

Introduction to Prosthodontics



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LEARNING OBJECTIVES

By the end of this lecture, the students are expected to:

- a. Define the prosthetics, prosthodontics and prostheses.
- b. List the subdivisions of the prosthodontics and define each division.
- c. Differentiate between the fixed and removable types of prostheses and between the complete and partial prostheses.
- d. Differentiate between the dentate, partially and completely edentulous patients.
- e. Show comprehension of the causes of tooth loss and the consequences, anatomically, physically, aesthetically and psychologically.

GLOSSARY

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Prosthetics:

The art and science of supplying artificial replacements for missing parts of the human body.



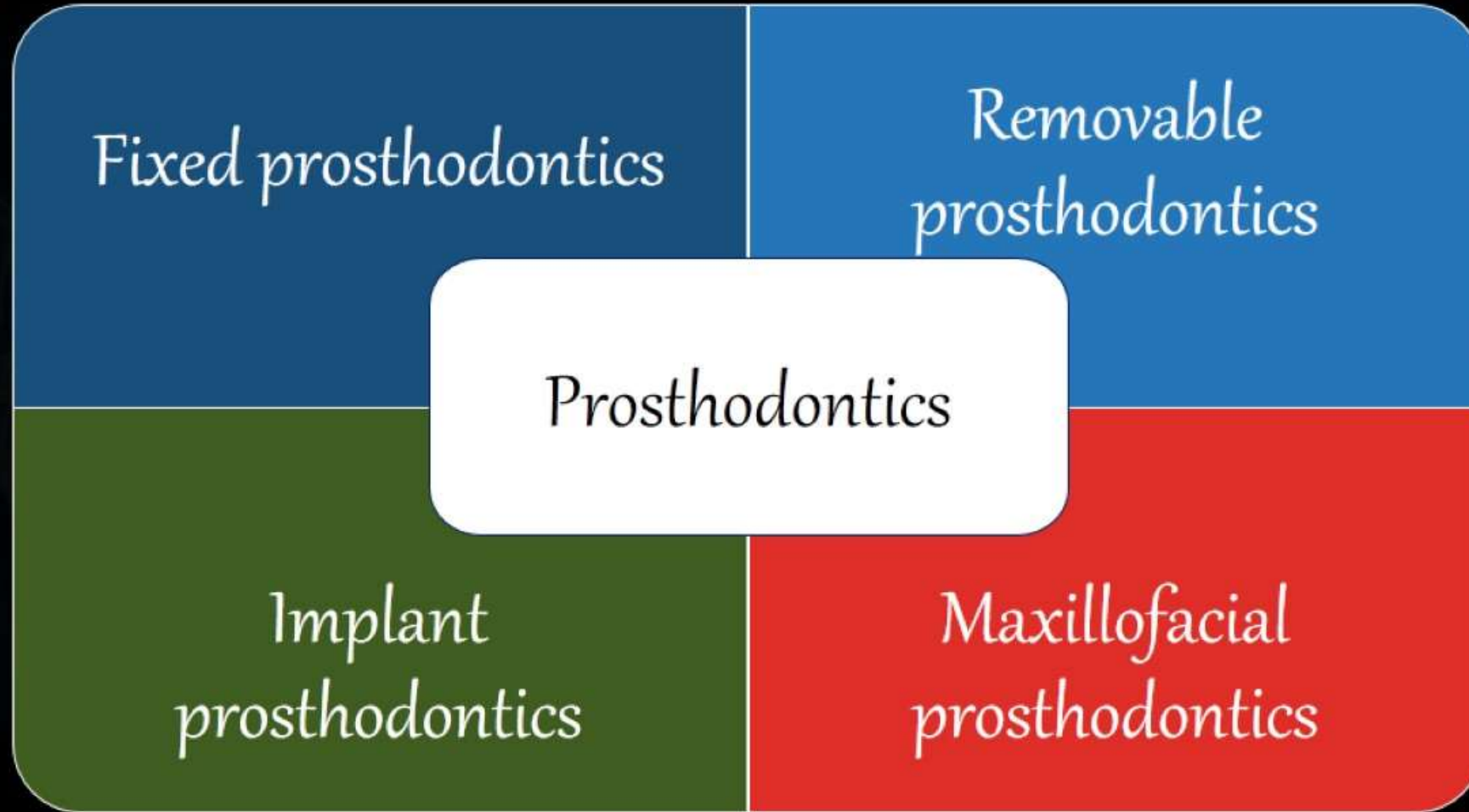
Prosthodontics (Prosthetic Dentistry):

Is the dental specialty pertaining to the diagnosis, treatment planning, rehabilitation & maintenance of the oral function, comfort, appearance and health of patients with clinical conditions associated with missing or deficient teeth and/or maxillofacial tissues using biocompatible substitutes.



DIVISIONS OF PROSTHODONTICS

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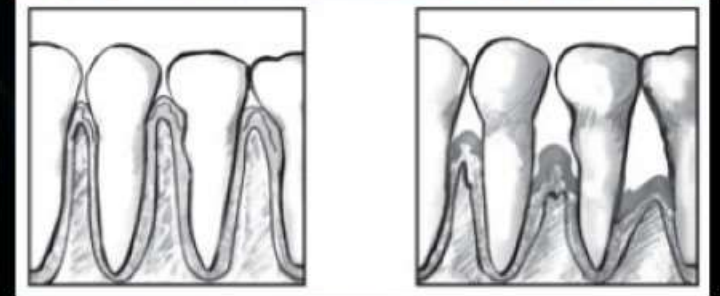
What are
the Teeth
Loss
Causes ?



TOOTH LOSS

Causes

- Periodontal diseases
- Dental caries (decayed teeth)
- Congenital missing
- Trauma
- Surgical procedures (demand)



CONSEQUENCES OF TOOTH LOSS

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1. *Anatomical* loss of ridge volume—both height and width

All Teeth Missing - Consequences of Non-Treatment



Residual ridge resorption (RRR)



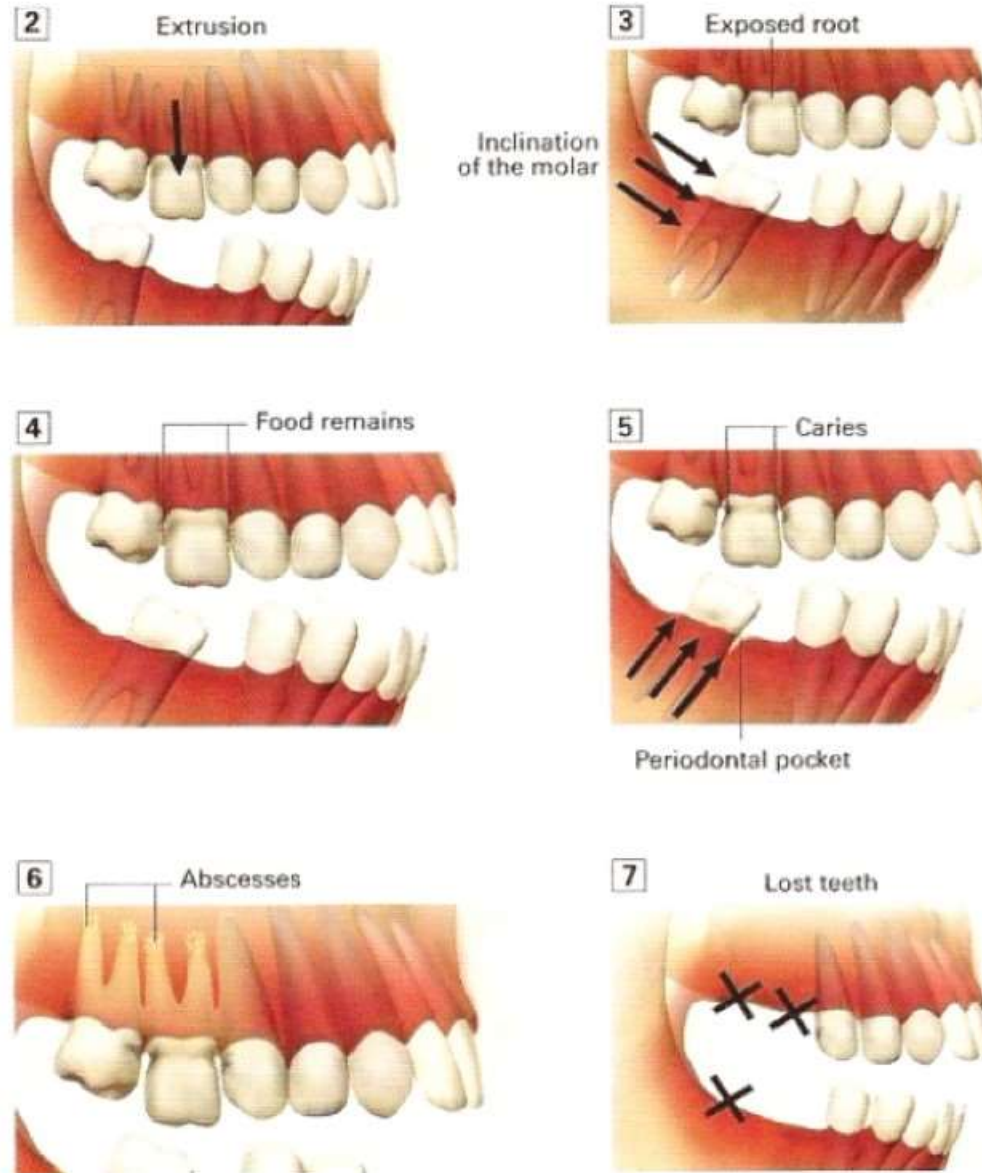
2. Physiological

- Chewing efficiency is decreased
- Drifting and overeruption of the teeth
- Temporomandibular Joint (TMJ) complications
- Speech and phonetics.



Physiological consequences

The loss of one tooth may lead to the loss of the other opposing and neighboring teeth if no artificial substitutes placed in the extracted tooth/teeth space.



3. Esthetic consequences

- cosmetic impact of tooth loss may lead to psychological effects.
- Decreased facial height (vertical dimension loss)
- Ptosis of the chin and rotation forward (witch's chin)
- Increase in the number and depth of the lines in the face.



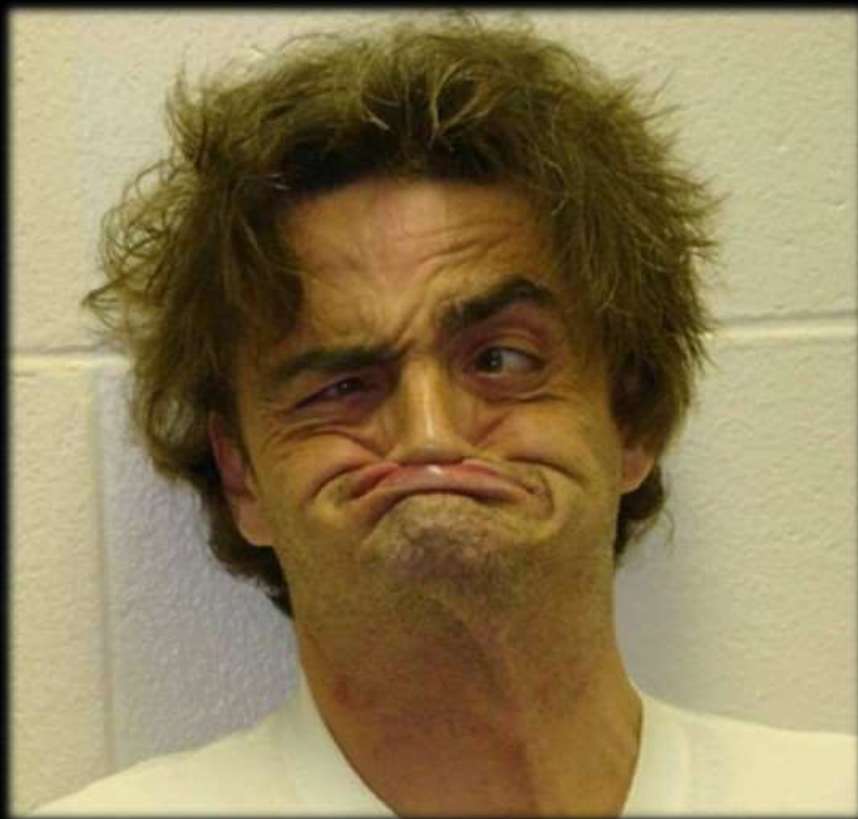
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LOSS OF VERTICAL DIMENSION



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Terminology In Prosthodontics

Terminology In Prosthodontics

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- **Dentate (dentulous)** a condition in which natural teeth are present in the mouth.
- **Edentulism:** the state of being edentulous , without natural teeth.
 - a) *Partially edentulous:* one or more of the natural teeth is missing but not all of the natural teeth are missing.
 - b) *Completely edentulous:* all of the natural teeth are missing in upper, lower or both jaws.

Examples:

- Partially edentulous



- Completely edentulous

What is the solution?



Prosthesis

An artificial replacement of an absent part of the human body like, nose, finger, ear or teeth (dentures)....etc.

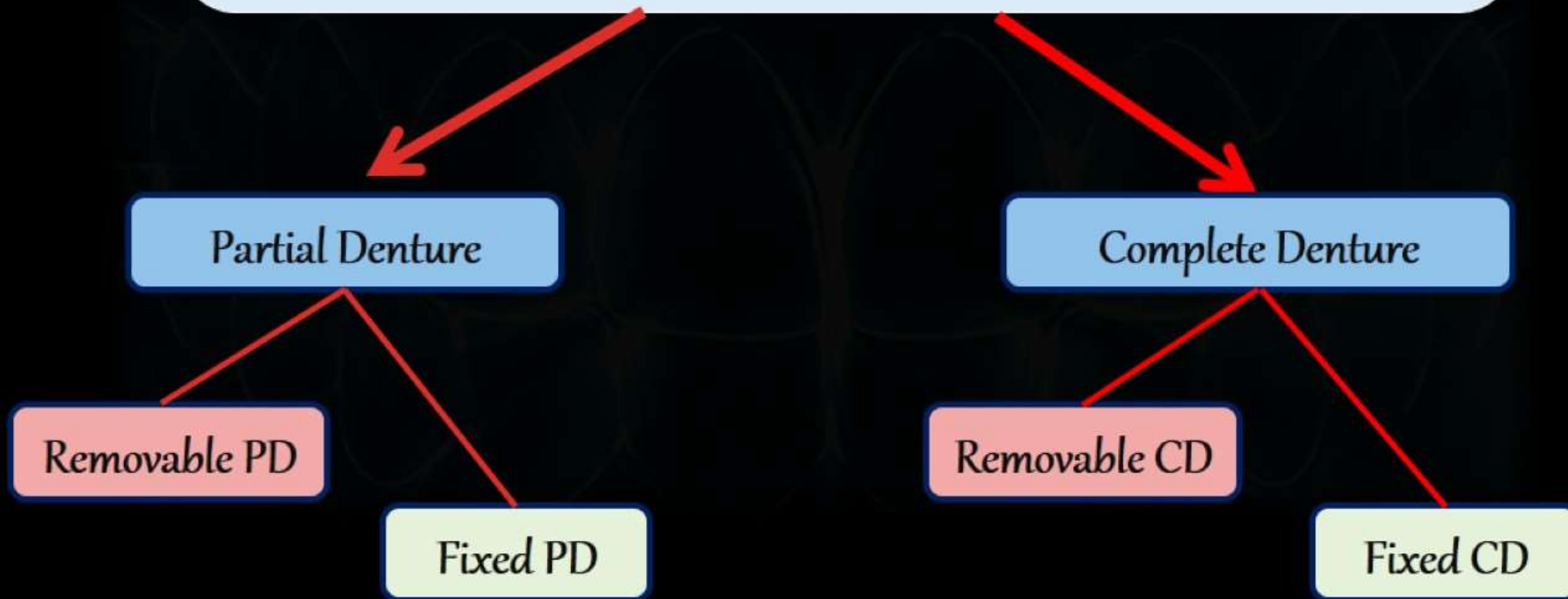


Aims Of Prosthesis Construction in Dentistry :

1. To **replace** the missing natural teeth and their function of **mastication**.
2. To **correct** the facial deformity caused by the loss of teeth (**to correct esthetics**).
3. To **correct** the speech deformity (**phonetics**).
4. To **maintain** the oral and facial structures in **healthy condition**.

Dental prosthesis:

An artificial substitute for missing natural teeth and adjacent tissues. Usually made by metallic and/or acrylic materials.



Complete Denture:

A fixed or removable dental prosthesis that replaces the entire dentition and associated structures of the maxillae or mandible.



Removable (conventional) CD



Fixed CD

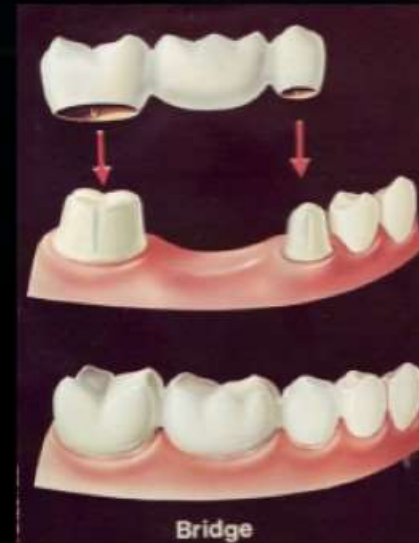
Partial Denture:

A removable or fixed dental prosthesis that restores one or more -but not all- of the natural teeth and/or associated parts.

Removable PD



Fixed PD (dental bridge)



WHY WE
NEED TO
USE
FIXED ??



Difference between FPD and RPD

- *A partial denture can be described as a fixed dental prosthesis or removable dental prosthesis, based on the patient's capability to remove and put back the prosthesis by himself in his mouth.*
- *The fixed dental prosthesis can only be removed by the dentist.*

- Fixed Prosthesis is called also Bridge or crown
- **ARTIFICIAL CROWN:** a metal, plastic, or ceramic restoration that covers three or more axial surfaces and the occlusal surface or incisal edge of a tooth

FIXED PARTIAL DENTURE (DENTAL BRIDGE)

any dental prosthesis that is luted, screwed or mechanically attached or otherwise securely retained to natural teeth, tooth roots, and/or dental implant abutments



Maxillofacial Prosthesis

It is the artificial replacement of the missing organs of the stomatognathic system such as the eyes, ears, nose, lips, etc. or part of them such as part of the mandible, part of the tongue and so on.



Ocular Prosthesis

Nasal Prosthesis

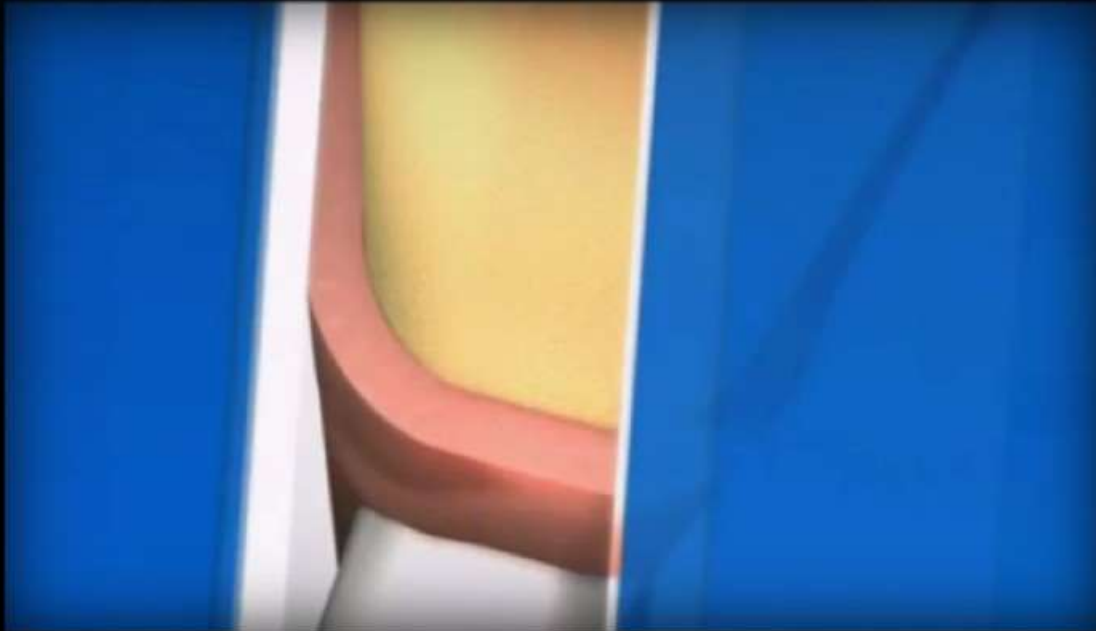
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Auricular prosthesis

Implant Prosthesis

the phase of prosthodontics concerning the replacement of missing teeth and/or associated structures by restorations that are attached to dental implants



BRIDGE VS IMPLANT



Implant vs. Bridge

REFERENCES

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QUESTIONS AND ANSWERS

Thank you