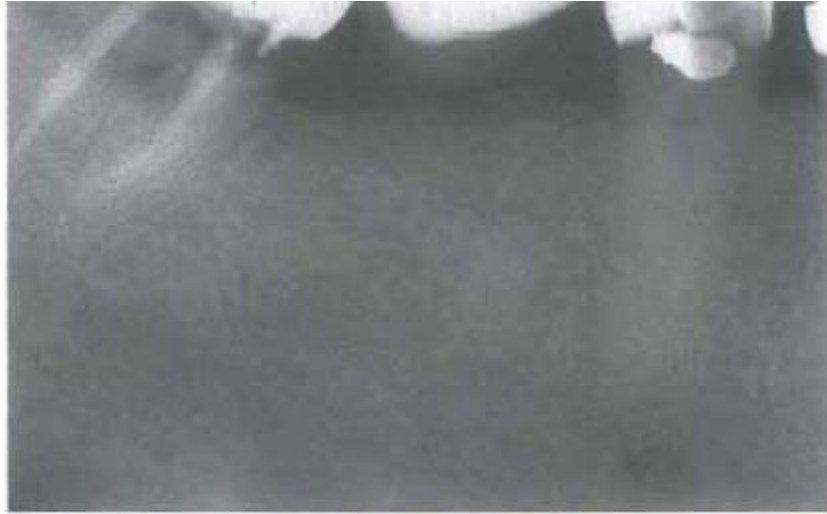


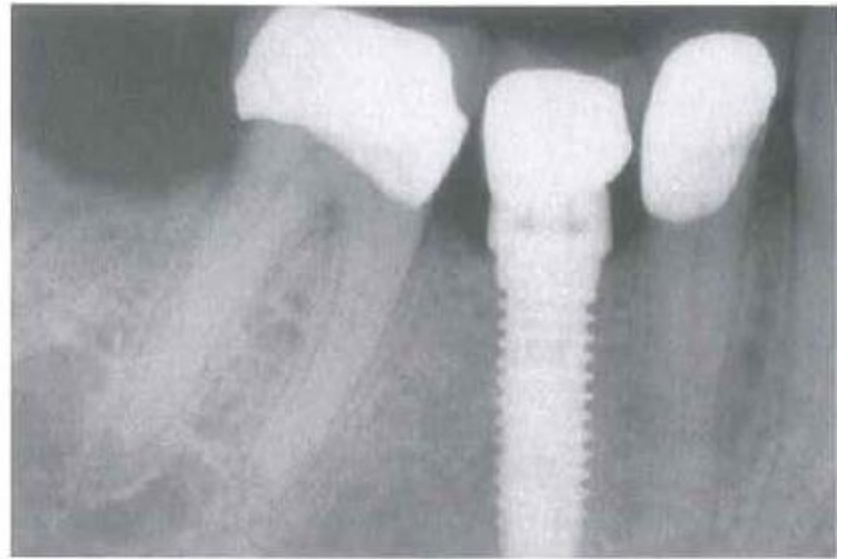
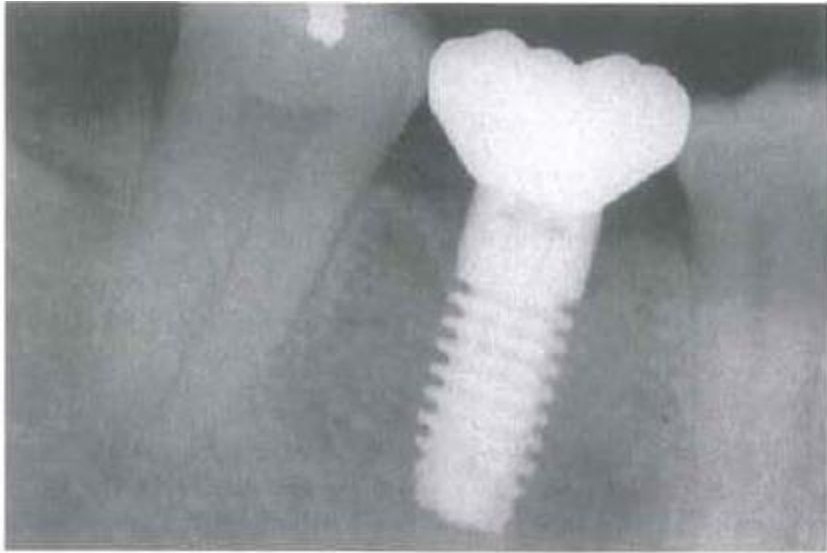
IN THE NAME OF GOD





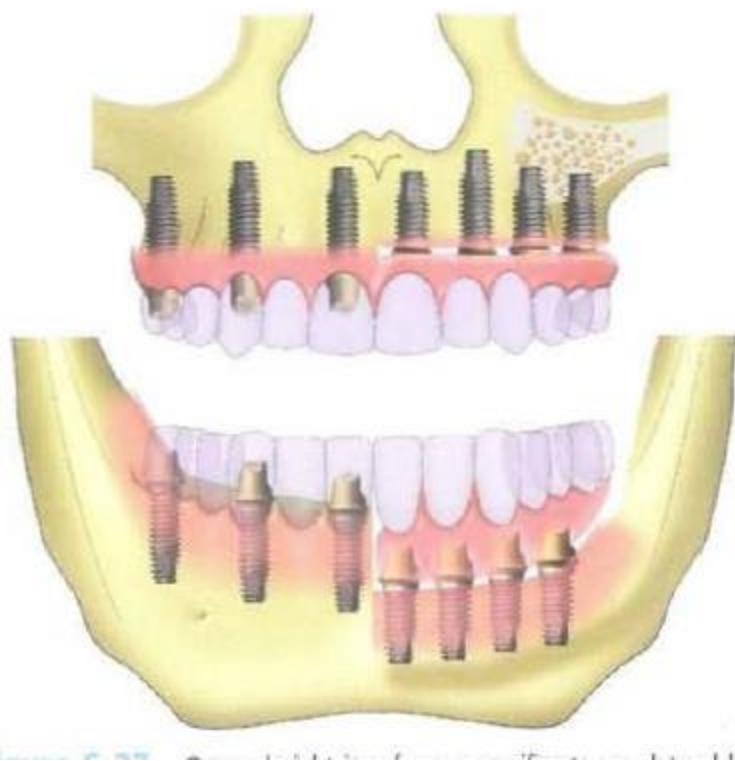
Single-Tooth Replacement—Fixed Partial Denture

- Estimated mean life span of FPD (50% survival) reported at 10 years
- Caries most common cause of FPD failure
- 15% of FPD abutments require endodontics
- Failure of abutment teeth of FPD 8% to 12% at 10 years and 30% at 15 years
- 80% of teeth adjacent to missing teeth have no or minimal restoration



Single-Tooth Implants— Advantages

- High success rates (above 97% for 10 years)
- Decreased risk of caries of adjacent teeth
- Decreased risk of endodontic problems on adjacent teeth
- Improved ability to clean the proximal surfaces of the adjacent teeth
- Improved esthetics of adjacent teeth
- Improved maintenance of bone in the edentulous site
- Decreased cold or contact sensitivity of adjacent teeth
- Psychological advantage
- Decreased abutment tooth loss



Prosthetic Classification

TYPE	DEFINITION
FP-1	Fixed prosthesis; replaces only the crown; looks like a natural tooth
FP-2	Fixed prosthesis; replaces the crown and a portion of the root; crown contour appears normal in the occlusal half but is elongated or hypercontoured in the gingival half
FP-3	Fixed prosthesis; replaces missing crowns and gingival color and portion of the edentulous site; prosthesis most often uses denture teeth and acrylic gingiva, but may be porcelain to metal
RP-4	Removable prosthesis; overdenture supported completely by implant
RP-5	Removable prosthesis; overdenture supported by both soft tissue and implant



A



B



A



B



A



B



A



B



Case 12
12/12/12



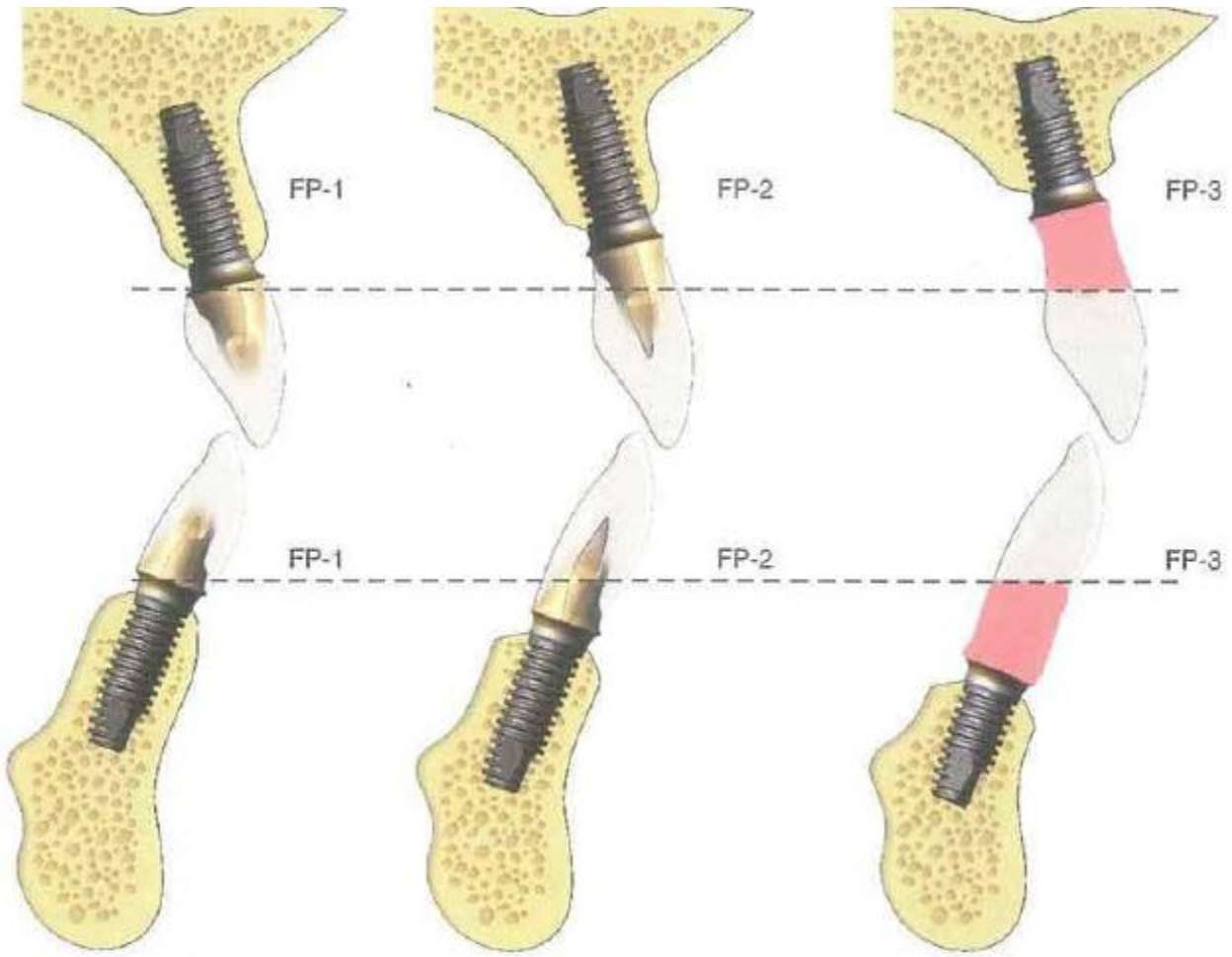


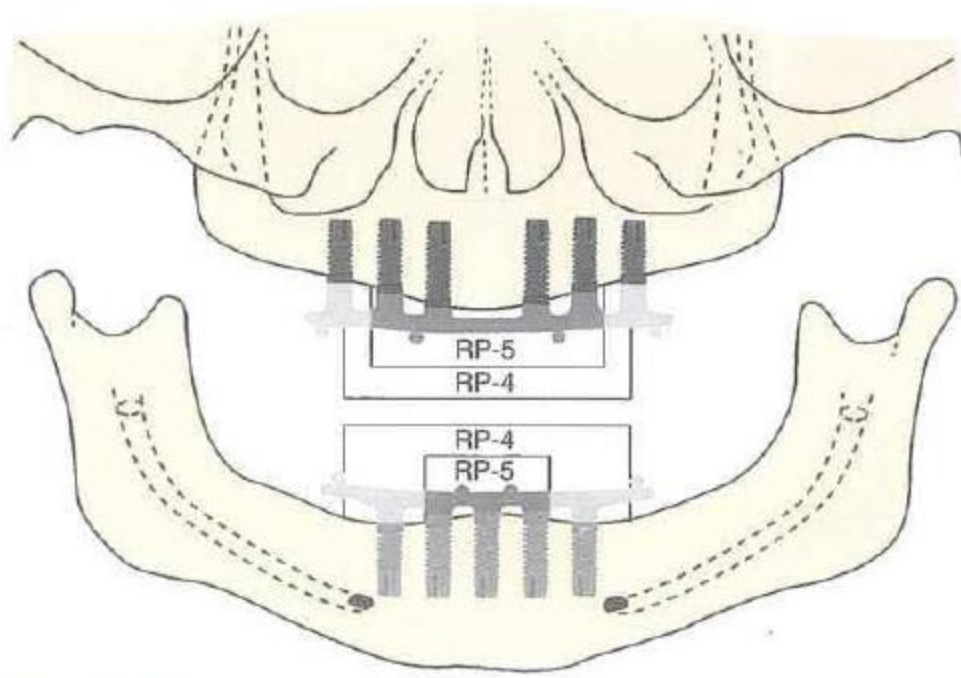
A



B

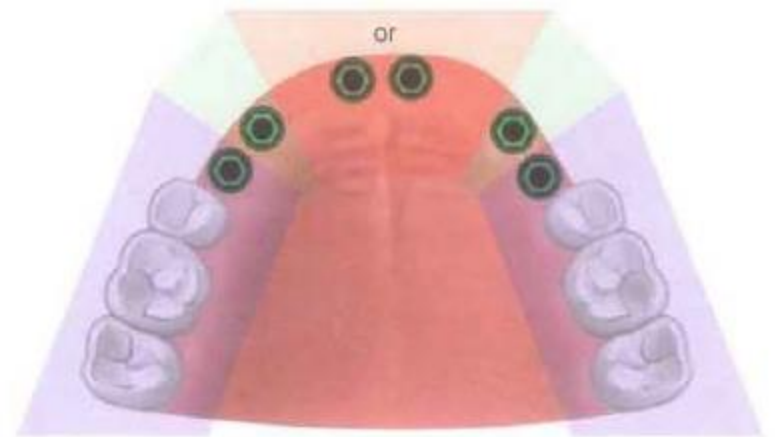


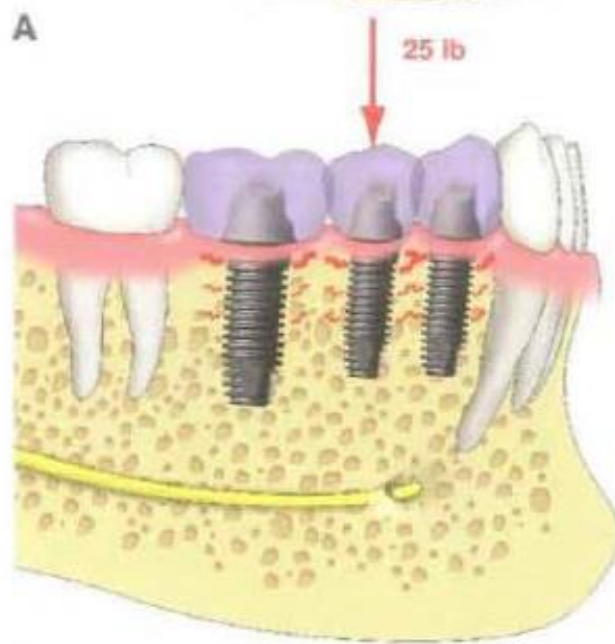
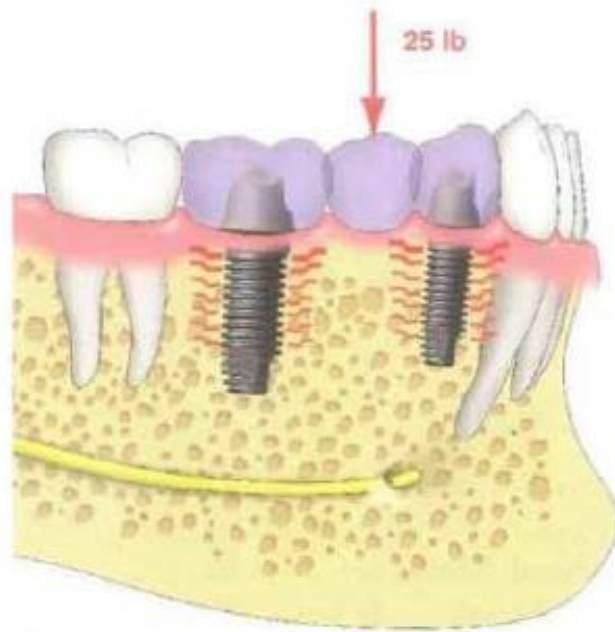




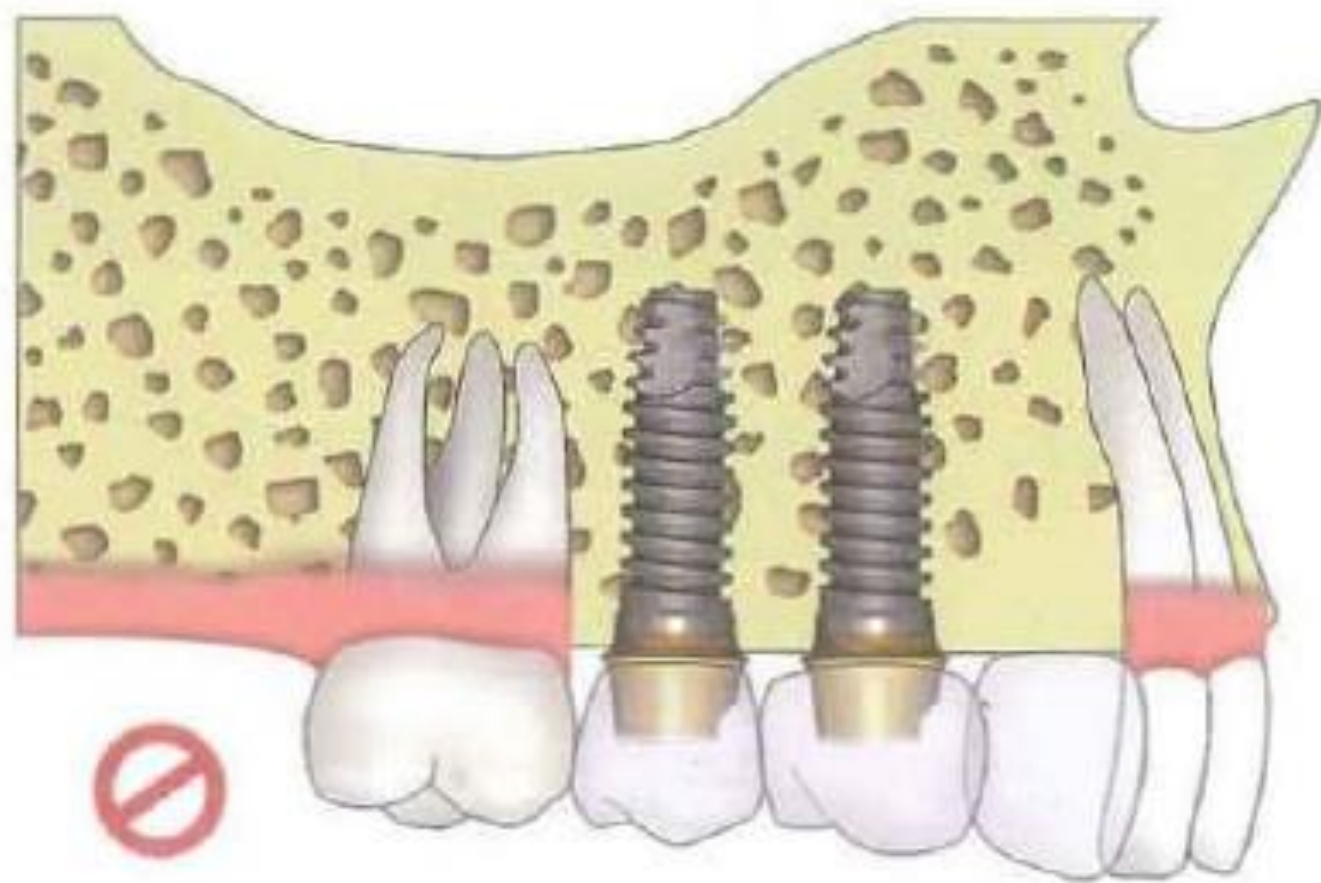
Guidelines for Key Implant Positions

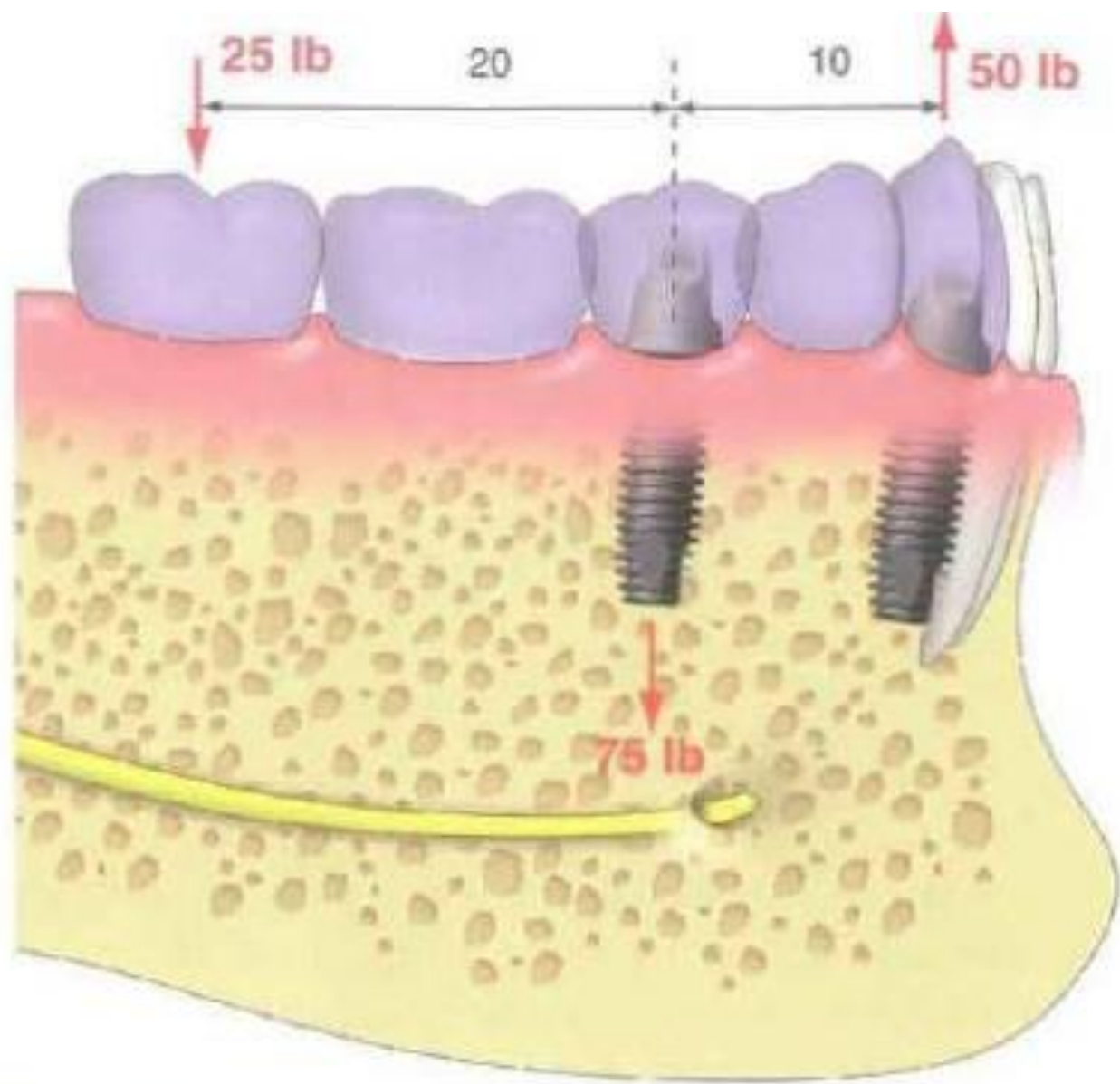
- No cantilevers
- No three adjacent pontics
- Canine-molar rule
- Arch dynamics

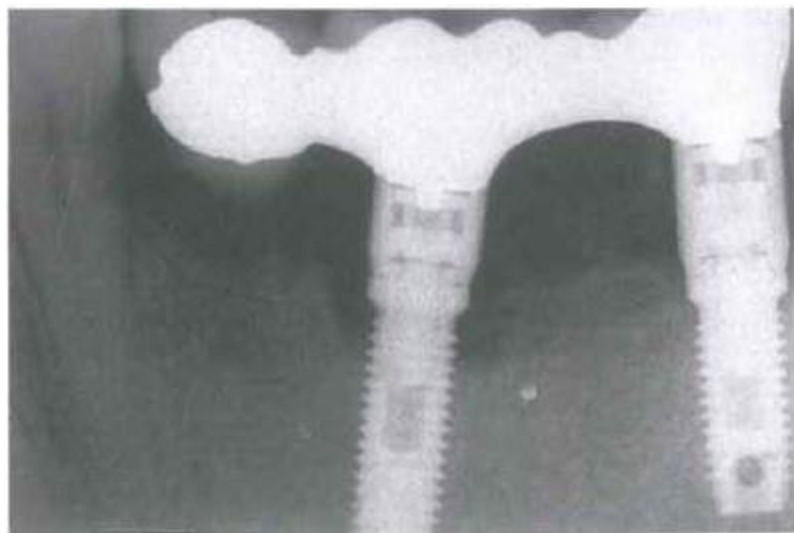


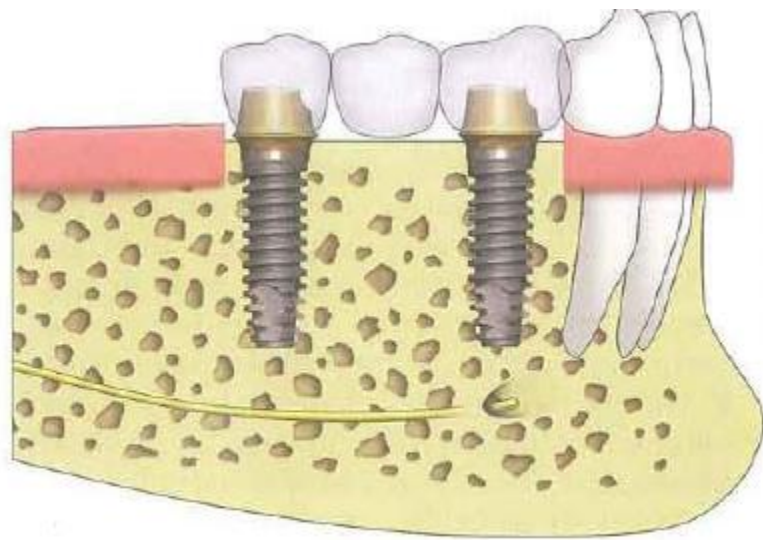


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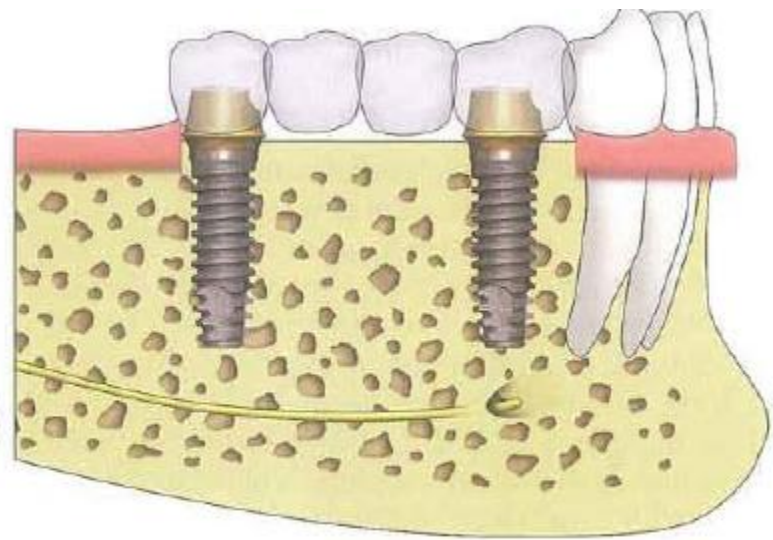




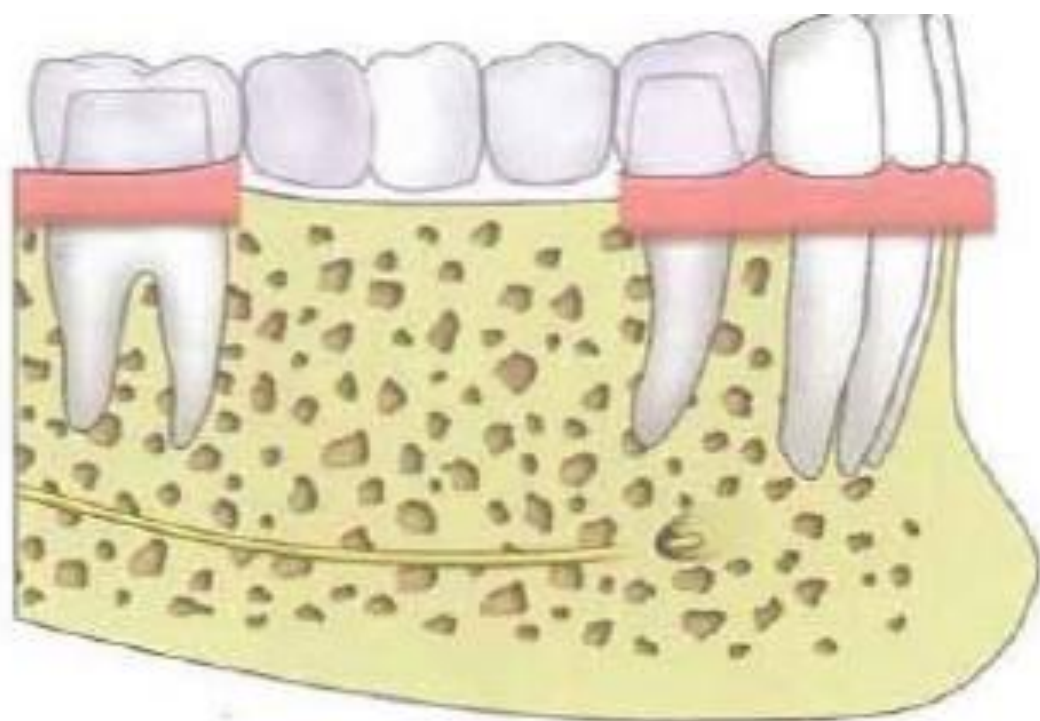




A



B









A



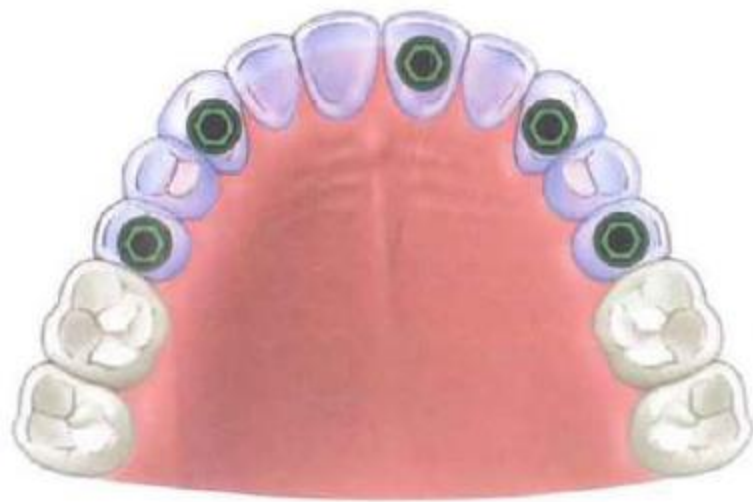
B



C



D



E





A

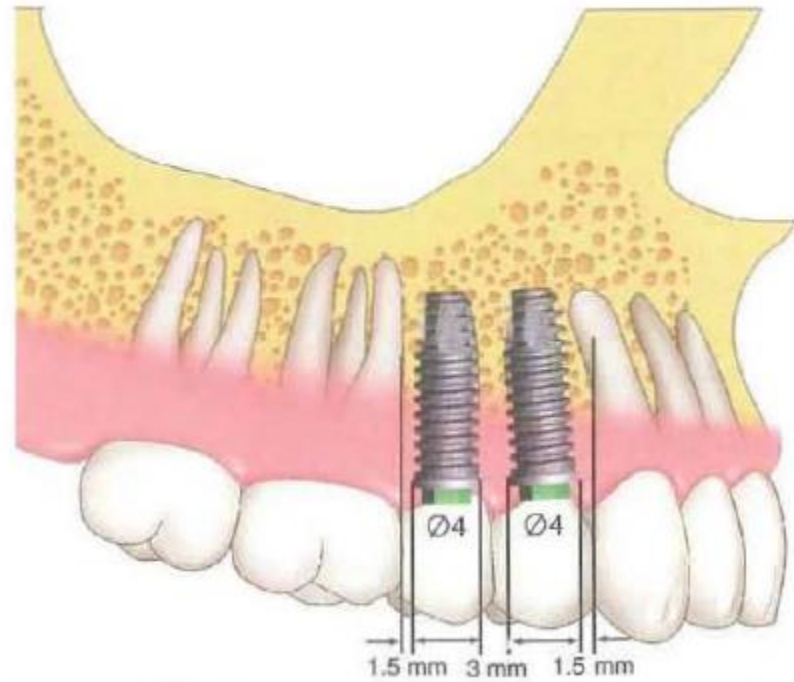


B





-  Primary site
-  Secondary site



Implant Size Selection Criteria in Posterior Maxilla

- Natural tooth 2 mm below cement-enamel junction
- 1.5 mm from adjacent tooth
- 3 mm from adjacent implant
- 4-mm-diameter minimum, for posterior maxilla



Crest module

The coronal two thirds of the implants have parallel walls for stability and surgical simplicity.

Apical taper for anatomical limitations. Tapered, self-tapping apex eases surgical placement in situations such as convergent roots, extraction sites, and undercuts.

Advantages of Short Implants

1. Less bone grafting in height
 - a. Less time for treatment
 - b. Less cost of treatment
 - c. Less discomfort
2. Less surgical risk of:
 - a. Sinus perforation
 - b. Paresthesia
 - c. Osteotomy trauma from heat
 - d. Damage to adjacent tooth root
3. Surgical ease
 - a. Decreased interarch spaces
 - b. Less inventory/cost

Surgical Advantages of Wide-Diameter Implants

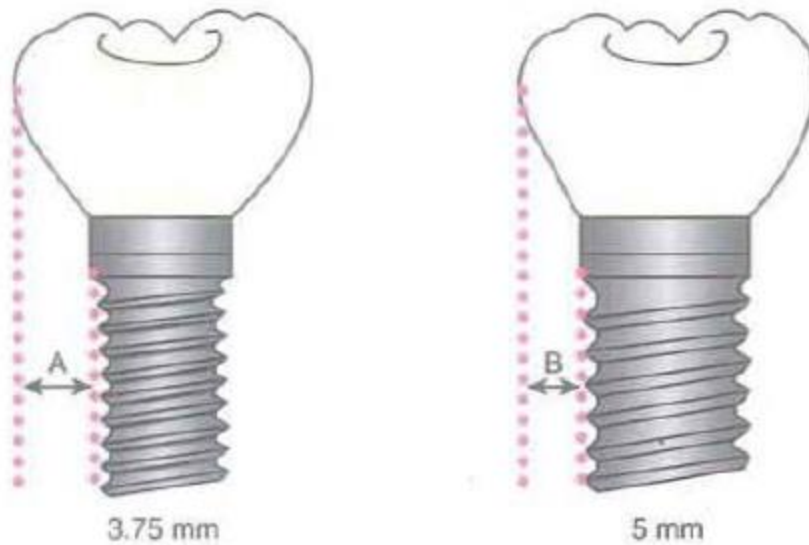
- Surgical rescue implant
- Failed implant/immediate
- Tooth extraction/immediate

Loading Advantages of Wide-Diameter Implants

- Increase surface area
- Compensate unfavorable patient force factors
- Minimize cantilevers for angled implant
- Compensate for poor bone density
- Enhance surface for short implants

Prosthetic Advantages of Wide-Diameter Implants

- Improve emergence profile
- Decrease screw loosening
- Minimize component fracture
- Facilitate oral hygiene



Disadvantages of Wide-Diameter Implants

- Bone trauma—drill sequence
- Decreased facial bone thickness may lead to recession
- Stress shielding
- Increased surgical failure rate
- Too close to adjacent tooth, PDL encroachment

Fabrication of maxillary surgical template

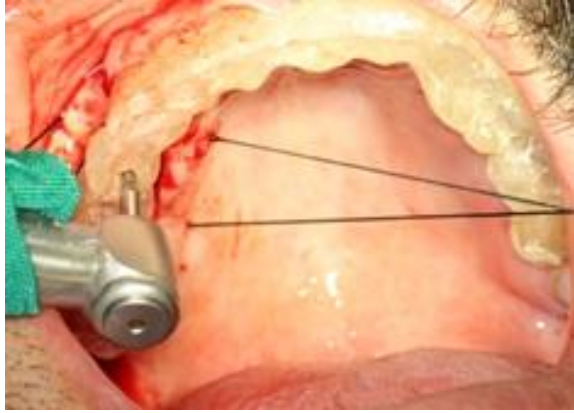


Contemporary implant dentistry, mish 2008





Implant surgery:



Before



After





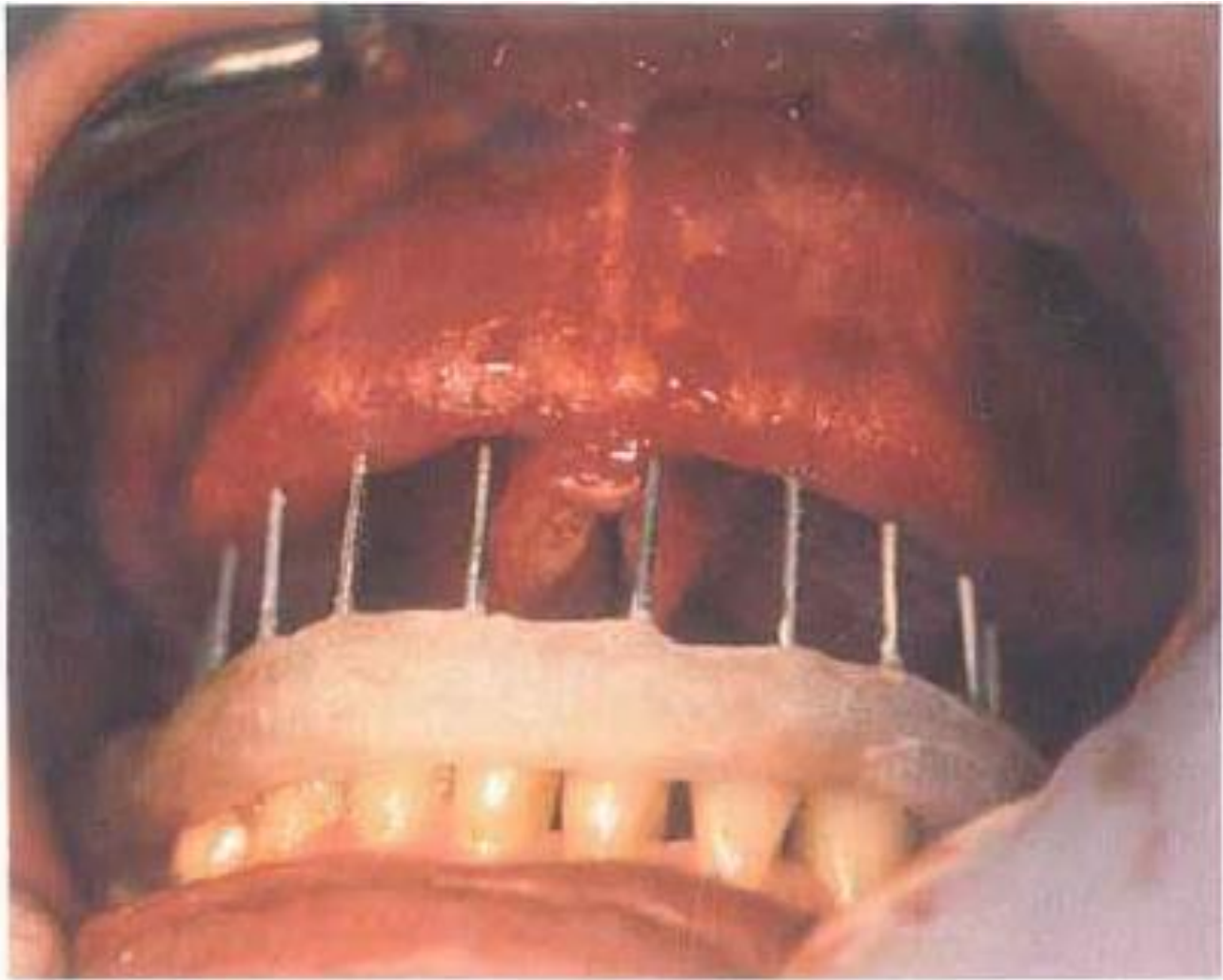
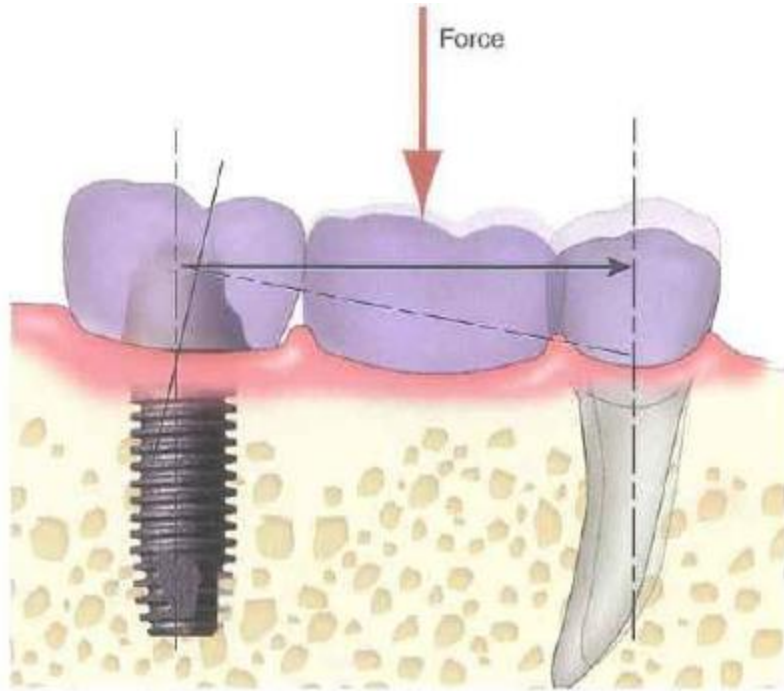
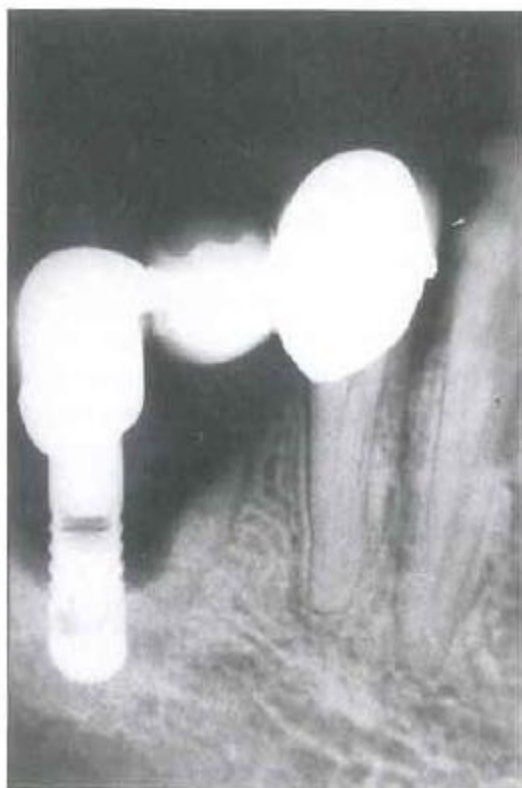
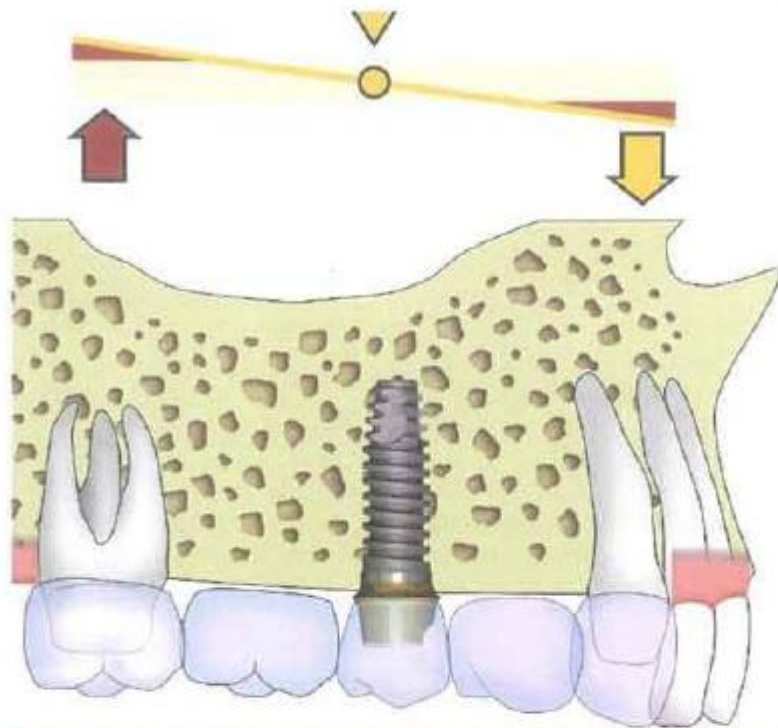


Figure 1: Intraoperative photograph showing the maxillary dental arch with surgical pins inserted into the alveolar bone, likely for stabilization or measurement during a surgical procedure.



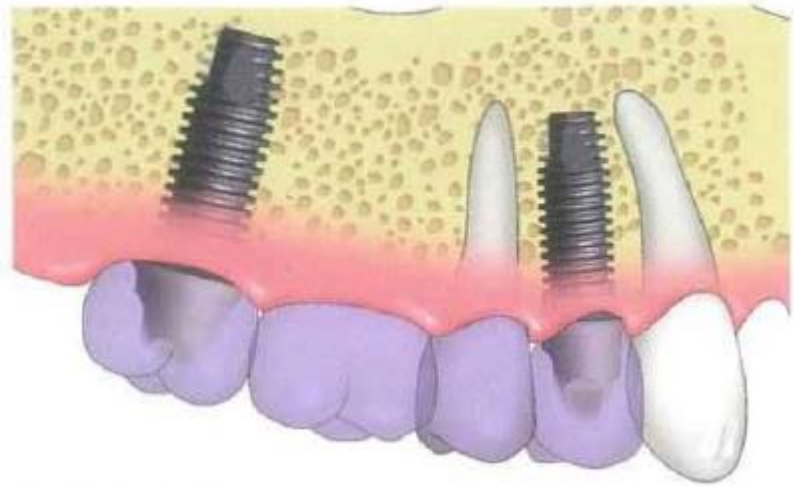




A

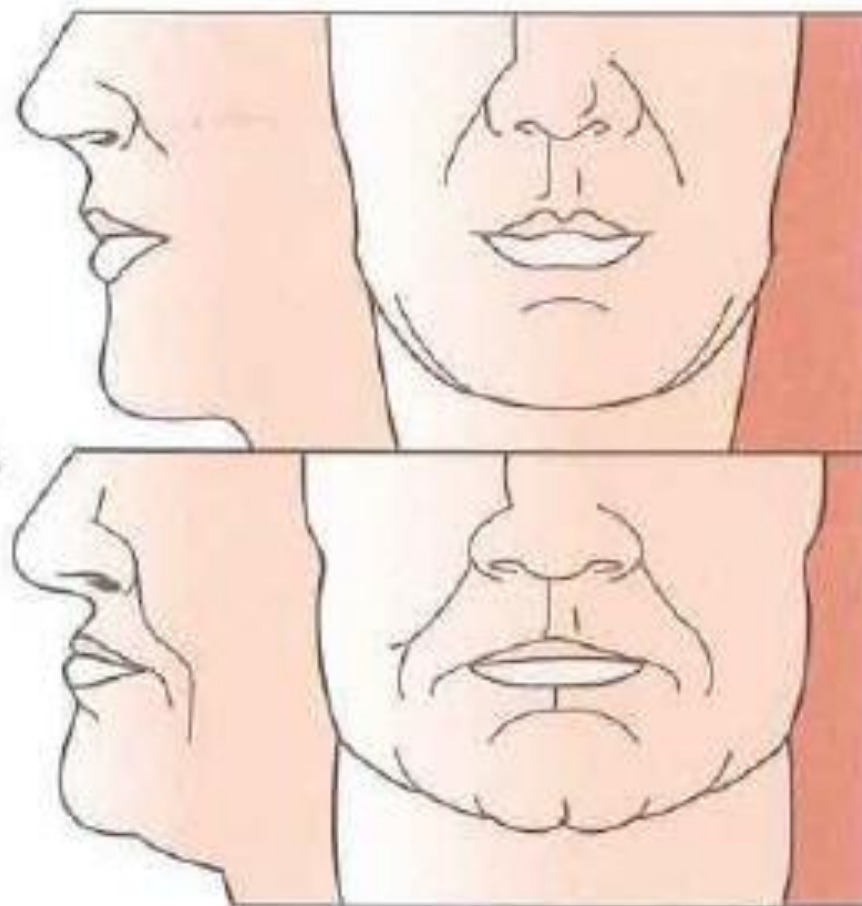


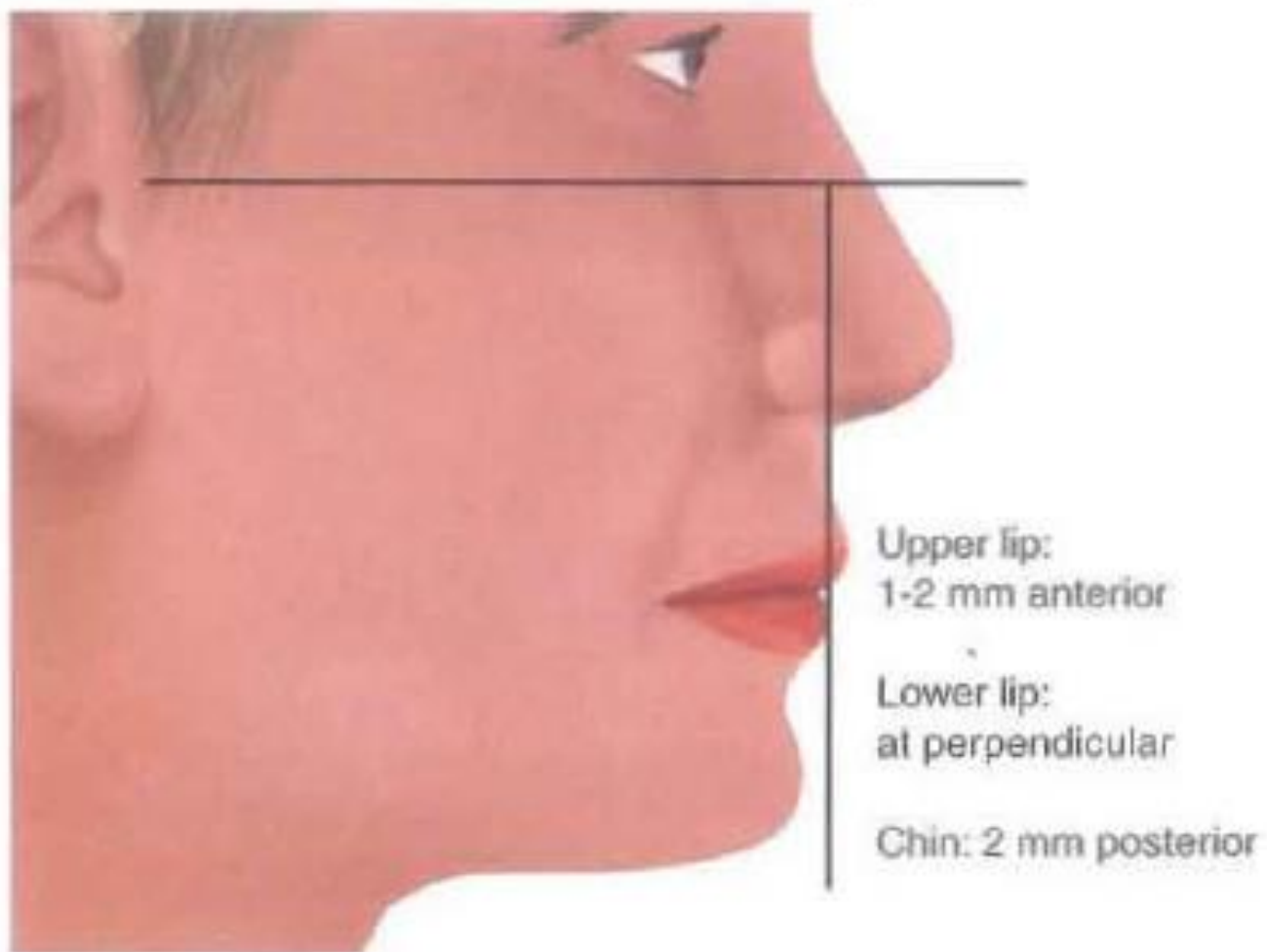
B





Collapse
of
edentulous
bite





Upper lip:
1-2 mm anterior

Lower lip:
at perpendicular

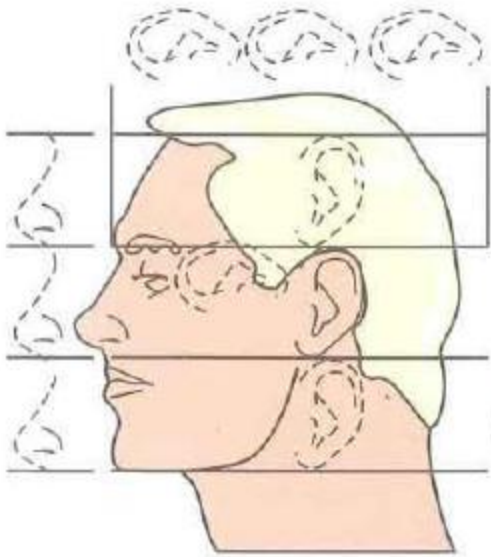
Chin: 2 mm posterior



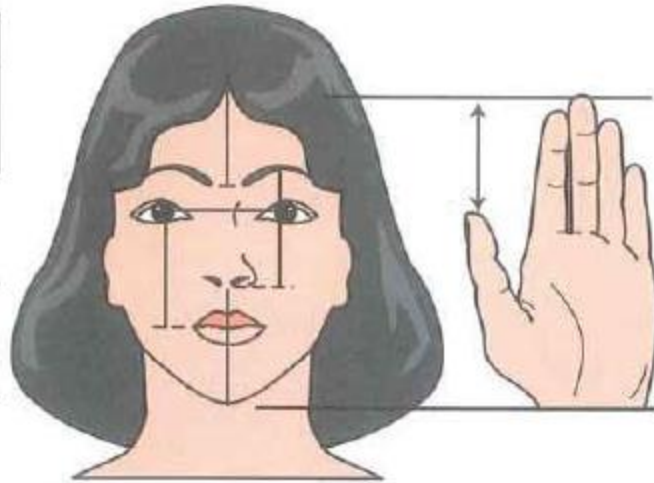
A



B



A



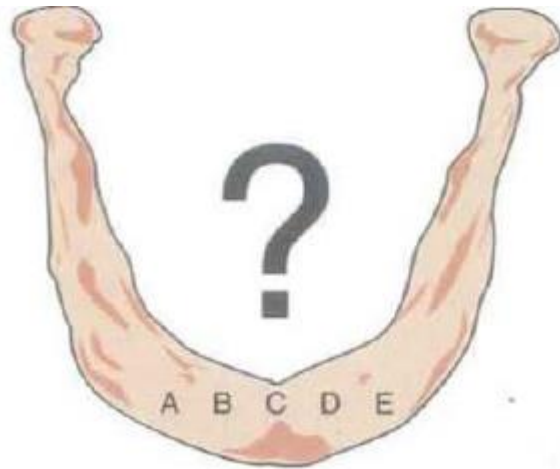
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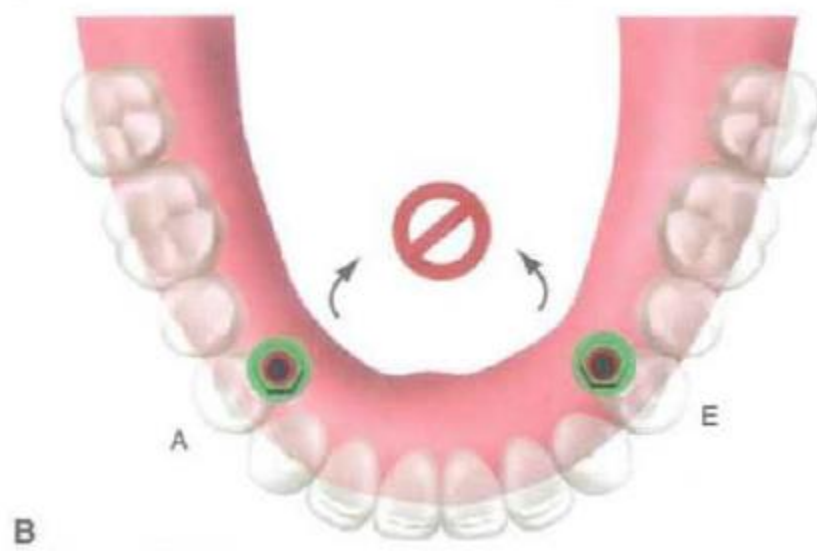
Implant Overdenture Advantages versus Fixed Prosthesis

- Fewer implants (RP-5)
 - Less bone graft
 - Less specific placement
- Improved esthetics
 - Labial flange
 - Denture teeth
 - Soft tissue drape
- Soft tissue considerations
 - Improved peri-implant probing (follow-up)
 - Hygiene
- Reduced stress
 - Nocturnal parafunction (remove prosthesis, at night)
 - Stress-relief attachment
- Lower cost and laboratory cost (RP-5)
 - Fewer implants (RP-5)
 - Less bone grafting (RP-5)
 - Easy repair
 - Laboratory cost decrease (RP-5)
- Transitional device until fixed restoration guidelines are complete

Overdenture Disadvantages

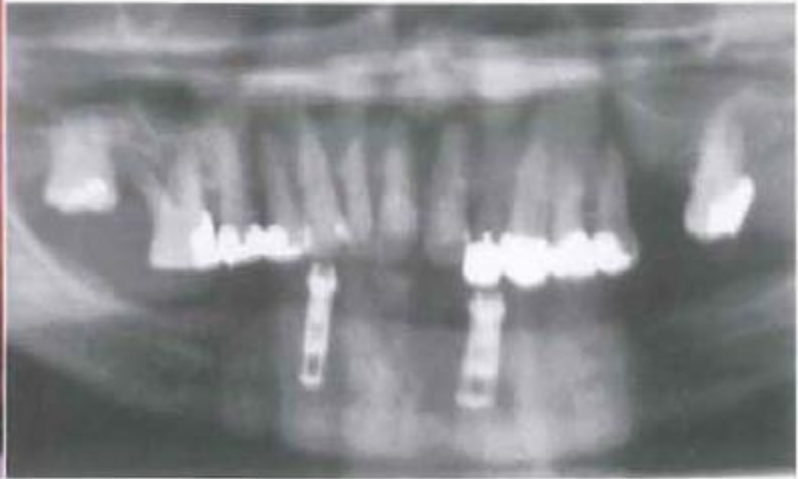
- Psychological (need for nonremovable teeth)
- Greater abutment crown height space required
- Long-term maintenance
 - Attachments (change)
 - Relines (RP-5)
 - New prosthesis every 7 years
- Continued posterior bone loss
- Food impaction
- Movement (RP-5)



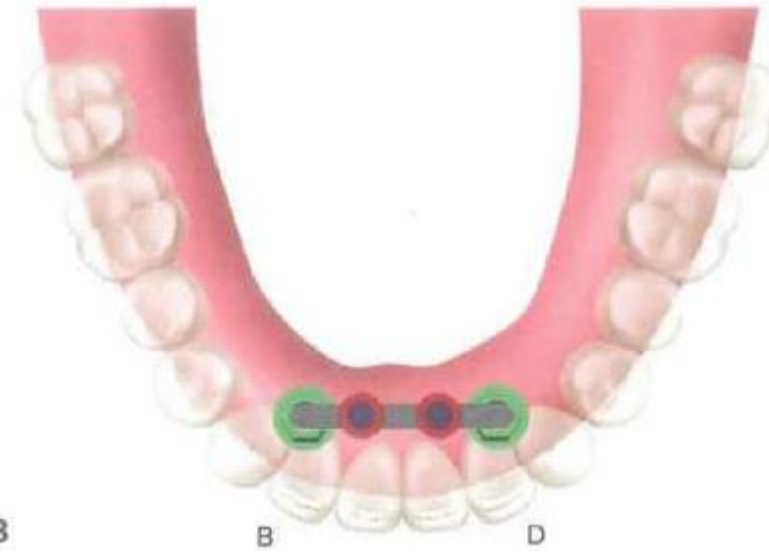
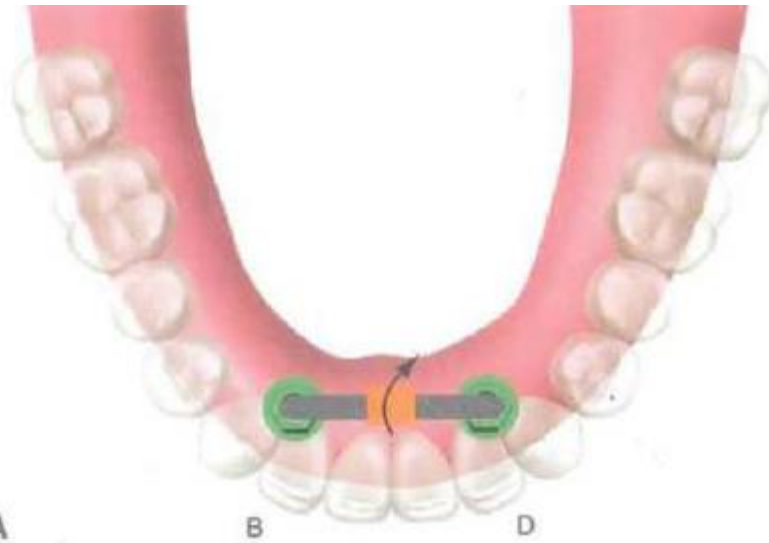


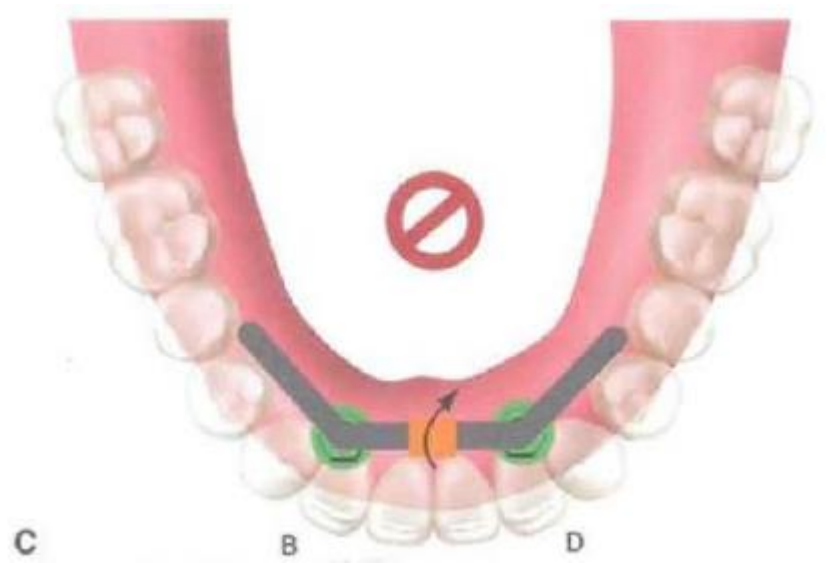


A



B



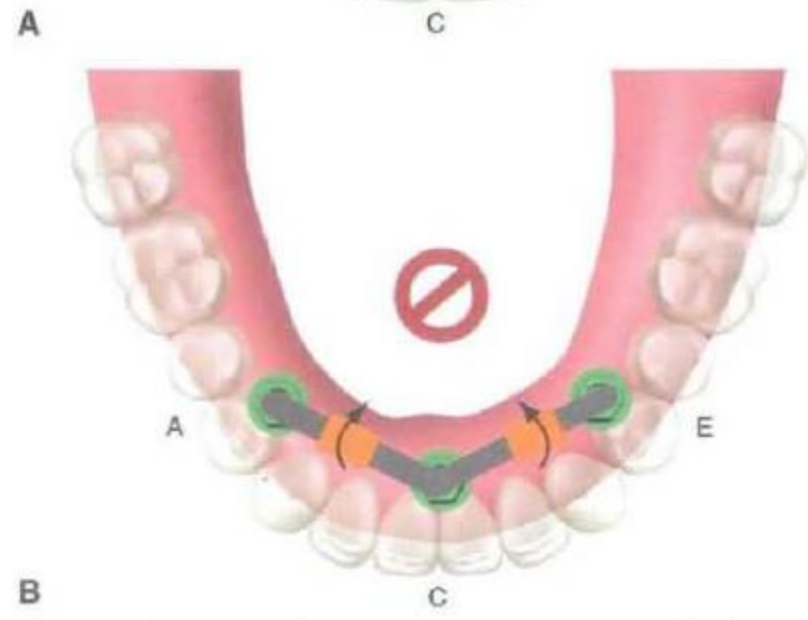
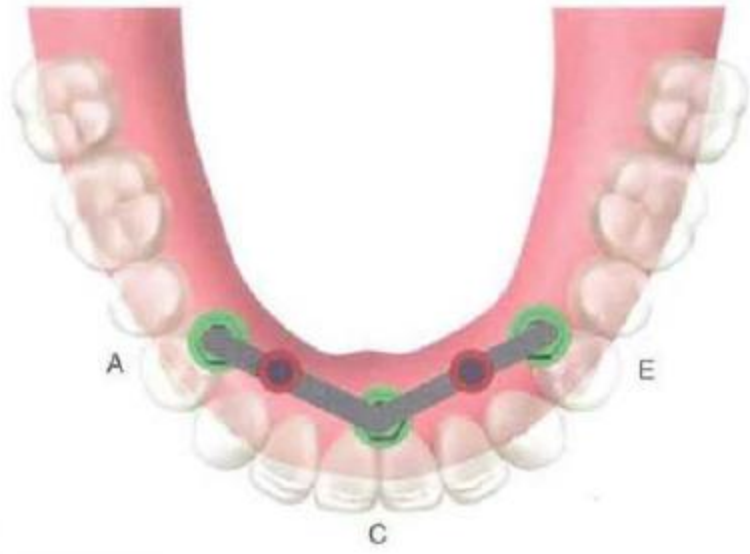


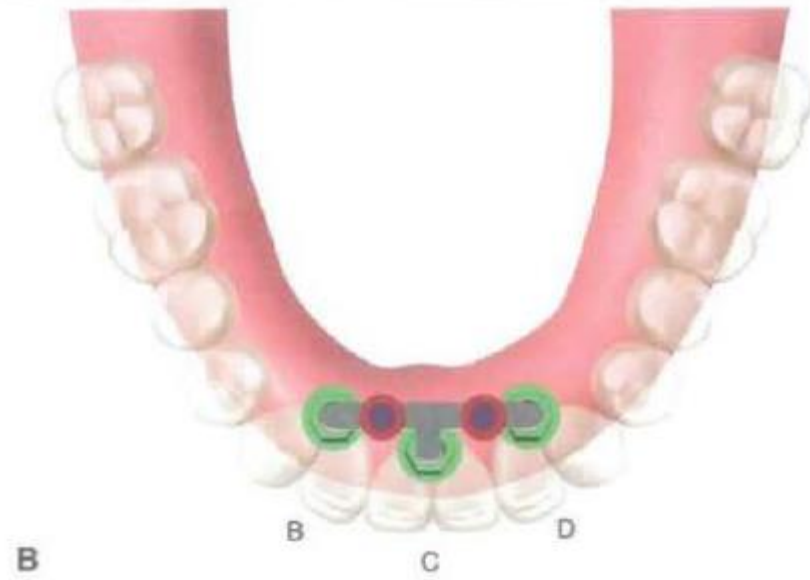
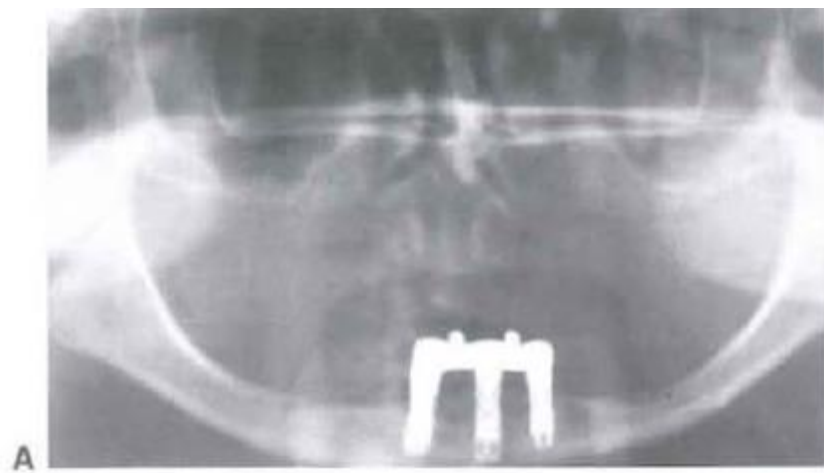


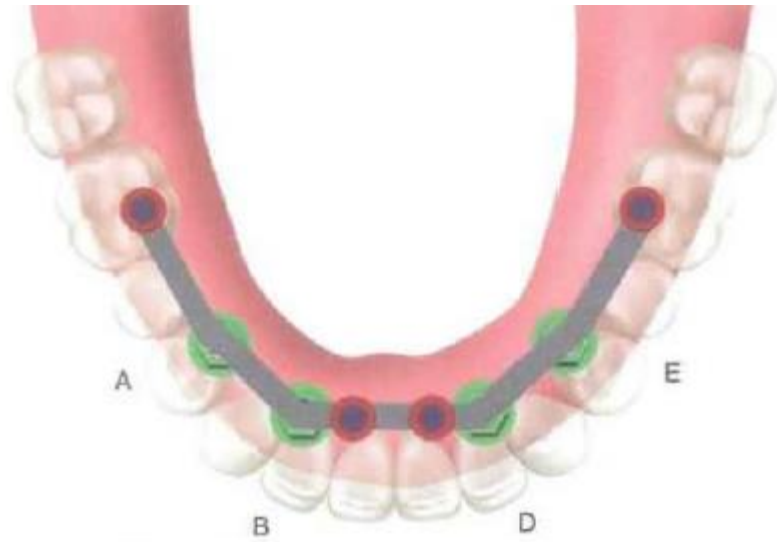
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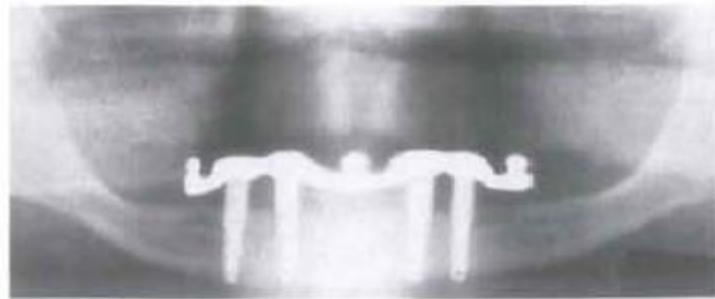
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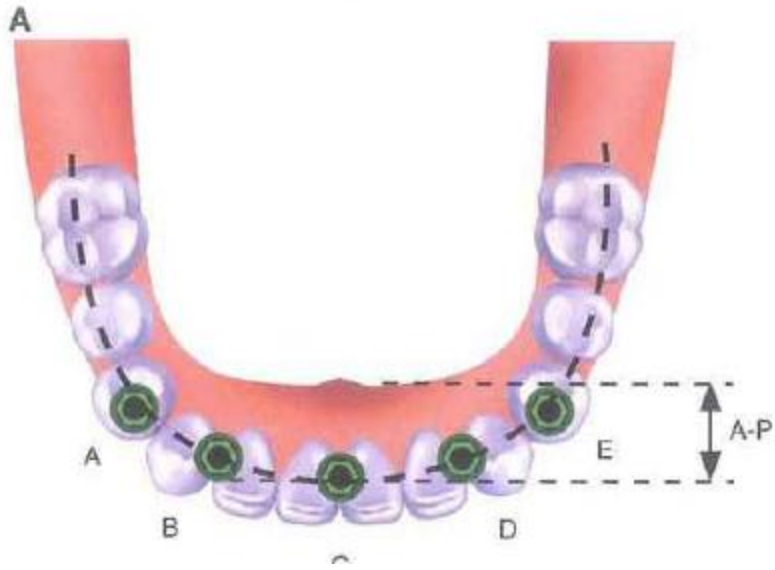
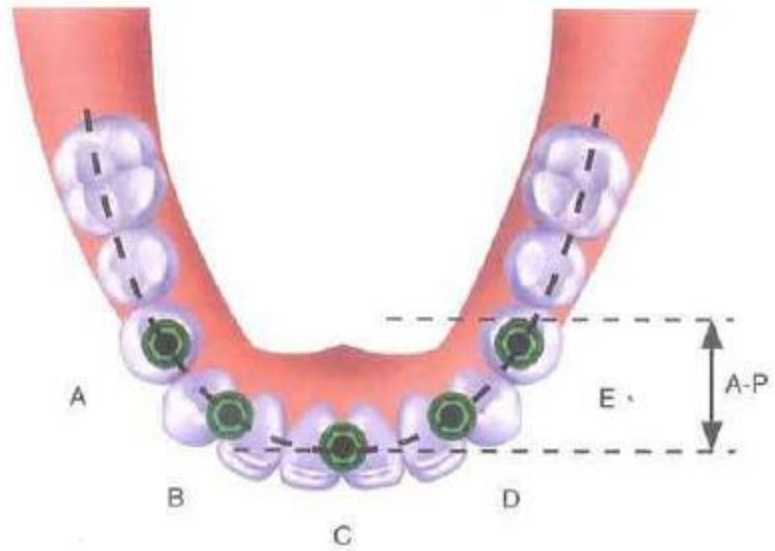


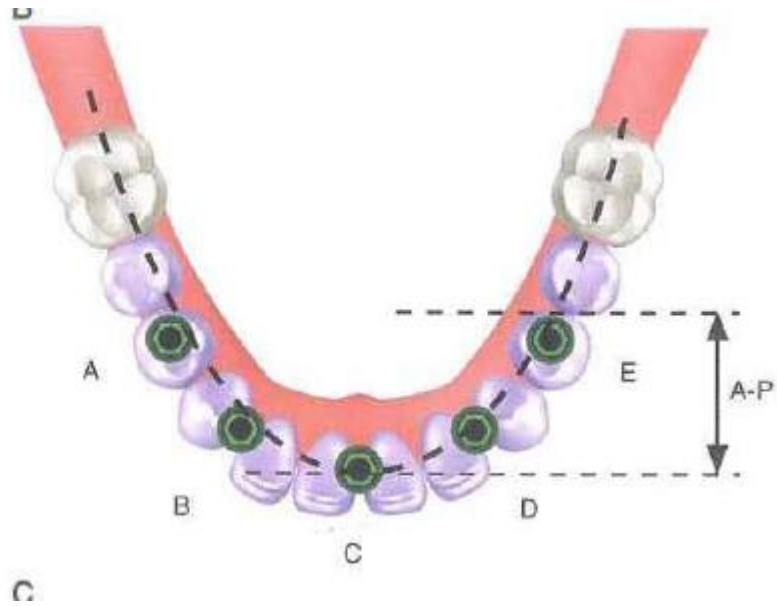


A

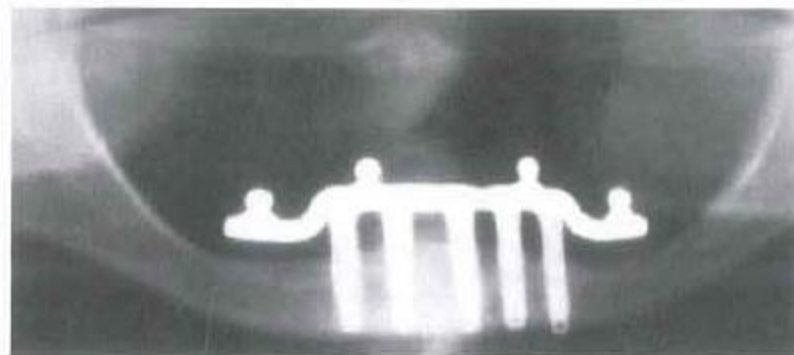
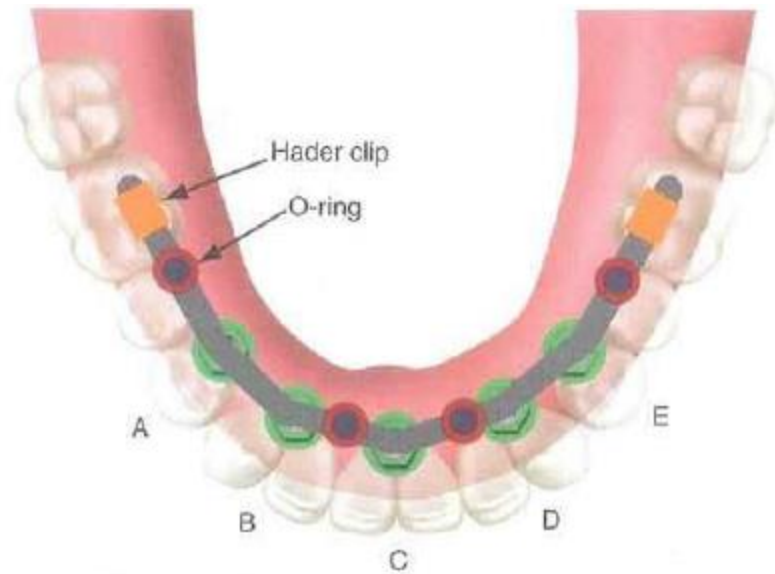


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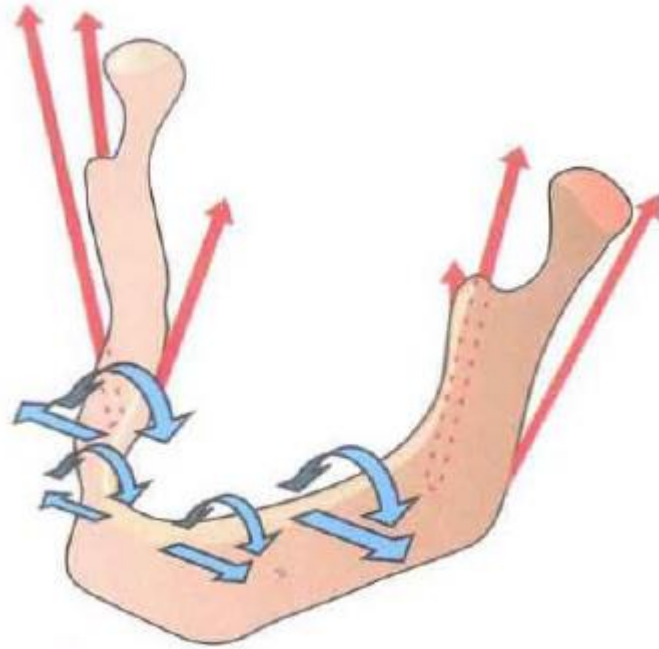


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Advantages of a Fixed Partial Denture

- Psychological: "feels like teeth"
- Less prosthetic maintenance (e.g., attachments, relines, new overdenture)
- Less food entrapment
- Posterior mandibular bone gain





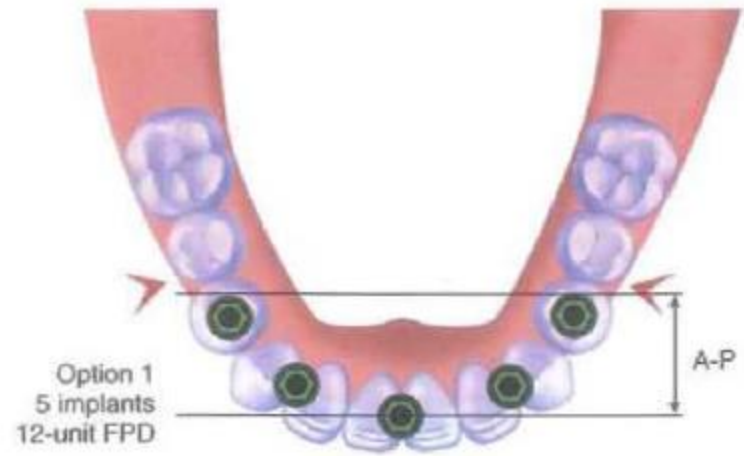
Ø 4.0-mm implant

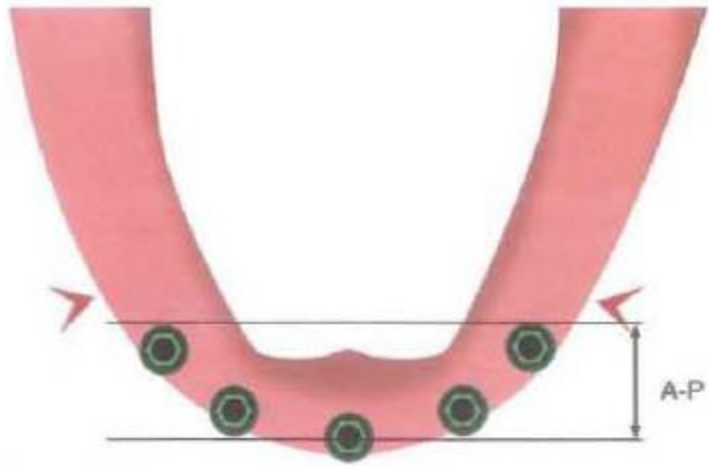


Optional implant

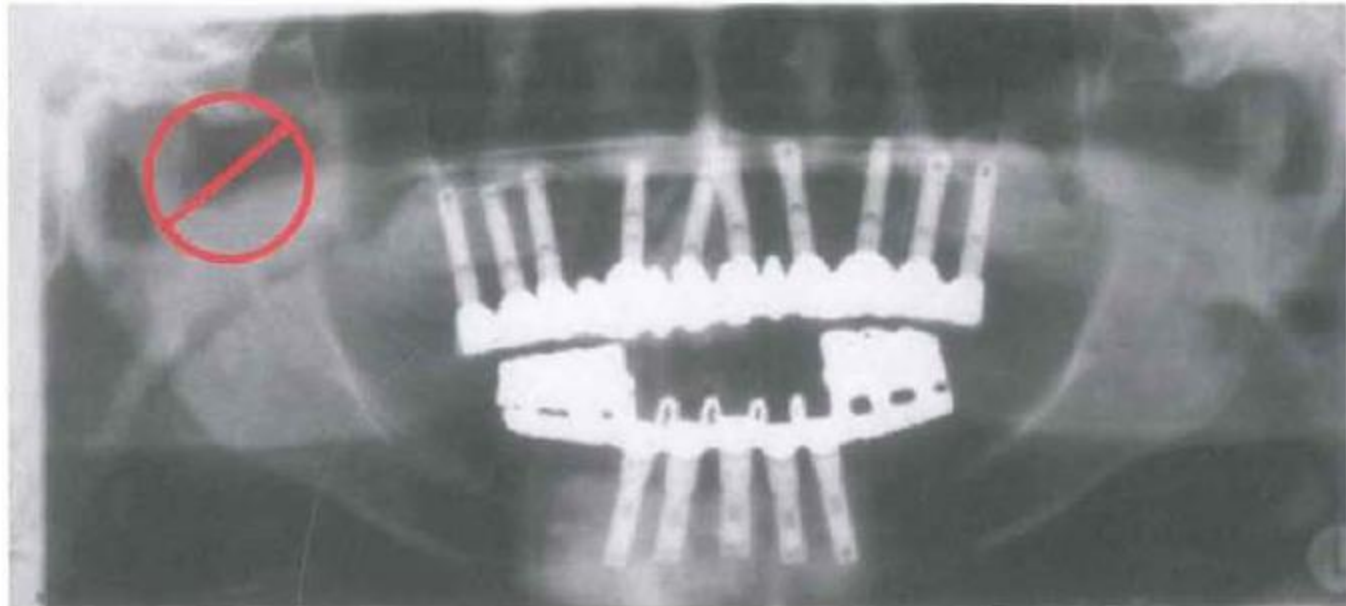


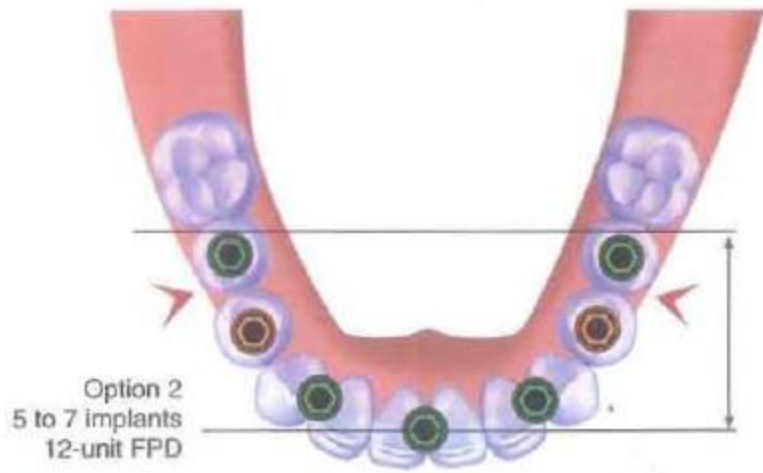
Incisal foramen

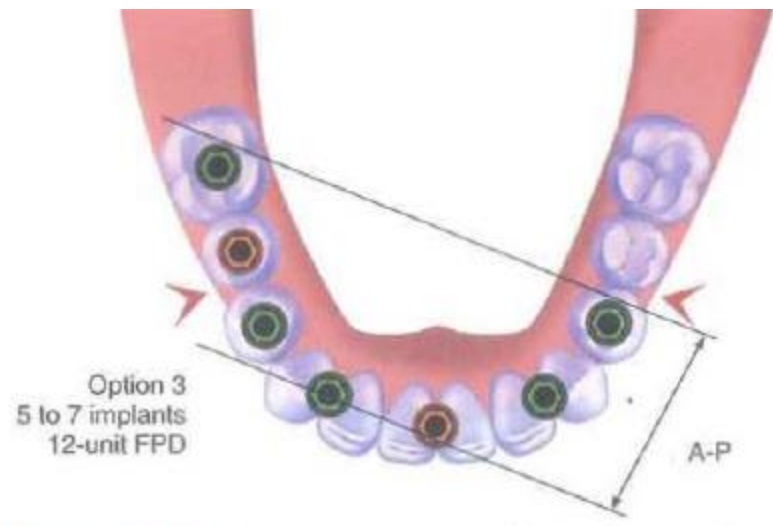


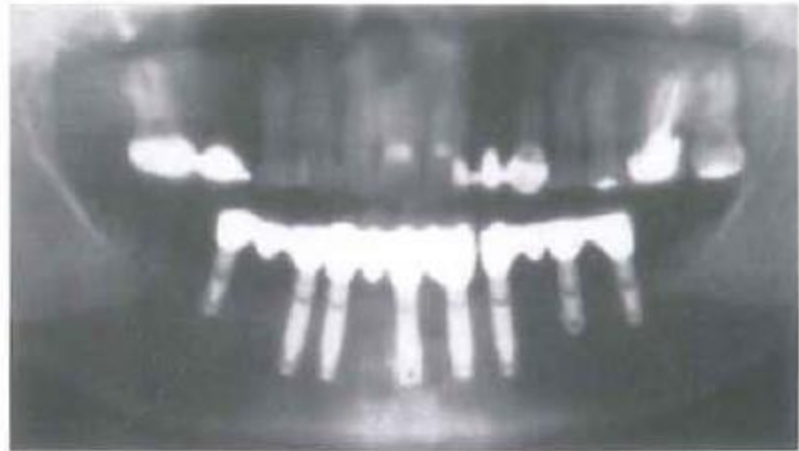
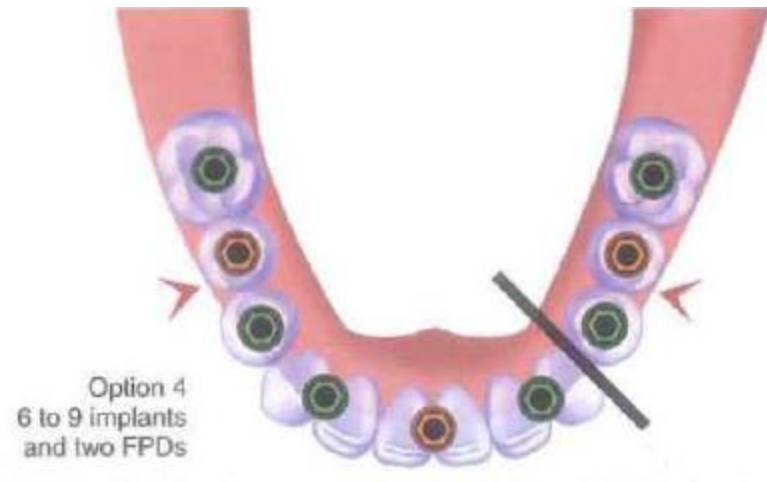


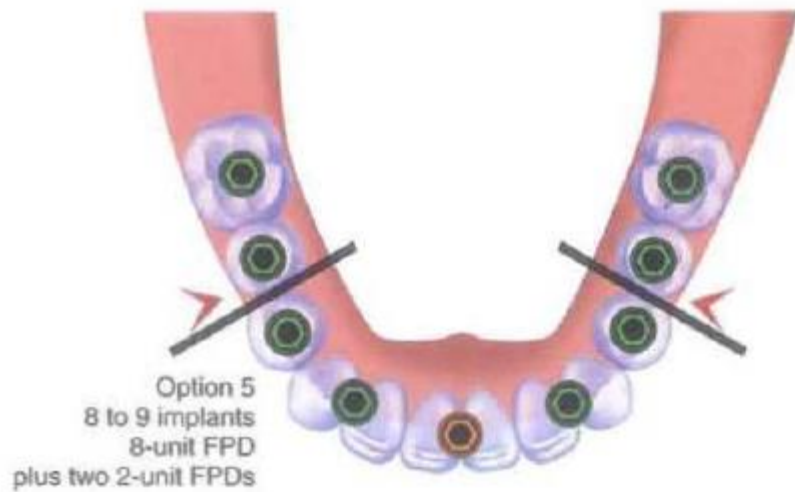
11/11/2023



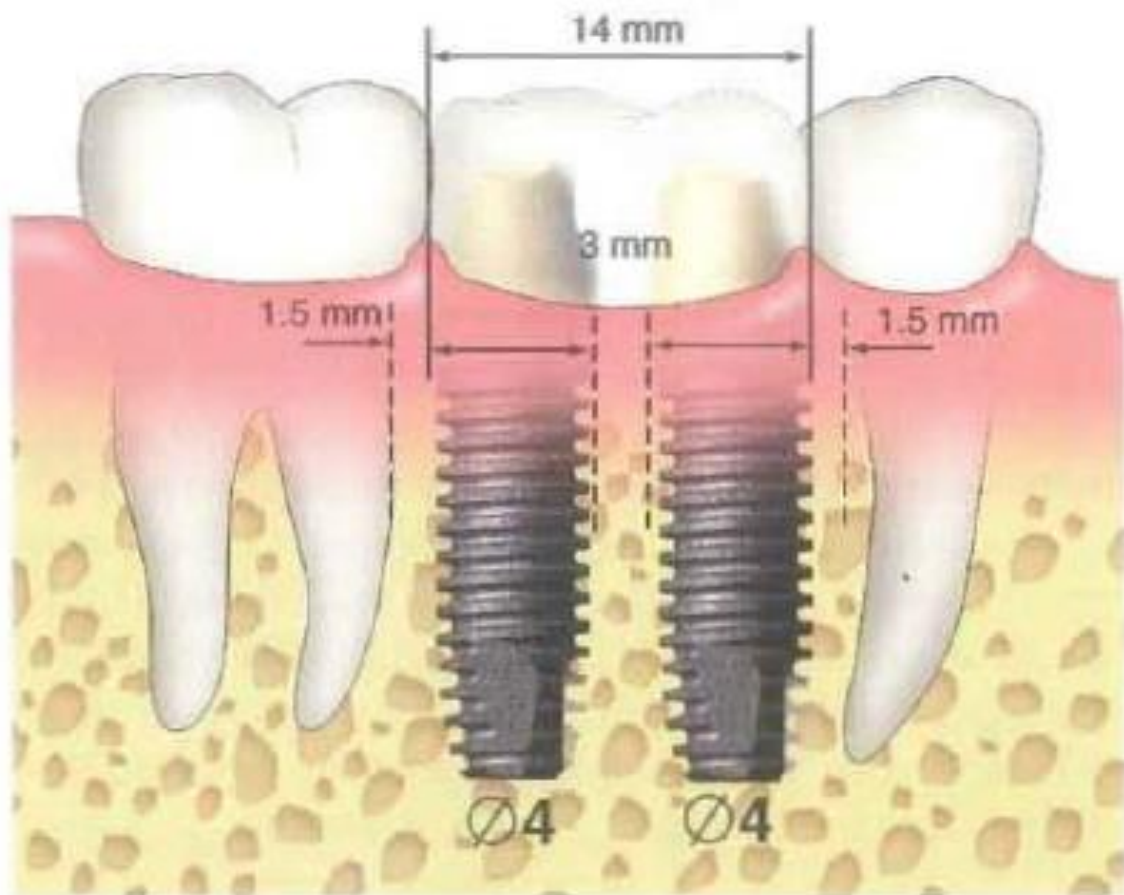


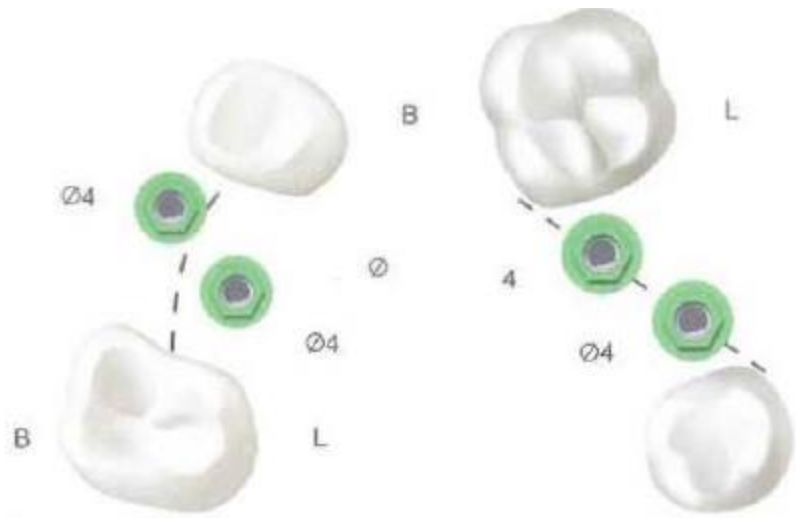






Option 5
8 to 9 implants
8-unit FPD
plus two 2-unit FPDs





Orthodontic Extraction

Advantages

- Improved bone volume
- Lower cost
- Less time
- Improved tissue drape
- Allows immediate extraction implant

Disadvantages

- Poor esthetics during treatment
- Higher patient cooperation
- Ankylosed teeth
- More difficult if porcelain-fused-to-metal crown on tooth



A



B



C

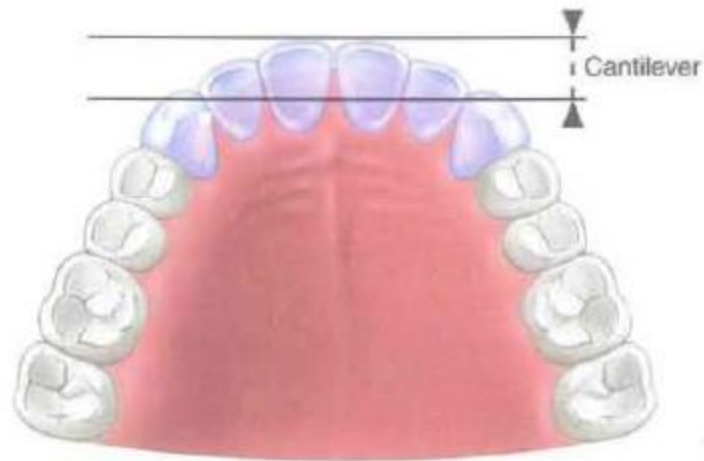


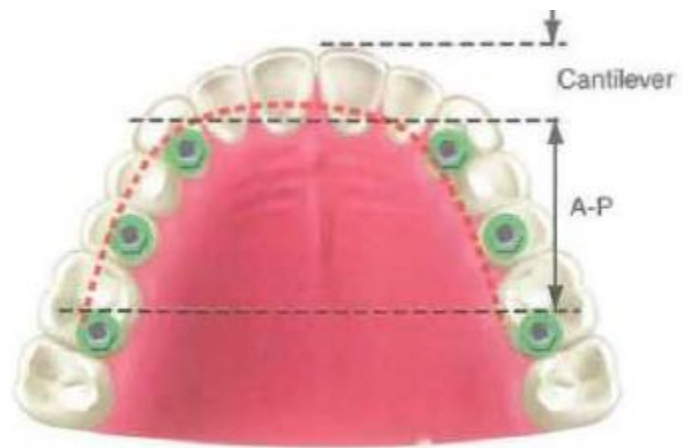
D



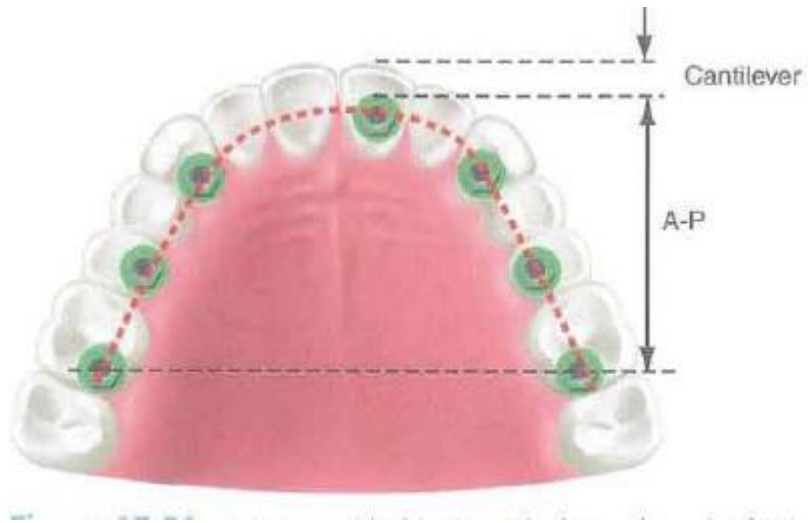
Treatment Plan for Edentulous Premaxilla

ARCH FORM	ANTERIOR CANTILEVER (MM)	NUMBER OF IMPLANTS	IMPLANT POSITION
Square	< 8	2	Canines
Ovoid	8-12	3	Two canines and one incisor
Tapering	> 12	4	Two canines and two incisors

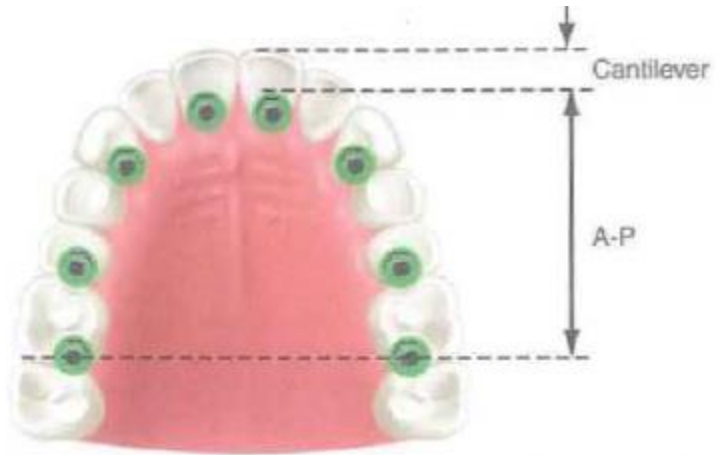




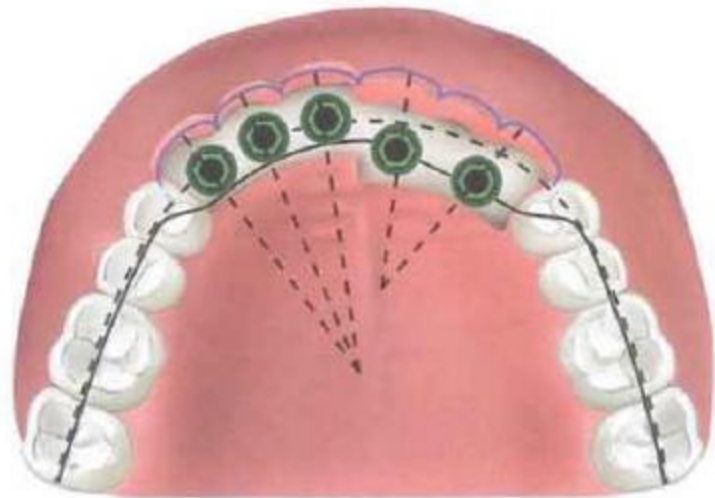
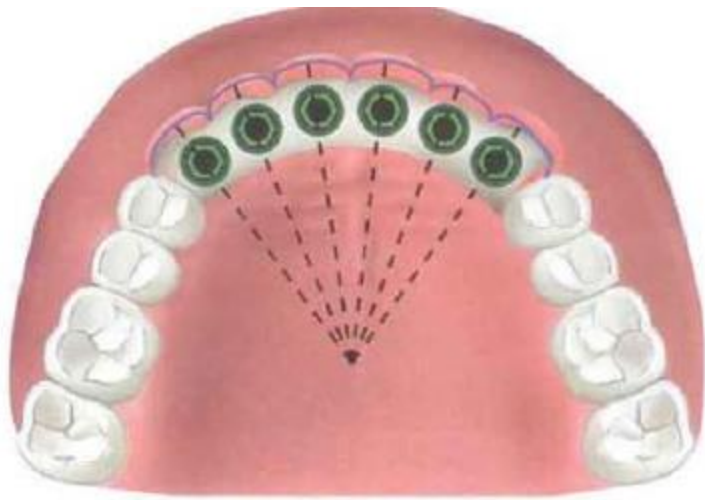












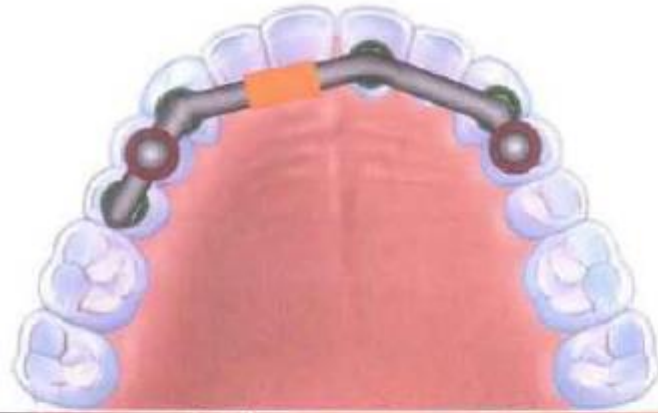




-  Primary site
-  Secondary site

Multiple Implant Size Selection Criteria for FP-1 Prostheses in the Maxilla

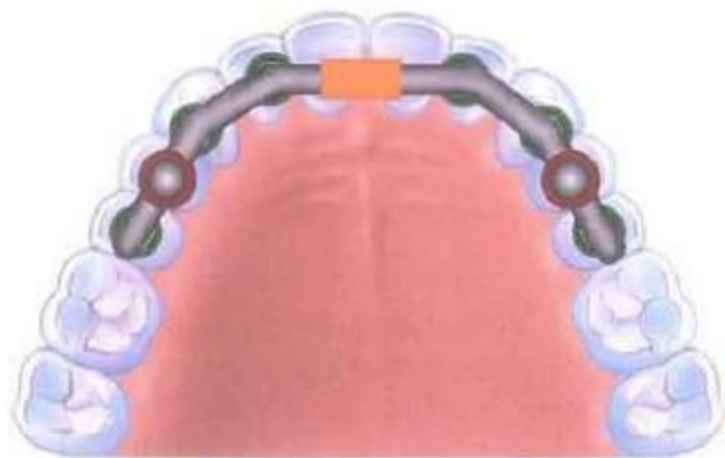
- Natural tooth 2 mm below cement-enamel junction
- 1.5 mm from adjacent tooth
- 1.5-mm facial bone
- 3 mm from adjacent implant
- 3- to 4-mm-diameter for anterior maxilla
- 4-mm-diameter minimum for posterior maxilla



A



B





A



B

استقرار ایمپلنت و ترمیم

Implant replacement and Healing

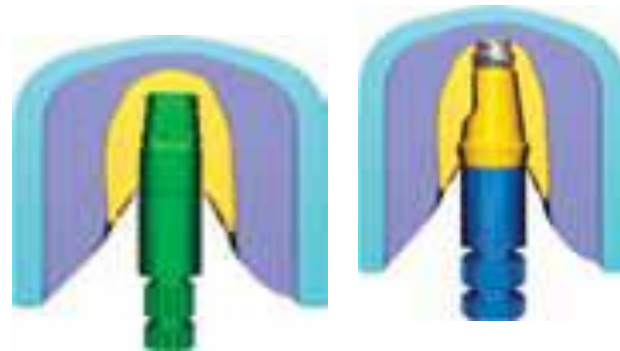
جایگزینی دندانهای از دست رفته توسط ایمپلنت و قرار دادن اباتمنت
ترمیمی



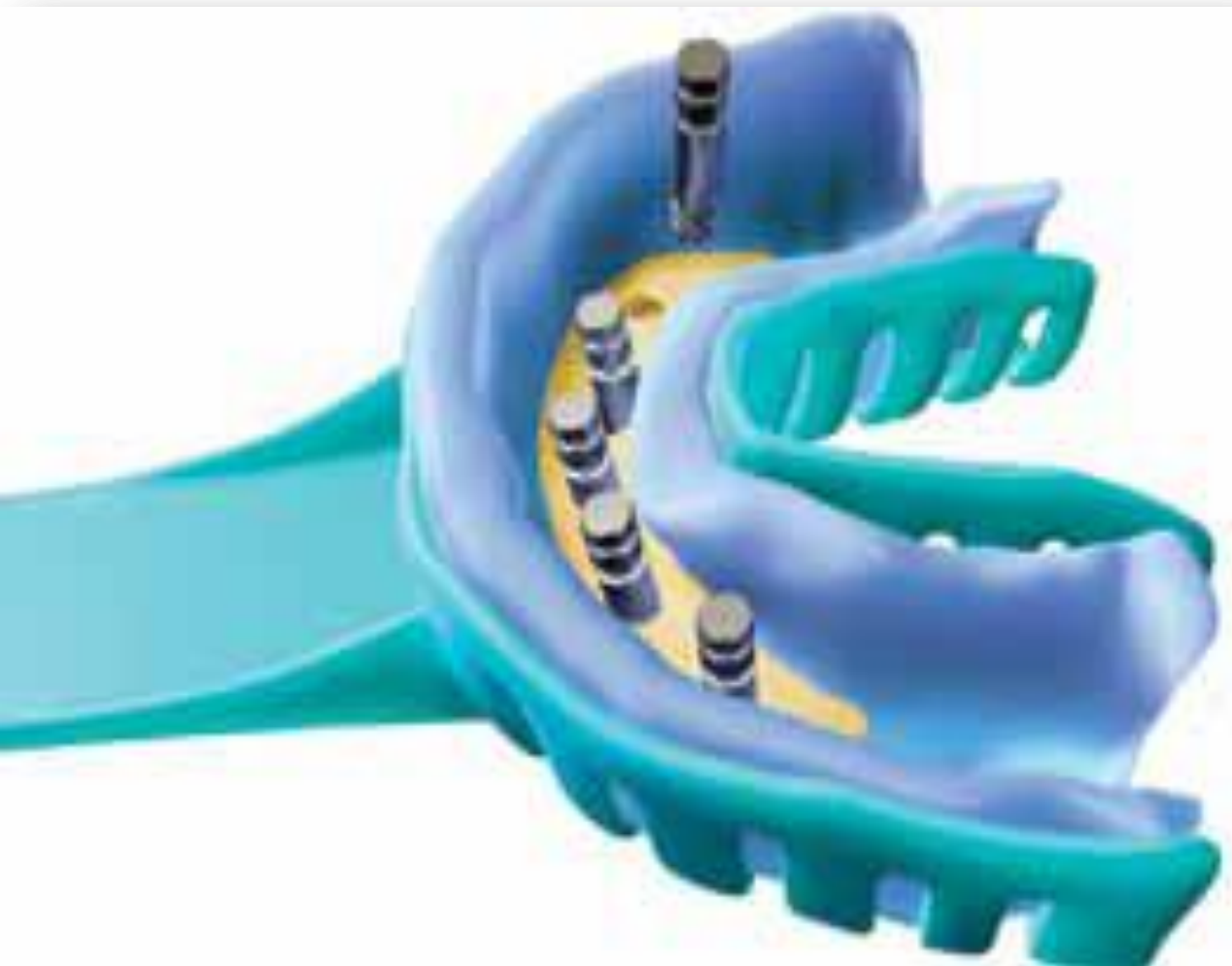
روش های قالبگیری تری باز و بسته

Closed and open tray impression techniques

روش تری بسته: ایمپرشن کوپینگ هنگامی که قالب از دهان بیمار خارج میشود به ایمپلنت متصل است و متعاقب خارج کردن قالب با تری بسته از دهان بیمار ایمپرشن کوپینگ از روی ایمپلنت خارج می گردد و به آنالوگ لابراتواری ایمپلنت متصل می گردد و مجددا وارد قالب می گردد.



Closed Tray – Indirect Transfer Technique

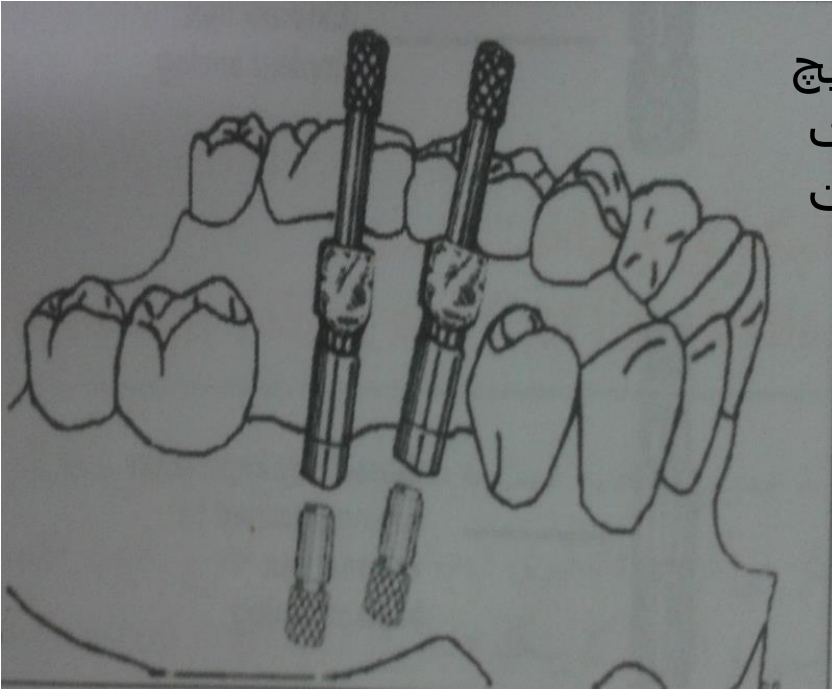


روش تری باز: ایمپرشن کوپینگ هنگامی که قالب از دهان بیمار خارج میشود در قالب باقی می ماند به این منظور ایمپرشن کوپینگ توسط پیچ جداگانه بلندی به ایمپلنت متصل میشود و باید قبل از خارج کردن تری قالبگیری از دهان بیمار، خارج گردد این نیازمند وجود مدخلی در تری است تا امکان دسترسی به پیچ اتصال دهنده باشد. در این روش آنالوگ لابراتوری ایمپلنت به ایمپرشن کوپینگ که در قالب باقی مانده متصل می گردد و قالب توسط استون ریخته میشود.



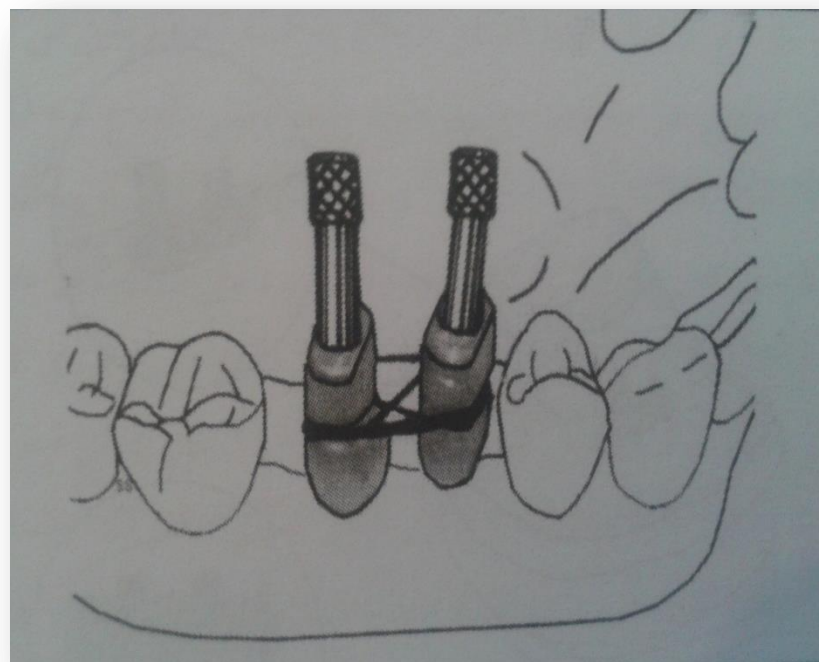
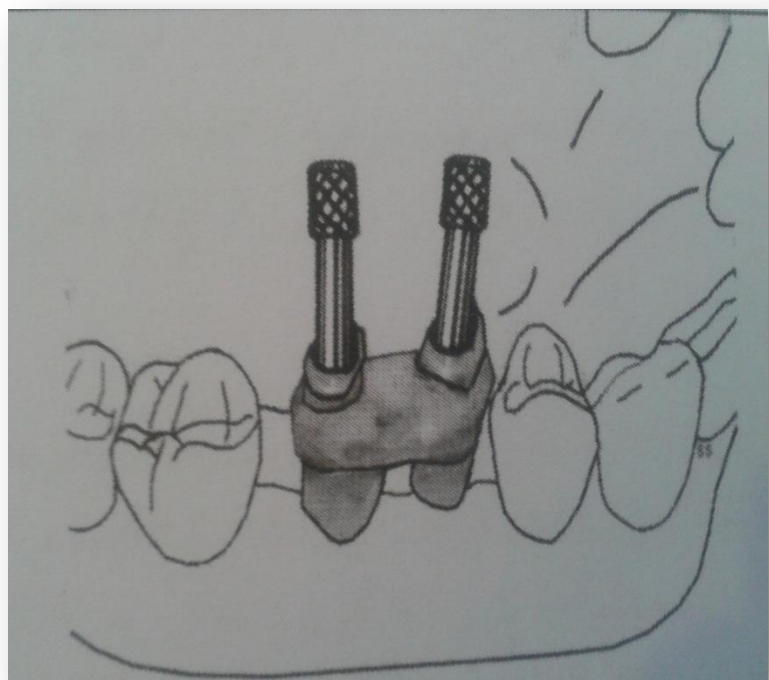
Open Tray – Direct Pick-up
Technique

روش تری باز:

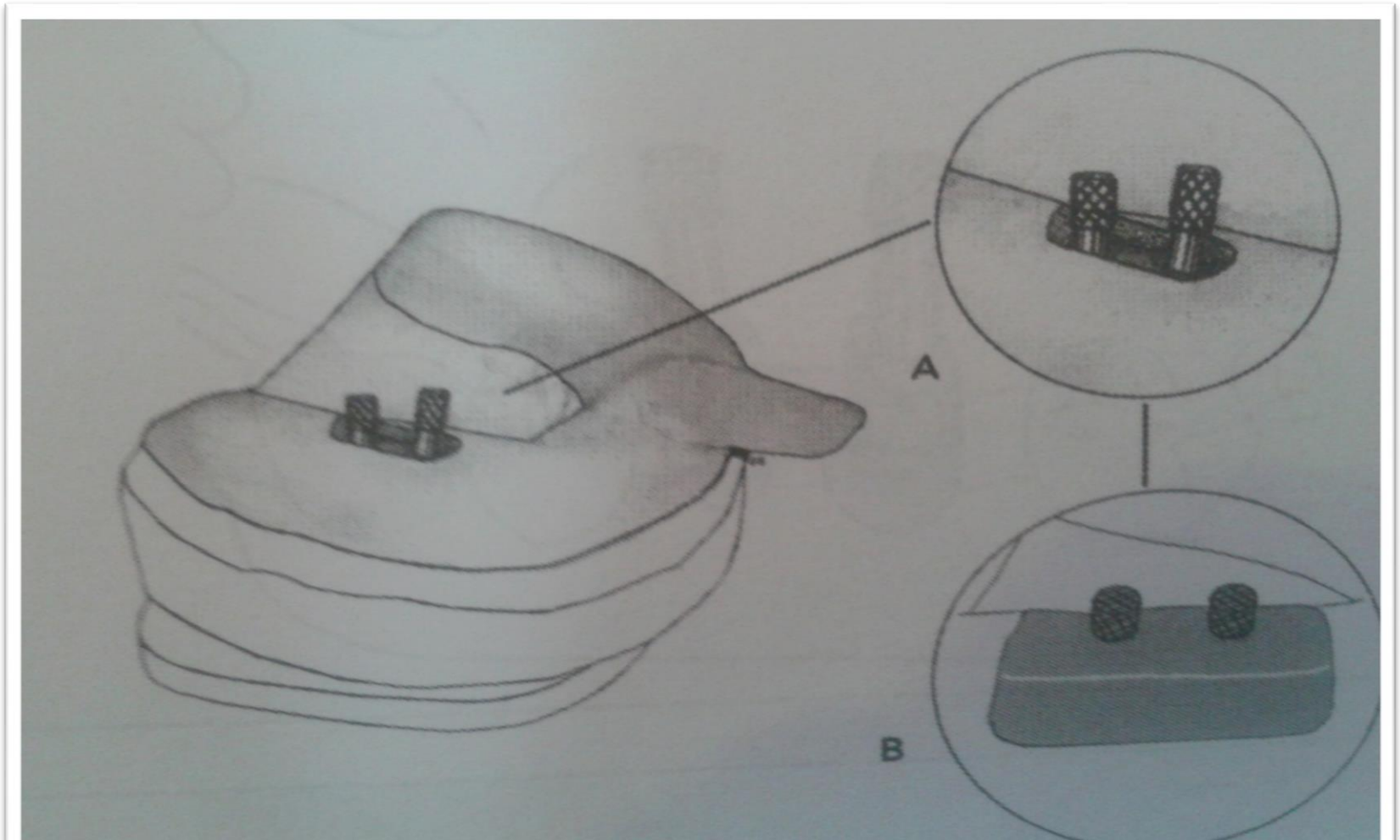


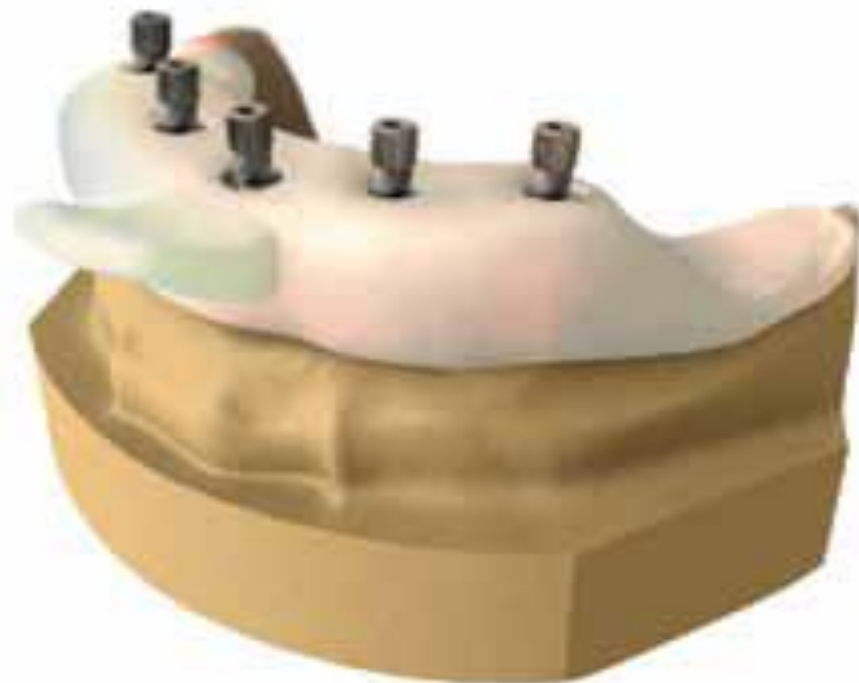
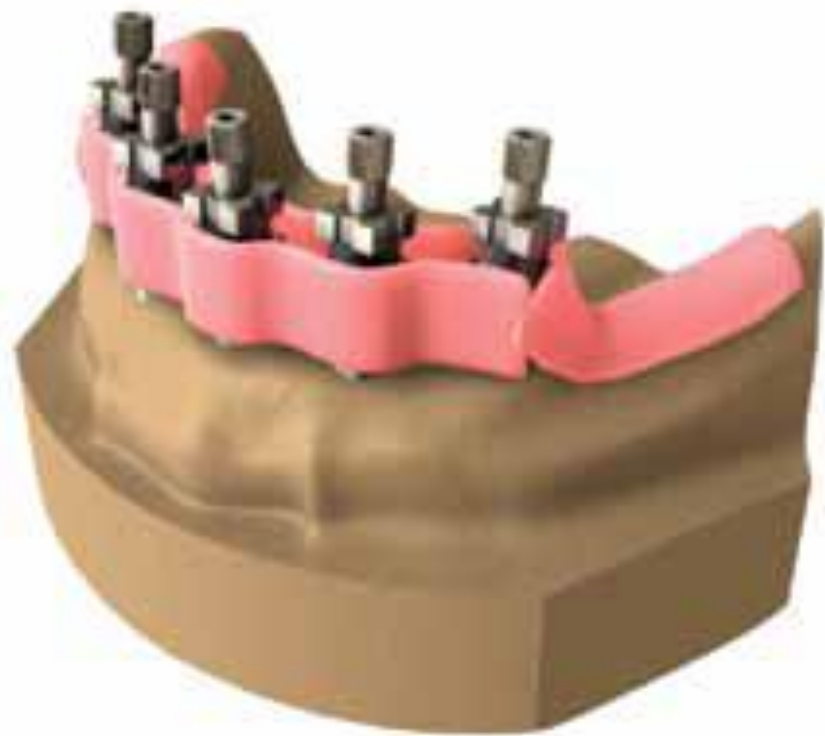
۱. ایمپلشن کوپینگ تری باز توسط پیچ
اتصال روی
کست مطالعه قرار گرفته است

۲. ایمپرشن کوپینگ مخصوص تری باز در رزین آکرلیک اتوپلیمریزه محصور
میشود تا رابطه دقیق آنها با هم ثبت شود

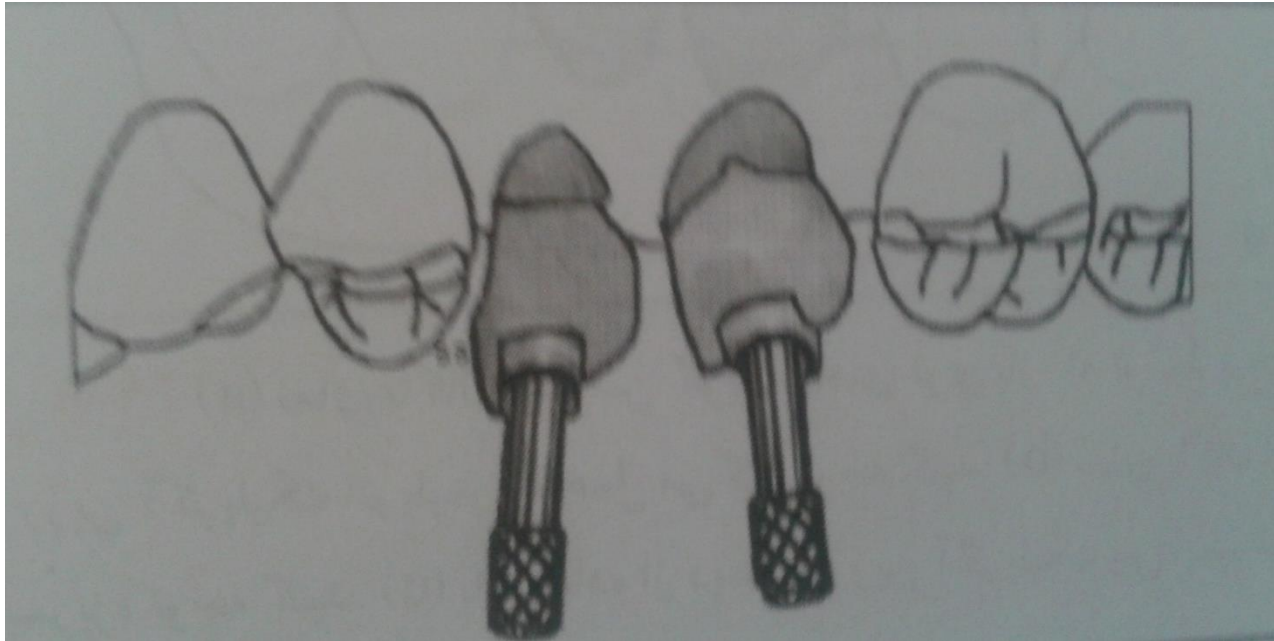


۳. بلاک اوت کست مطالعه در اطراف دندانها توسط دو ورقه موم بیس پلیت به نحوی که دو-سوم انتهایی پیچ اتصال عریان باقی بماند سپس تری قالبگیری روی کست مطالعه ساخته میشود

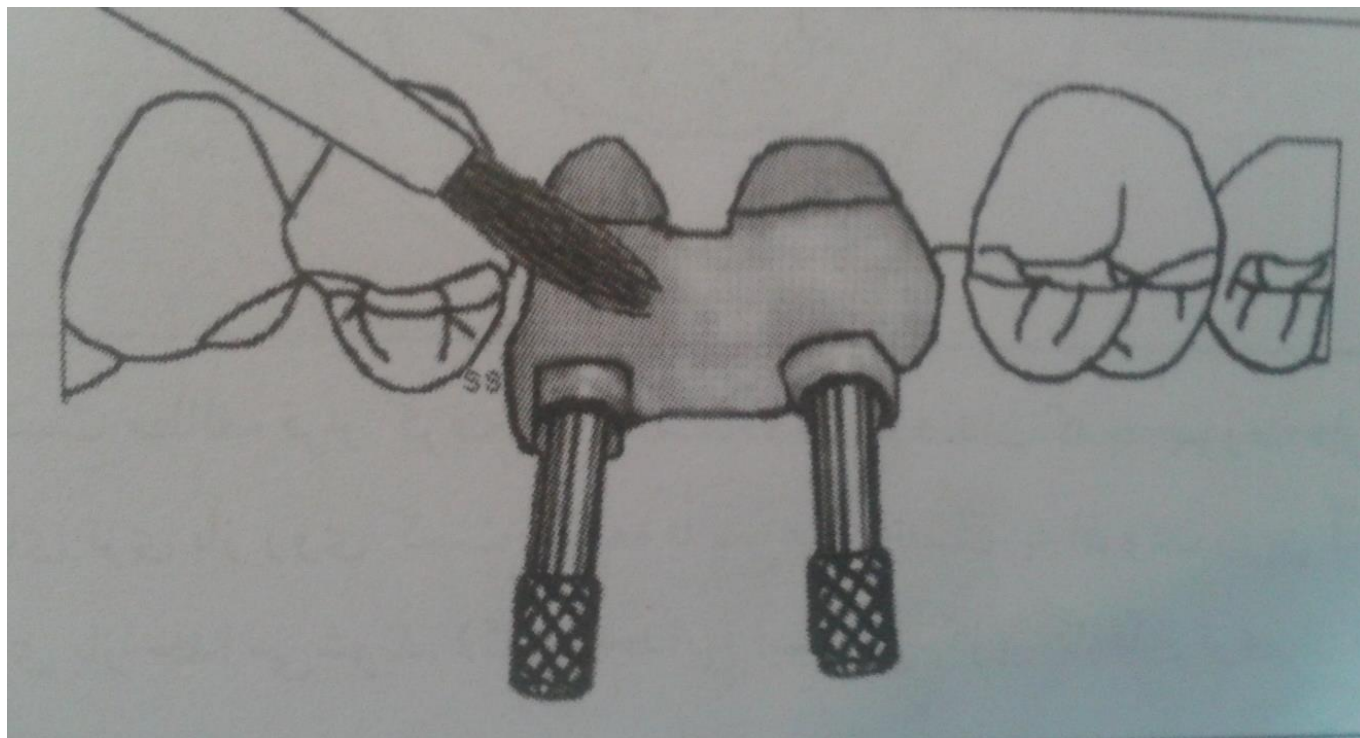




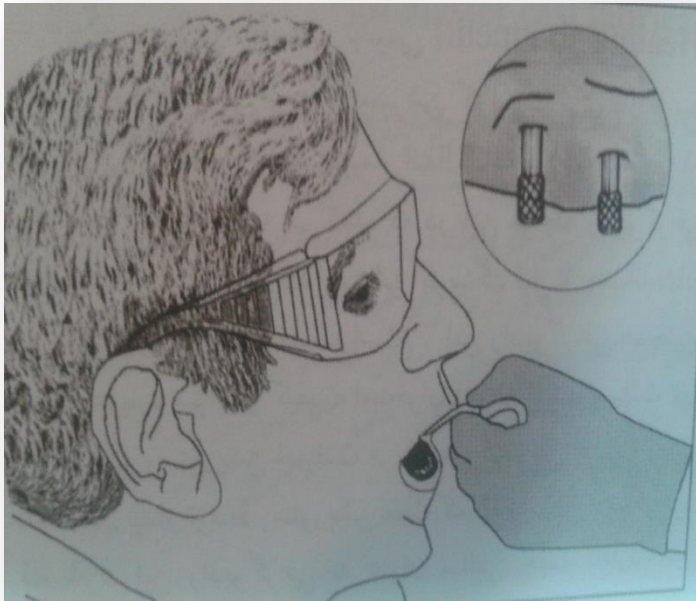
۴. خارج کردن اباتمنت ترمیمی از دهان بیمار و انتقال ایمپرشن کوپینگ تری باز همراه پیچ اتصالش از روی کست به دهان بیمار



۵. اتصال مجدد ایمپرشن کوپینگ تری باز به رزین آکرلیک اتوپلیمریزه دردهان بیمار

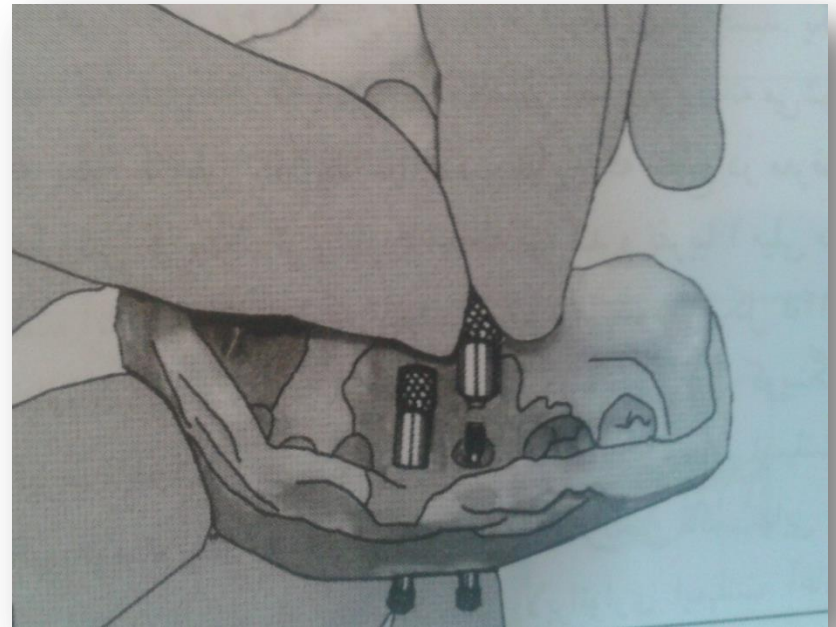
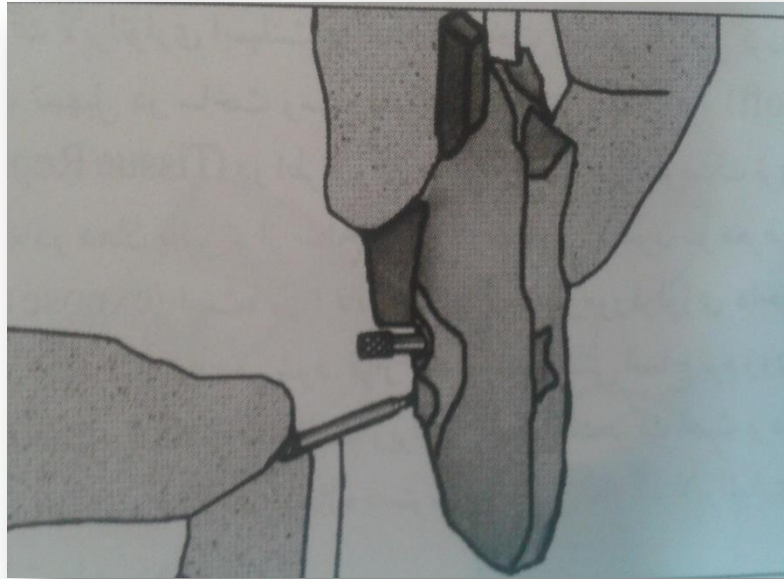


در اطراف ایمپرشن کوپینگ وپر کردن medium-body. تزریق ماده قالبگیری heavy-body با ماده قالبگیری



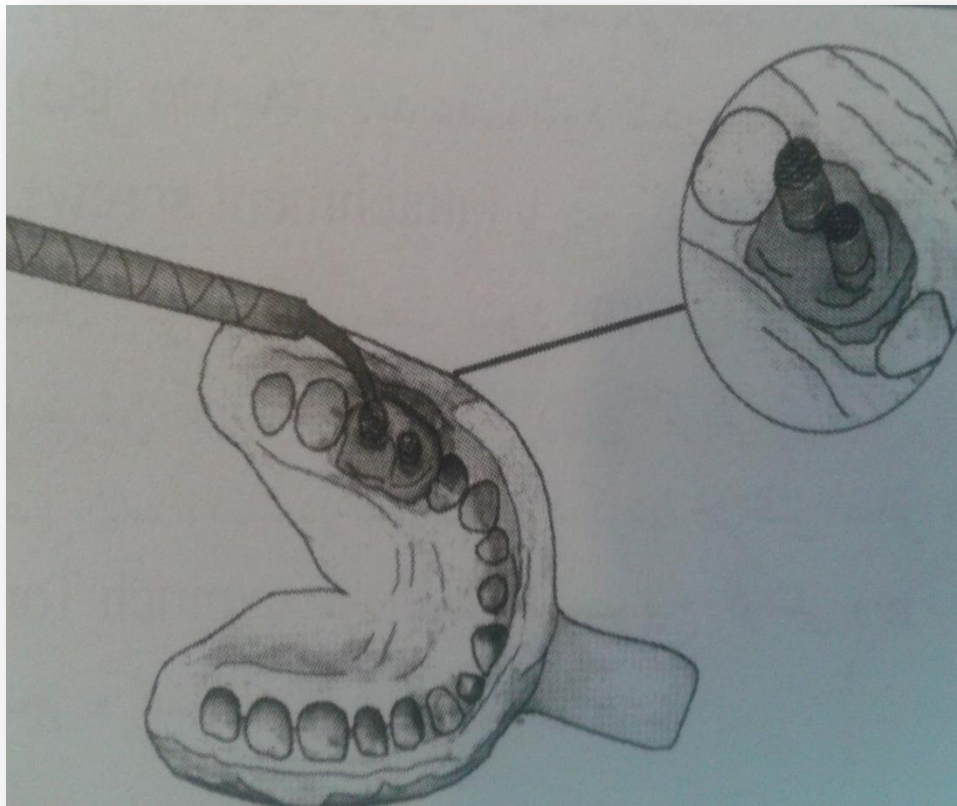
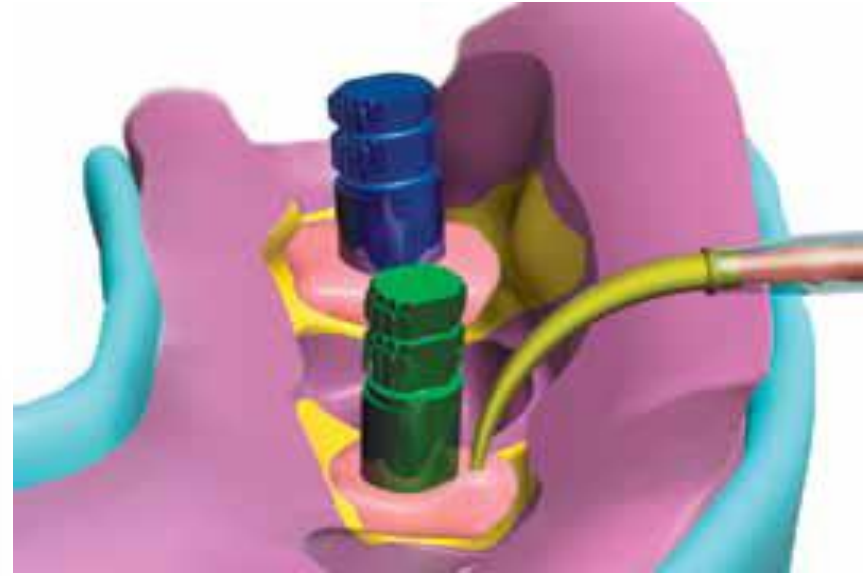
۷. باز کردن پیچ اباتمنت ایمپلنت و خارج شدن آن از سوراخ تری حین قالبگیری در دهان بیمار و سپس خارج کردن تری با ماده قالبگیری از دهان بیمار

پیچ اتصال بعد از خروج تری از دهان بیمار مجدداً به ایمپرشن کوپینگ متصل میشود و در نهایت آنالوگ لابراتوری ایمپلنت به ایمپرشن کوپینگ درون قالب متصل میشود

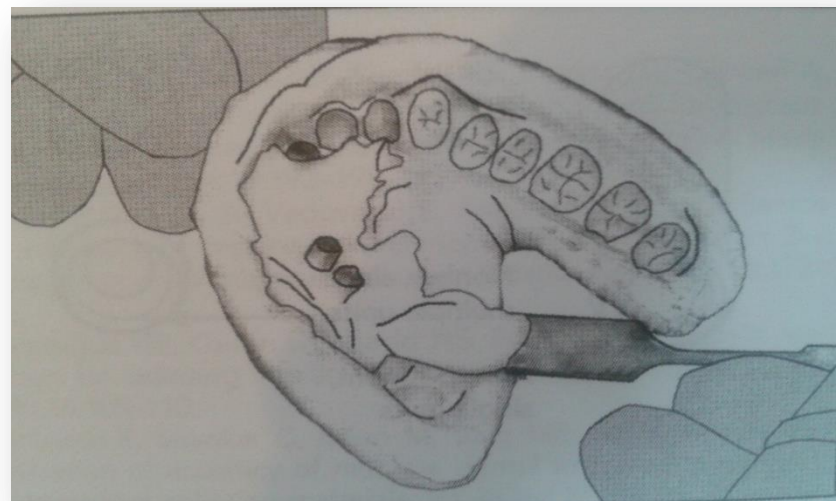
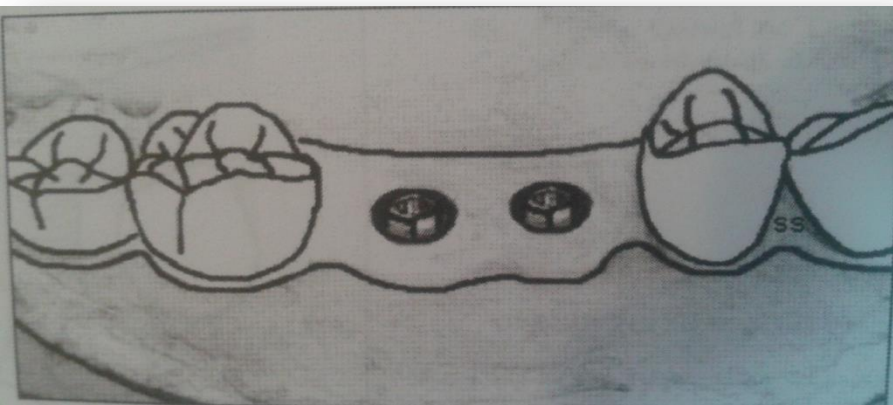
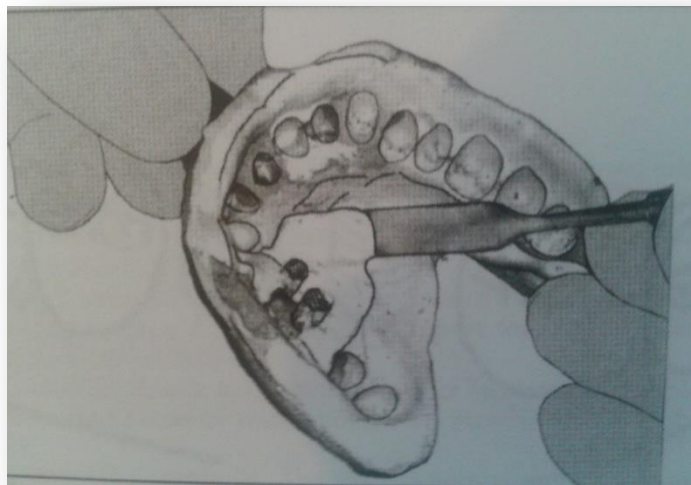




در اطراف آن بخشی ایمپرشن کوپینگ تری gingival mask قرار دادن ماده باز که در دهان پایین تر از از انساج لته بود، به منظور تقلید انساج لته

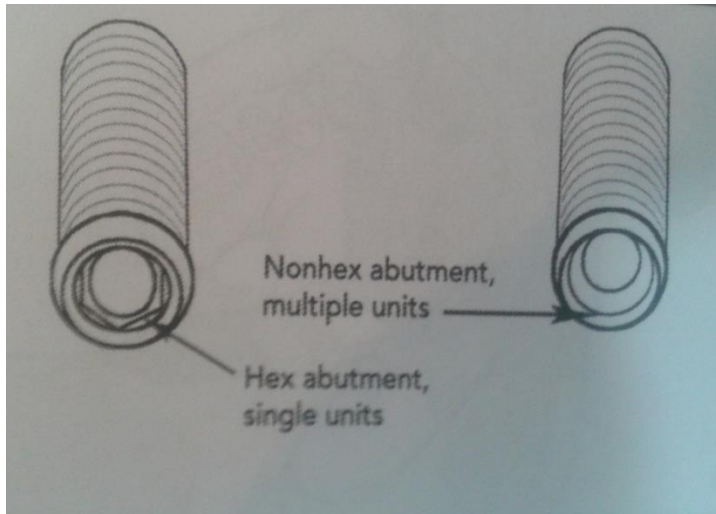


۹. ریختن قالب نهایی با ریختن استون اطراف آنالوگ لابراتوری ایمپلنت و سپس
ریختن بقیه قالب برای ساخت کست



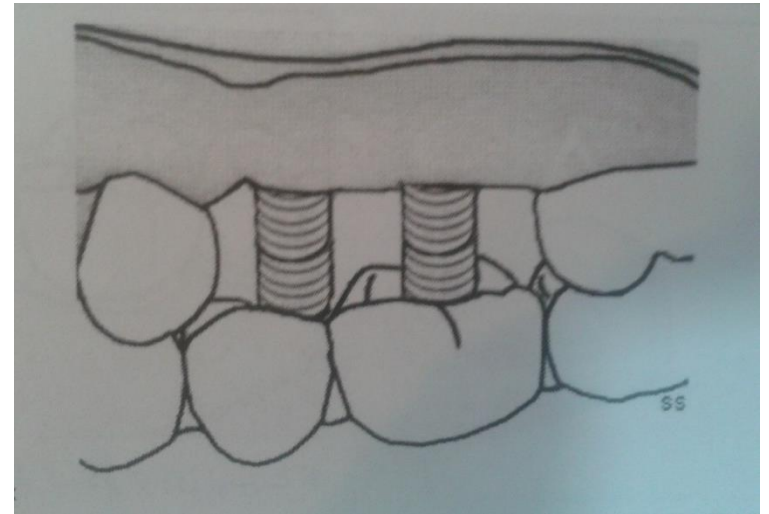
رستوریشن نهایی ایمپلنت Definitive Implant Restoration

برای ساخت رستوریشن نهایی اباتمنت سیلندری فلزی پیش ساخته و ماشین به منظور موم گذاری به عنوان زیر (waxing sleeve) شده همراه با جلد پلاستیکی مورد استفاده قرار میگیرد
non hex و hex این اباتمنت به دو صورت است:



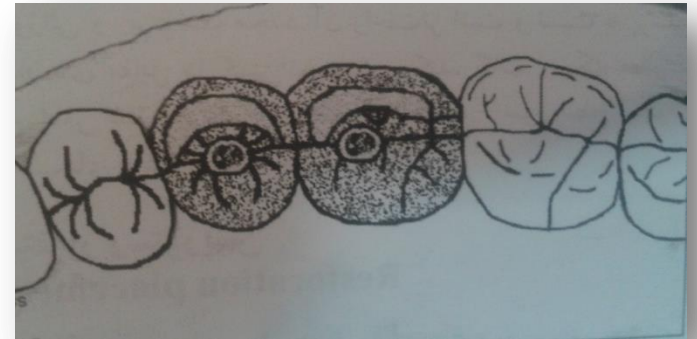
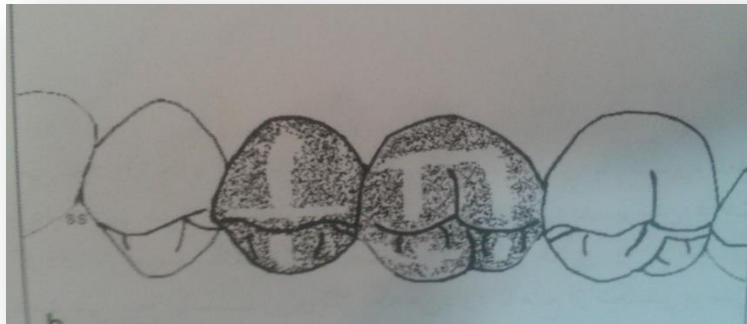
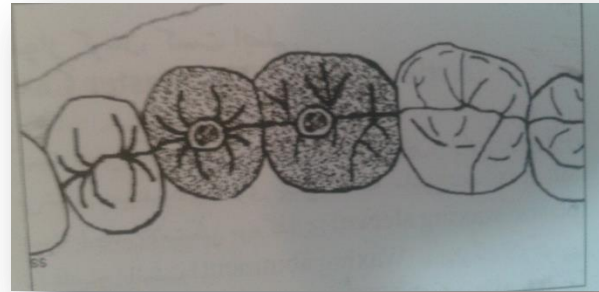
سوار کردن کست اصلی *Articulation of The master Cast*

سیلنדרهای فلزی پیش ساخته شده
توسط پیچ اباتمنت به آنالوگ لابراتوری
ایمپلنت روی کست اصلی متصل
میشود



موم گذاری رستوریشن Restoration Wax-up

رستوریشن به صورت کانتور کامل موم گذاری میشود سپس کات بلاک در سطح باکال ویک - سوم سطح لینگوال کاسپ های باکال صورت میگیرد تا فضا برای افزودن پرسن فراهم شود



رستوریشن نهایی:

محل اتصال پرسلن به فلز در
اطراف سوراخ دسترسی به
پیچ نگه دارنده باید روی فلز
باشد

