak to our counsellors to know the best treatment option for you and the cost associated with us.



Digital dentistry – Role importance

Prabu dental, An ISO 9001:2015 certified dental hospital in karaikudi, is one of the very few dentistrys in India that employs digitally guided treatments to make dental procedures safe, quick, and as comfortable as possible.

Following are the patient benefits of employing digitally guided implant procedure.

- 1) Decide the best treatment option based on the patient condition.
- 2) Comfortable, painless treatment and fast recovery.
- 3) Ensure precision to the desired result.
- 4) Avoid unnecessary radiation from imaging devices.
- 5) Prevent infections from
- 6) Digital documentation ensures faster insurance claim and follow up treatments in your city.

Attend oral health issues in time

Oral health tips

- Brush properly, Clean tongue
- Floss your teeth once a day.
- Eat a lot of fruits and vegetables.
- Limit sugary and acidic foods
- Avoid smoking and keep alcohol intake in control.
- Wear a bite splint if you have night time teeth clenching disorder.
- While playing sports, wearing a properly fitted mouthguard is essential.
- Visit the dentist often as recommended and attend dental check-ups and professional cleanings.
- Diabetes is a significant risk factor for gum diseases and other dental problems, so keep your diabetes level under control.

Dental symptoms when you should contact the doctor

- Red or swollen gums.
- Tender or bleeding in gums.
- Painful chewing.
- Loose teeth.
- Bad breath that wont go awy
- Receding gums or longer appearing teeth.

If you have already lost a tooth or two, Don't wait. Getting your fully functional teeth is just a step away in a right direction



Conclusion

As seen above, implant surgery is the most reliable form of dental restoration technique as it mimics the natural teeth in terms of their construct and function.

Performing an implant procedure requires a lot of expertise and a definite amount of technology infrastructure. Selecting dentistry with that winning combination is all it

takes to get a successful implant procedure done to complete satisfaction.

The objective of this Ebook is to give every possible information you would need to know about dental implants in a single handout and in an easy to read format. We hope this Ebook clears all the doubts surrounding implants.

If you have been hesitating to decide between various teeth restoration options, you can wholeheartedly choose to go with dental implants after reading this Ebook.



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