

Intro to Oral Surgery

Lecture 5: Basic Exodontia

Dr. Caroline Zeller



Objectives:

- Evaluate difficulty of tooth removal
- Prepare patient for extraction
- Identify different types of extractions
- Demonstrate principles of tooth extraction
- Describe surgical site management following extraction

Basic/Routine/Simple/Open

1. Billing/coding
2. Skill level
3. Documentation

Basic/Routine/Simple/Open

Billing/coding:

D711: extraction, coronal remnants - deciduous tooth
(Removal of soft tissue-retained coronal remnants)

D7140: extraction, erupted tooth or exposed root
(includes routine removal of tooth structure, minor smoothing of socket bone, and closure as necessary)

Patient presents to clinic

How is tooth treatment planned?

Factors of Difficulty

Tooth-specific factors
Environmental factors

Environmental Factors of Difficulty

What must minimally exist for success?

- Medically safe
- Psychologically capable
- Position
- Anesthesia
- Stabilize jaw
- Lighting
- Visualization/Access
- Non-moving human

Factors of Difficulty

Clinical/Radiographic Factors of Difficulty

Intraoral

Erupted
Status of crown (decayed or fractured)
Evidence of bruxism

Is there space/access
for our instruments?

Elevators (mesial and buccal)

Forceps (sufficient crown)

Clinical/Radiographic Factors of Difficulty

Intraoral

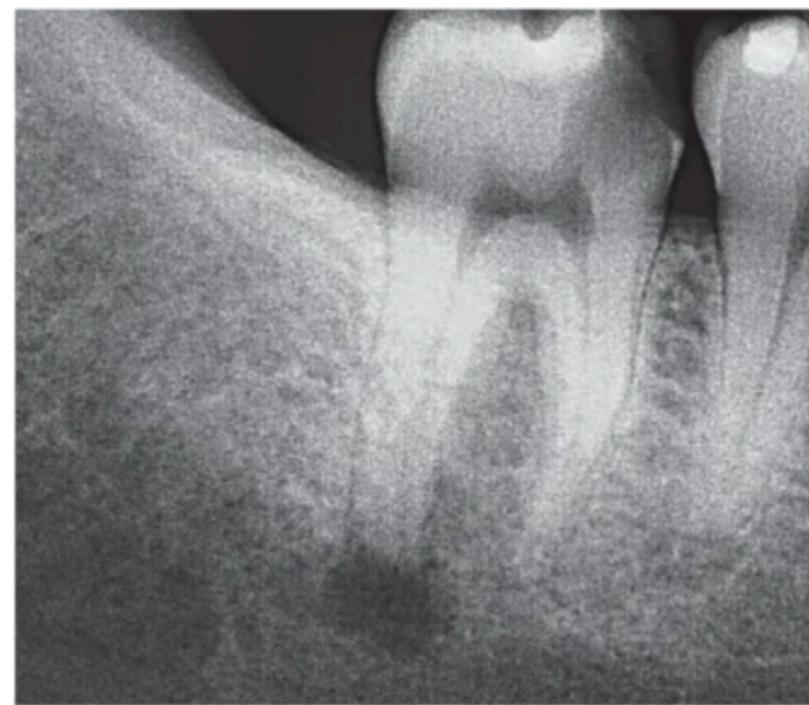
Erupted
Status of crown (decayed or fractured)
Evidence of bruxism



Clinical/Radiographic Factors of Difficulty



Reduced PDL
Endodontically treated teeth
Dense sclerotic bone/exostosis
Acute infection



Clinical/Radiographic Factors of Difficulty

Roots:

1. Form - long, thin, dilacerated, hypercementosis, bulbous (**undercuts**)



Clinical/Radiographic Factors of Difficulty

Roots:

1. Form - long, thin, dilacerated, hypercementosis, bulbous (**undercuts**)
2. Anatomic factors: inferior alveolar canal, other teeth/tooth position, maxillary sinus



Principles of Extraction Technique

1. Prepare patient
2. Soft tissue management: release gingival cuff
3. Expand tooth containing alveolus
4. Elevate the tooth
5. Apply forceps and remove the tooth
6. Decontaminate/debride the extraction site
7. Wound management/suture

1. Prepare Patient

Medically safe
Psychologically capable
Position
Anesthesia
Stabilize jaw
Lighting
Visualization/Access
Non-moving human

1. Prepare Patient

~~Medically safe~~
~~Psychologically capable~~
Position
Anesthesia
Stabilize jaw
Lighting
Visualization/Access
Non-moving human

If you feel weird, you probably look weird.

And you're probably doing it wrong.

Position:

So you can see
So your body doesn't hurt
So the instruments work

1. Prepare Patient

~~Medically safe~~
~~Psychologically capable~~
Position
Anesthesia
Stabilize jaw
Lighting
Visualization/Access
Non-moving human

maxillary:
more reclined, higher

mandibular:
mandible parallel to floor

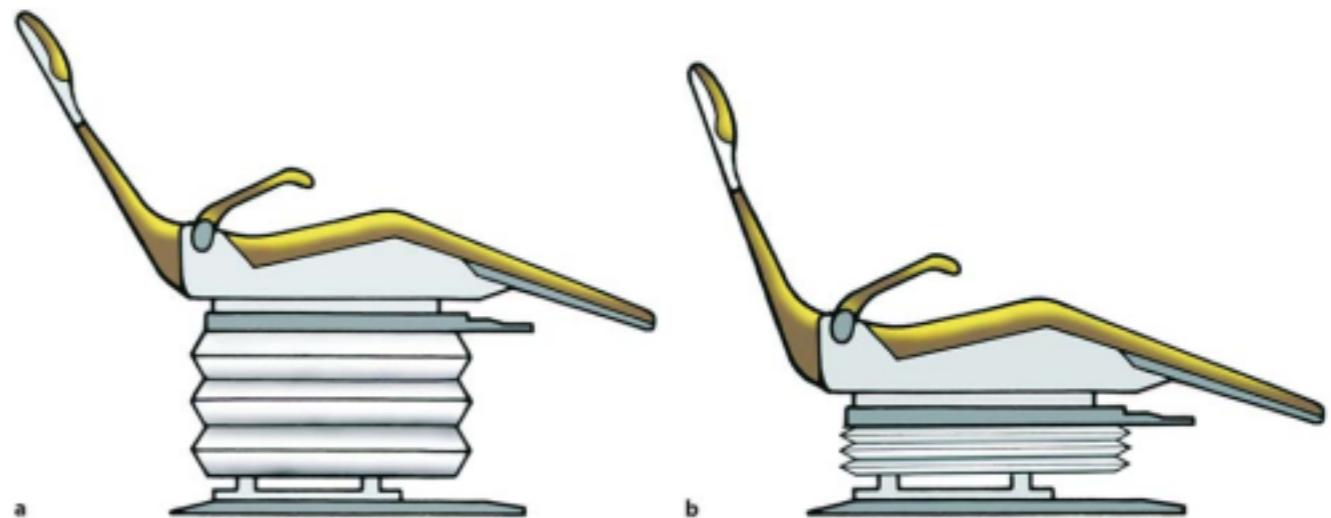


Fig. 5.1 a,b. Position of dental chair during extraction. a Maxilla: angle between dental chair and the horizontal (floor) is 120°. b Mandible: angle between dental chair and the horizontal (floor) is 110°

So the instruments work

1. Prepare Patient

~~Medically safe~~

~~Psychologically capable~~

Position

Anesthesia

Stabilize jaw

Lighting

Visualization/Access

Non-moving human

1. Prepare Patient

~~Medically safe~~

~~Psychologically capable~~

~~Position~~

Anesthesia

Stabilize jaw

Lighting

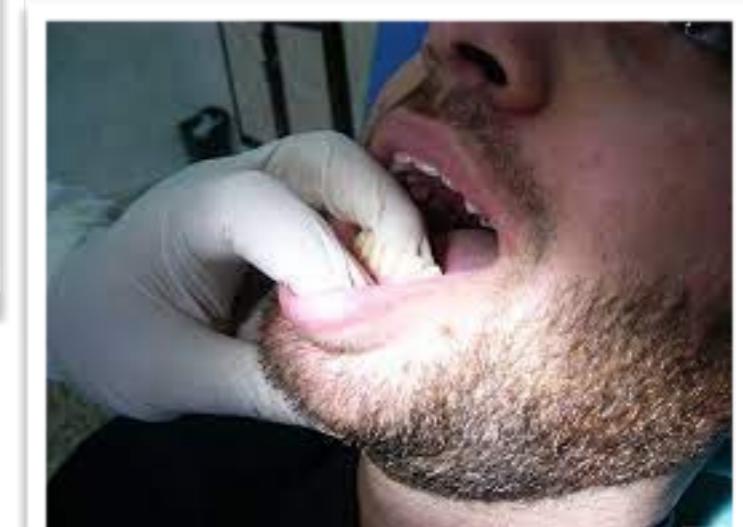
Visualization/Access

Non-moving human

Check before you start.
Dont forget the lingual.
When all else fails, find the shortest route to the apex.

1. Prepare Patient

~~Medically safe~~
~~Psychologically capable~~
Position
Anesthesia
Stabilize jaw
Lighting
Visualization/Access
Non-moving human



"when you bite down it stabilizes your lower jaw, which will make your jaw joints much happier tomorrow"

1. Prepare Patient

~~Medically safe~~

~~Psychologically capable~~

Position

Anesthesia

Stabilize jaw

Lighting

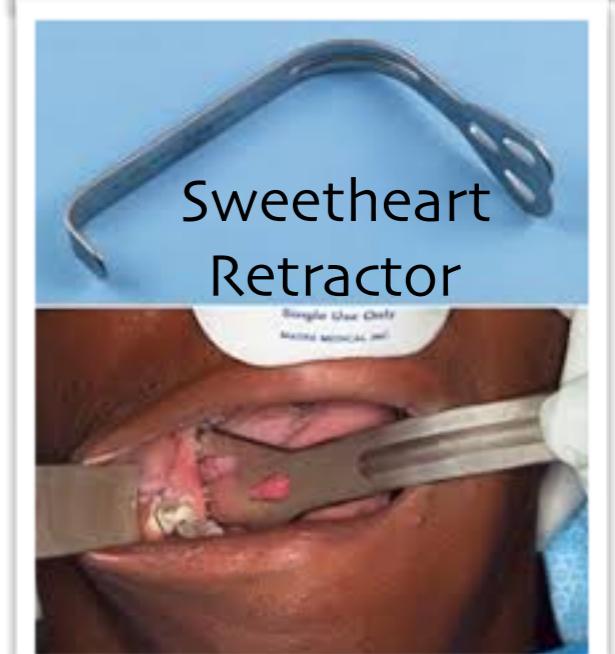
Visualization/Access

Non-moving human

1. Prepare Patient

~~Medically safe~~
~~Psychologically capable~~
Position
Anesthesia
Stabilize jaw
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Non-moving human

Retractors designed for comfort and improved visualization



Minnesota Retractor

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7. Wound management/suture

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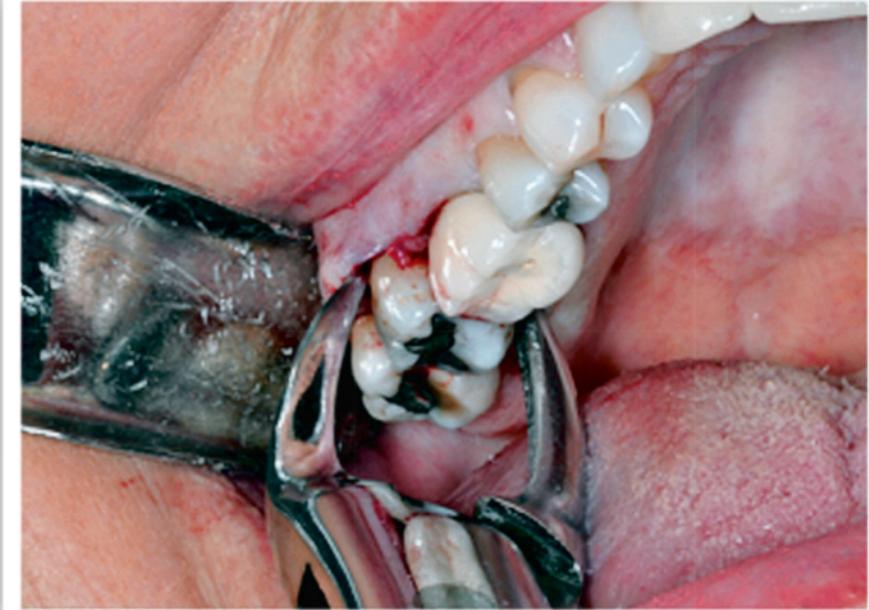
Extract
The
Tooth

Extract the Tooth (routinely)

If a tooth can be removed simply, without breaking, then the process of removal is the same for every tooth in the mouth.

1. Separate soft tissue from tooth to avoid soft tissue from tearing.
2. Separate tooth from bone by expanding bone.
3. Remove tooth .

Extract the Tooth (routinely)



1. Separate soft tissue from tooth to avoid soft tissue from

2. Separate tooth from bone by expanding bone.

3. Remove tooth .



Periosteal
Elevator



Elevators
or Luxators



Forceps

Extract the Tooth (routinely)



1. Separate soft tissue from tooth to avoid soft tissue from tearing.

Held like a pen
Relieve gingival cuff
More important in areas with deeper pockets
Don't take forever. I get bored watching you.

Extract the Tooth (routinely)



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Relieve gingival cuff
More important in areas with deeper pockets
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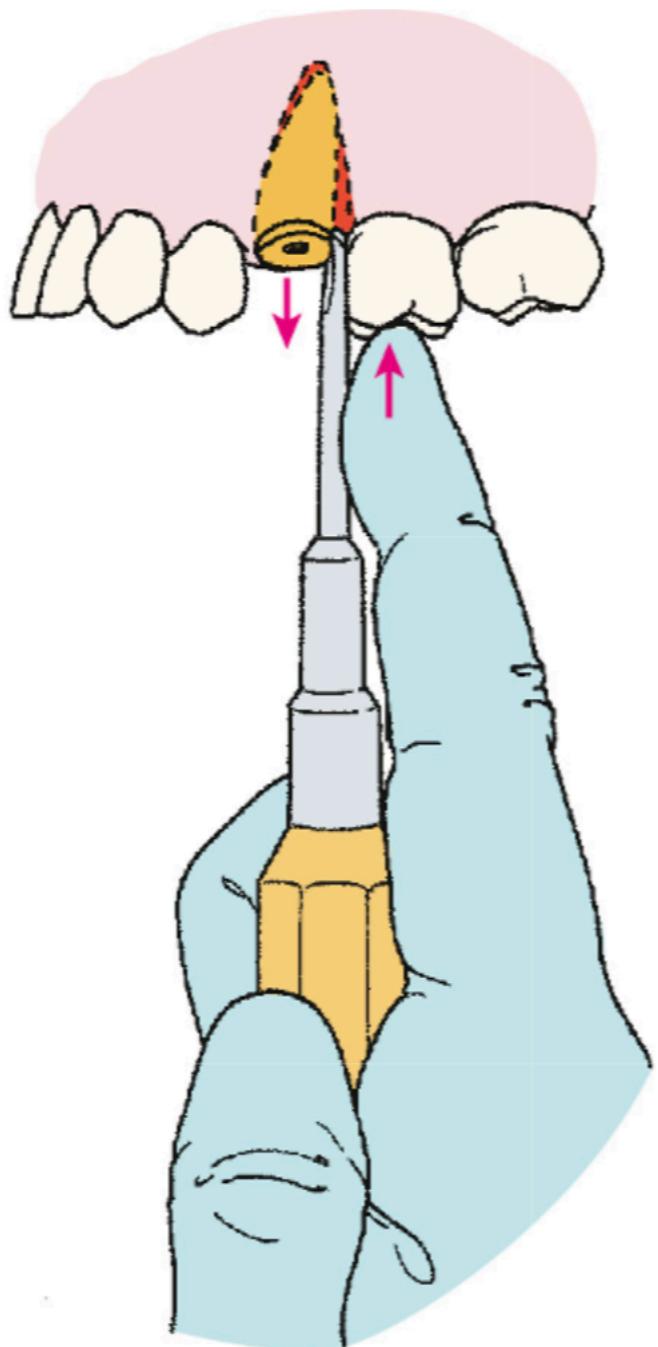
Extract the Tooth (routinely)



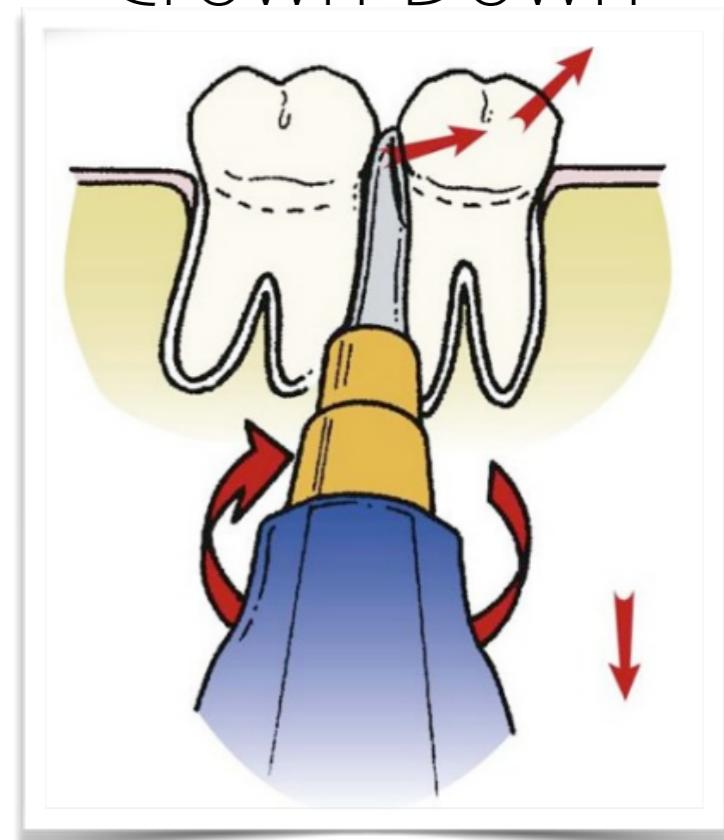
2. Separate tooth from bone by
expanding bone.

Elevate.
Luxate.
Take up space.

Extract the Tooth (routinely)



Crown Down



2. Separate tooth from bone by
expanding bone.

Elevate.

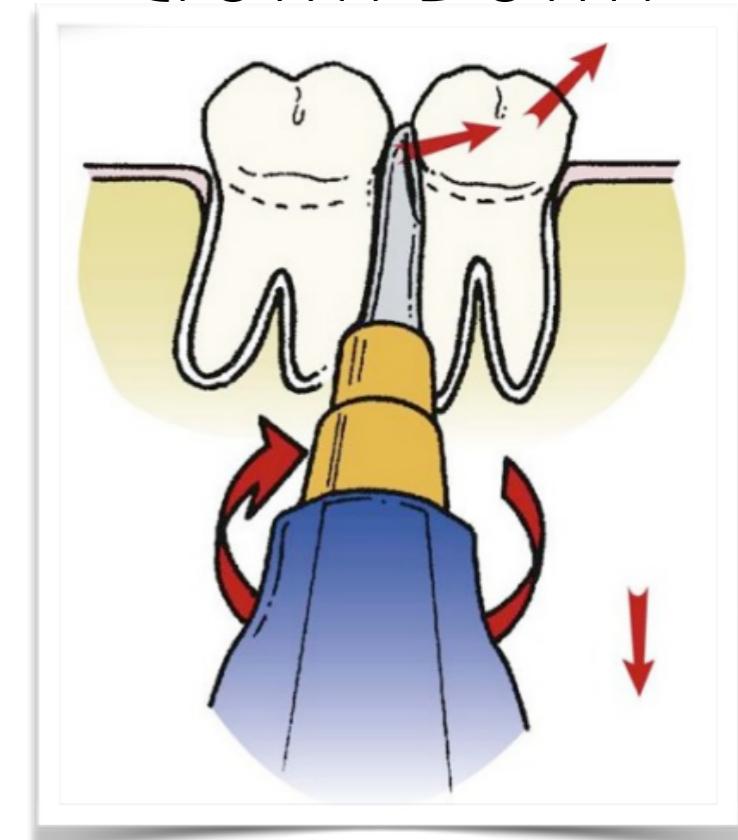
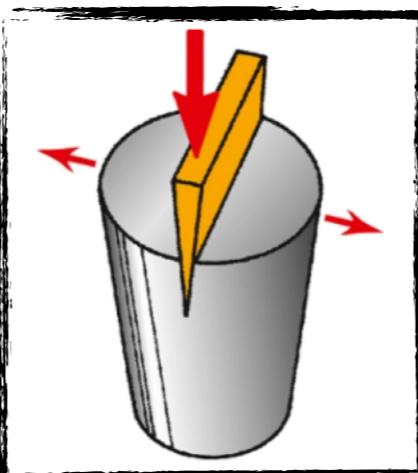
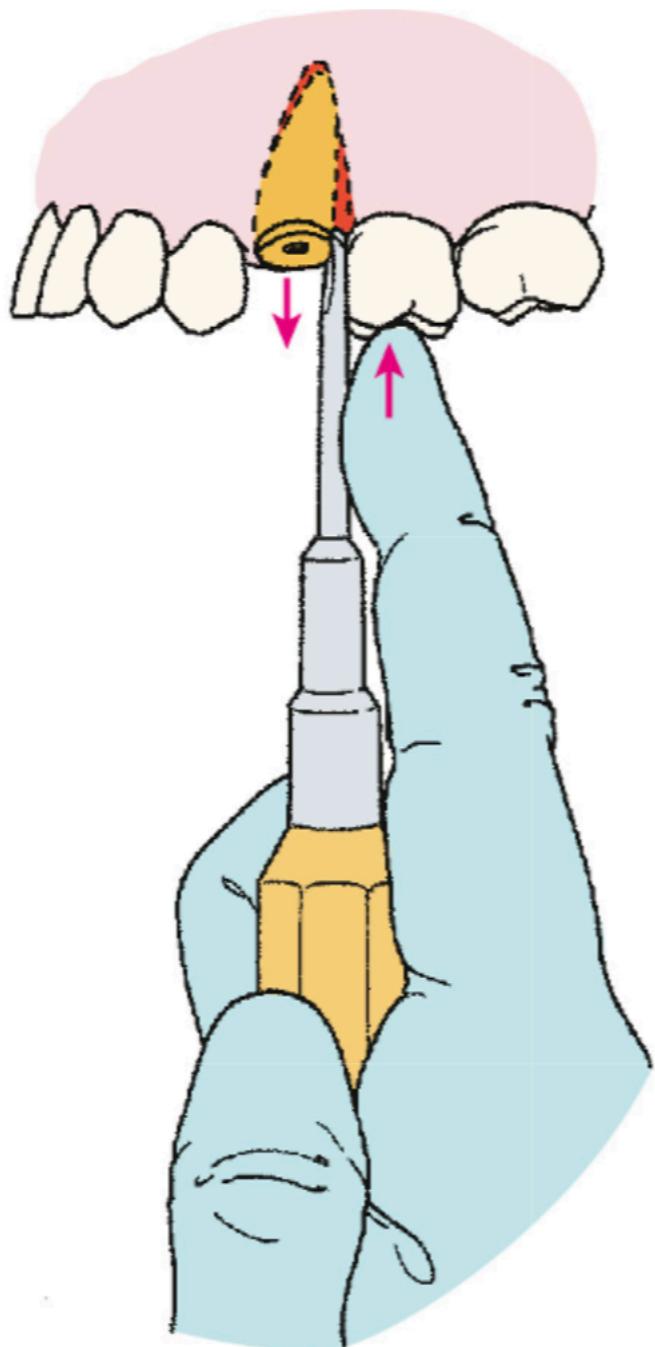
Luxate.

Take up space.

Held correctly, increases precision.

Crown Down

Extract the Tooth (routinely)



The tooth doesn't change in size. In order to "loosen it" you have to create space around the tooth. This can be done by expanding the alveolus bone with elevation or by physically creating space with your elevator.

Working end of elevator typically placed on mesial of tooth to be extracted or directly in PDL

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Extract
The
Tooth

Extract the Tooth (routinely)



3. Remove tooth .



Forceps

Extract the Tooth (routinely)



3. Remove tooth .

Type of forcep and movement used, depends on shape of tooth in surrounding bone.

1. Single rooted tooth
2. Maxillary molar
3. Mandibular molar

Extract the Tooth (routinely)

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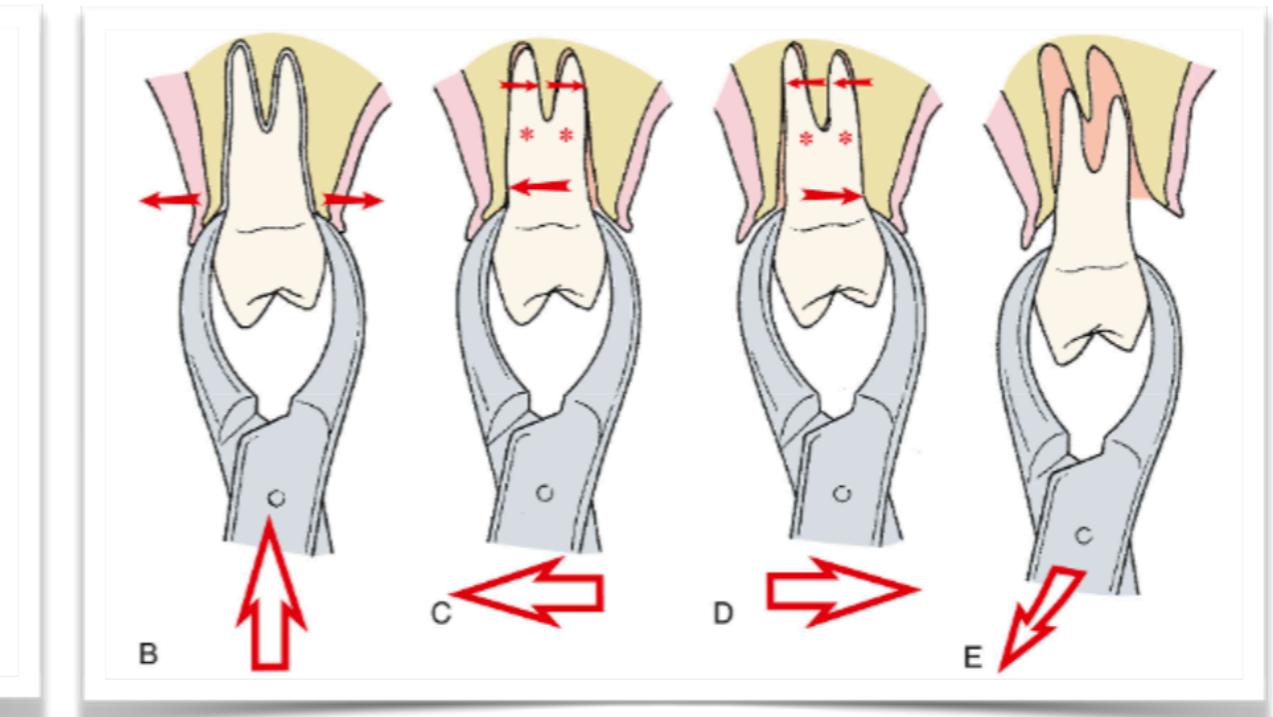
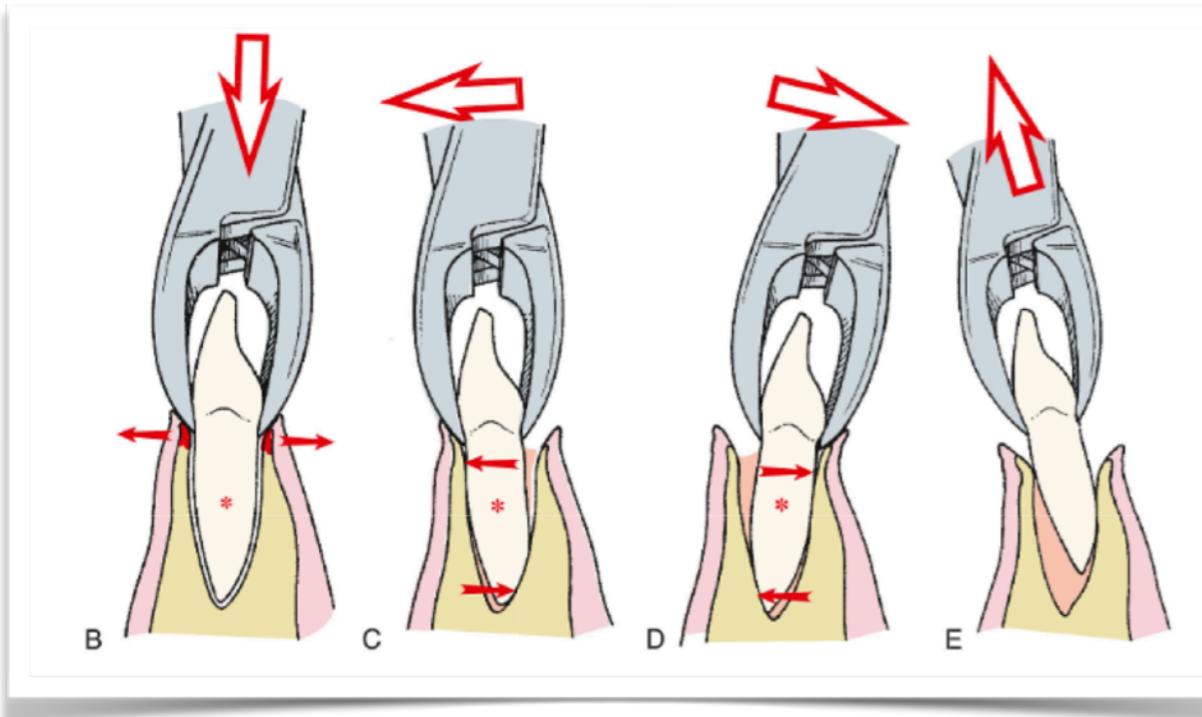
Avoid fracturing tooth or buccal bone

Extract the Tooth (routinely)

Movement options:

1. Rotation (with apical force)
2. Buccal - Lingual (expands bone)
3. Superior - Inferior "pumping"

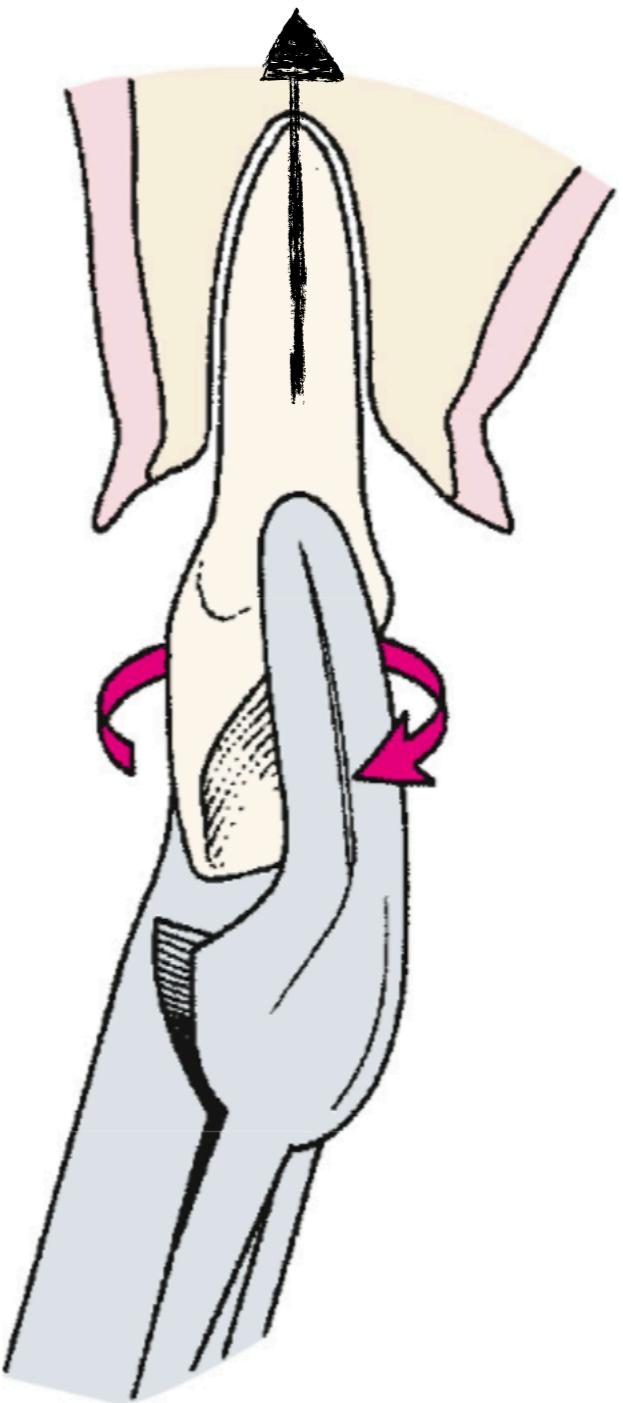
ALL in combination
with apical pressure



Extract the Tooth (routinely)

Movement options:

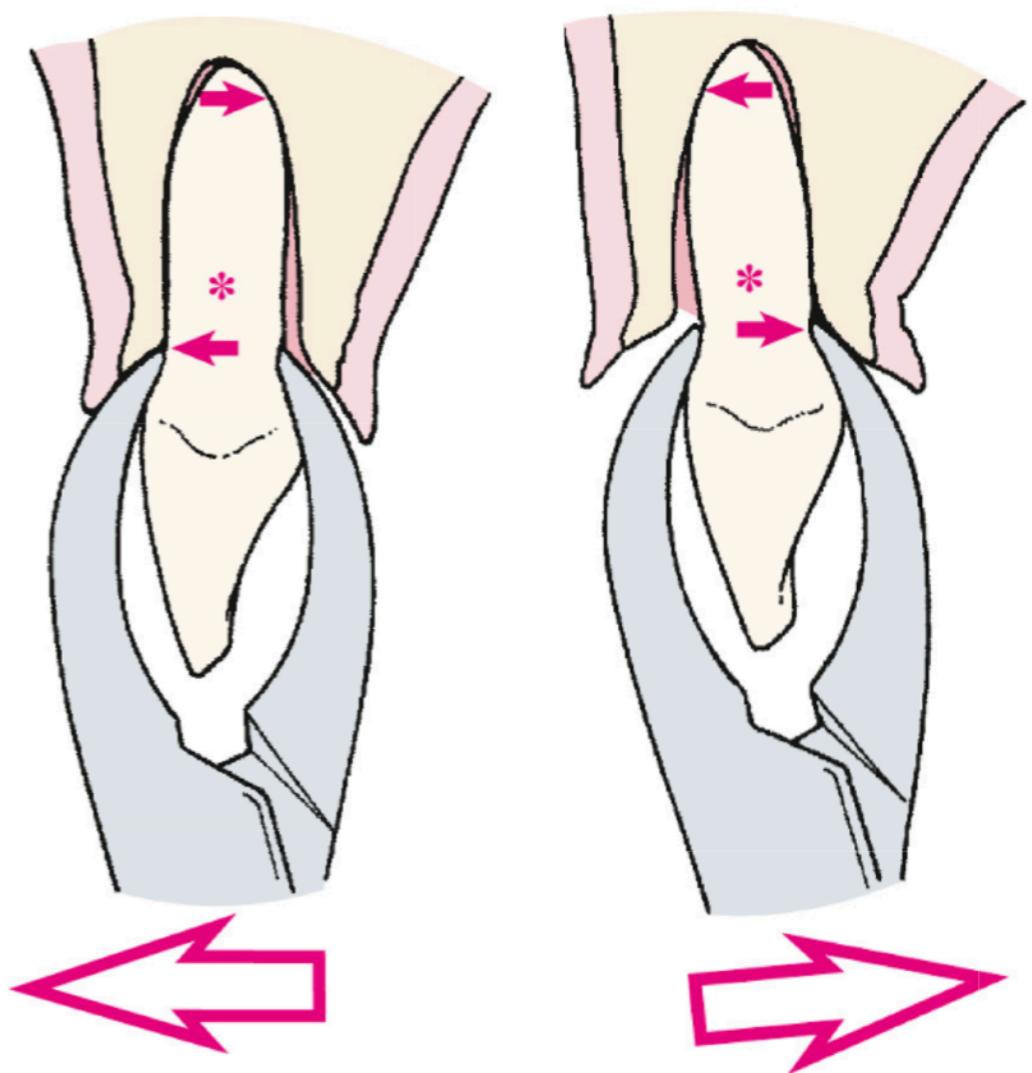
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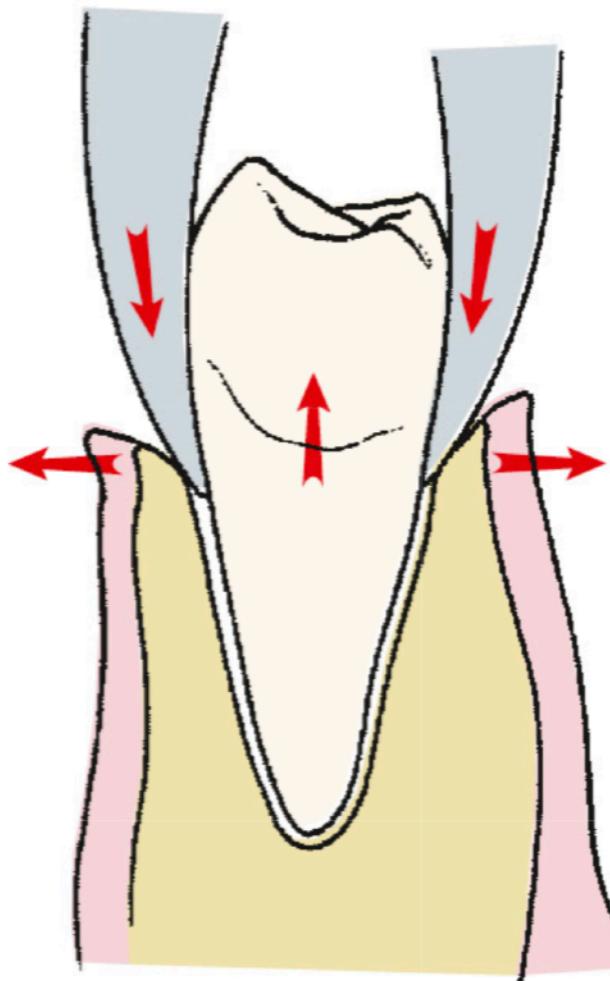
Extract the Tooth (routinely)

Movement options:

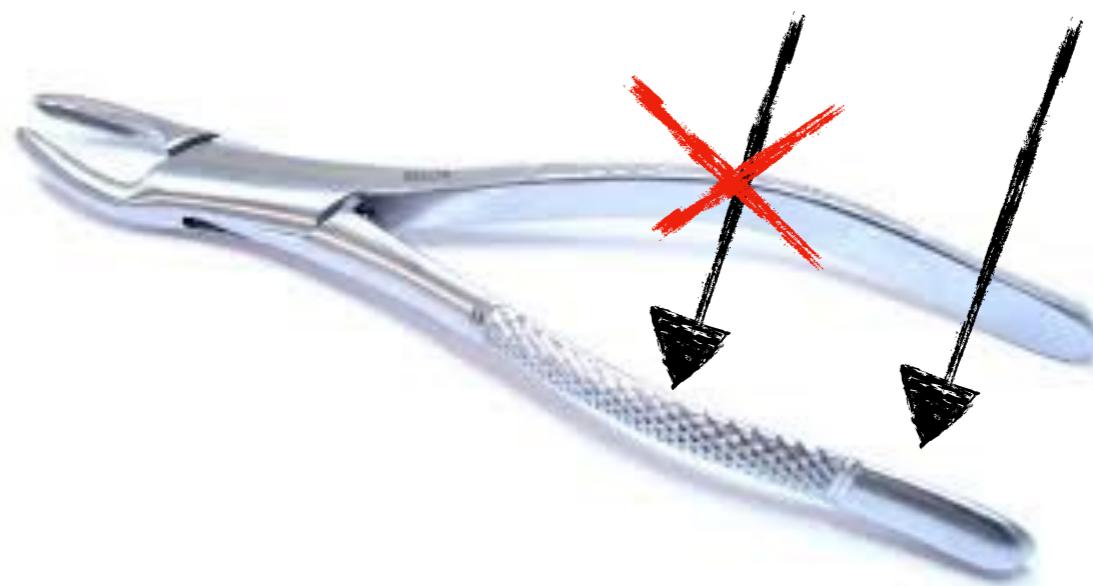
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Extract the Tooth (routinely)



Greatest leverage when hand is further away

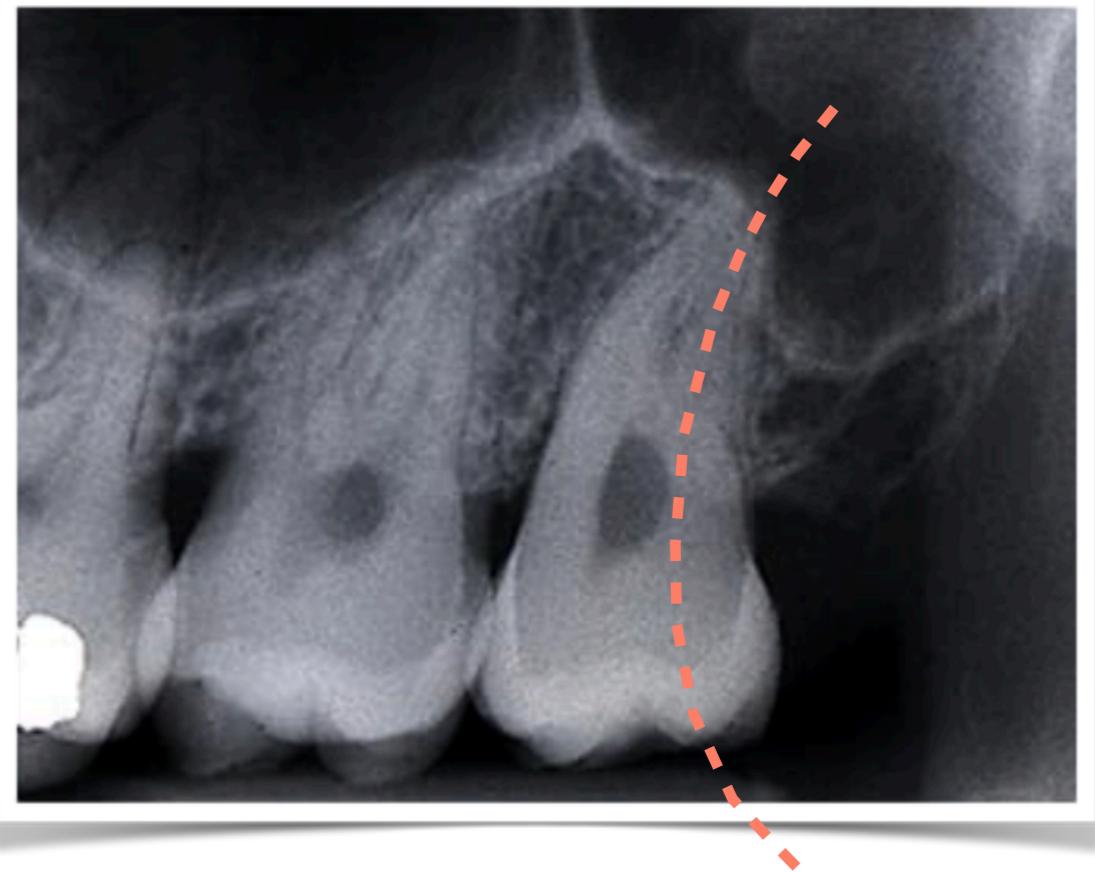
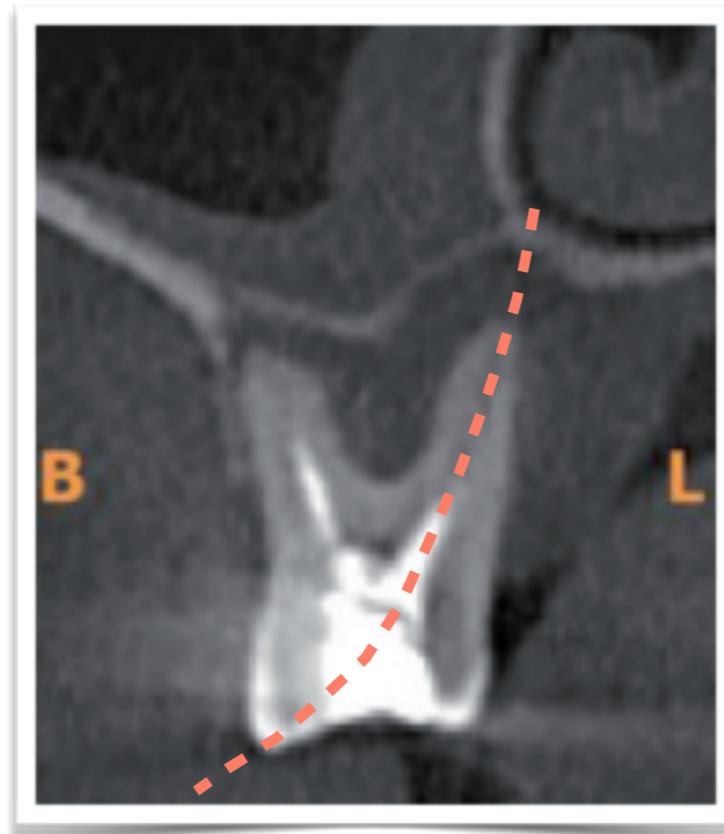


Beaks of forceps placed as apical as possible

Extract the Tooth (routinely)

How teeth tend to deliver:

- Follow path of roots and thickness of bone
- Usually buccal and distal



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Extract
The
Tooth

Scrapped
the surface

Decontaminate/Debride Extraction Site

Why?

Decontaminate/Debride Extraction Site

1. Avoid infection
2. Avoid pain

Make sure what you're doing has a point.

Why?

Decontaminate/Debride Extraction Site

What needs to be removed?

1. Avoid infection
2. Avoid pain

Tooth
Bone
Restorative materials
Calculus
Bacteria
Infected tissue - granulation tissue
Sharp surfaces

Decontaminate/Debride Extraction Site

Instruments



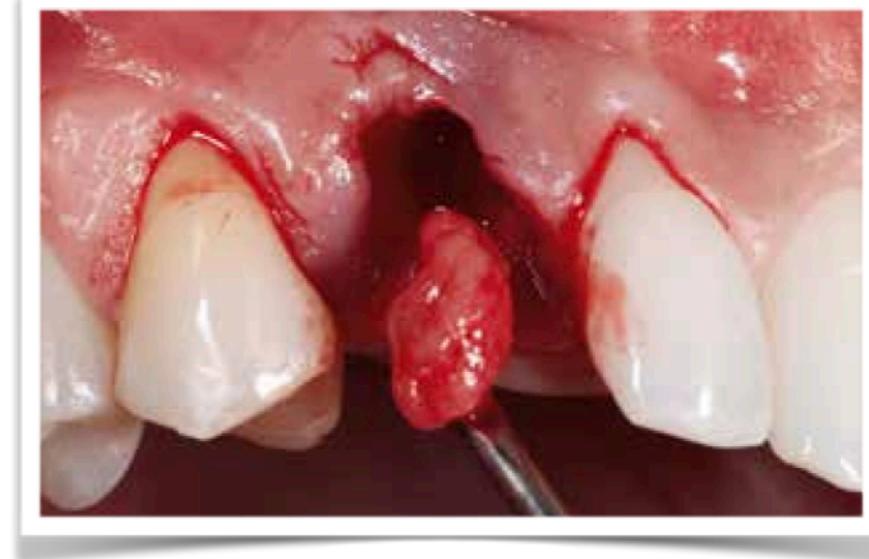
Rongeur



Bone File



Currette



Tooth
Bone

Calculus

Restorative materials

Bacteria

Granulation tissue

Sharp surfaces

Decontaminate/Debride Extraction Site

Instruments



Rongeur



Bone File



Currette

Irrigation



Saline



Monojet Syringe

Tooth
Bone
Calculus

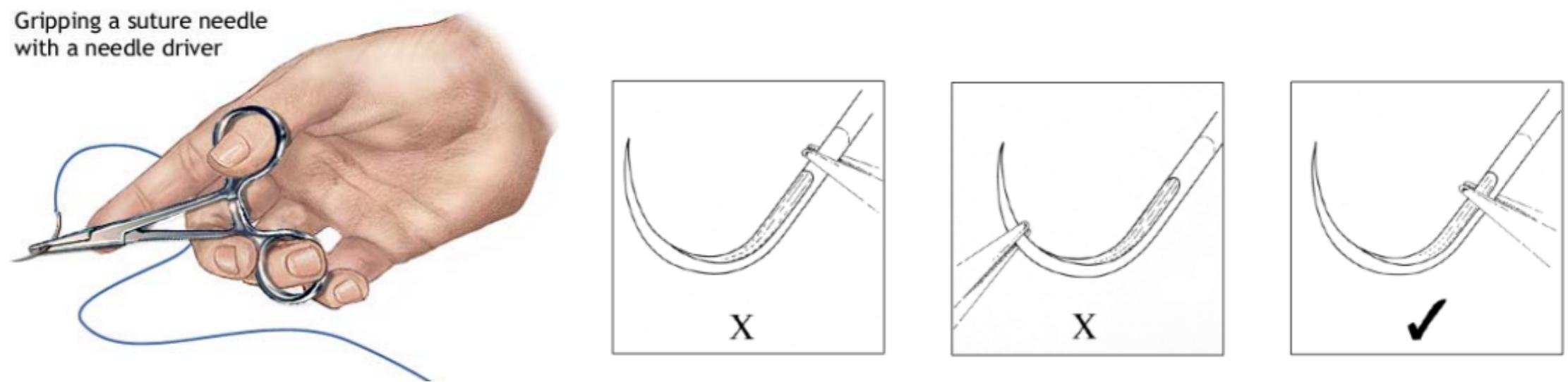
Restorative materials
Bacteria
Granulation tissue
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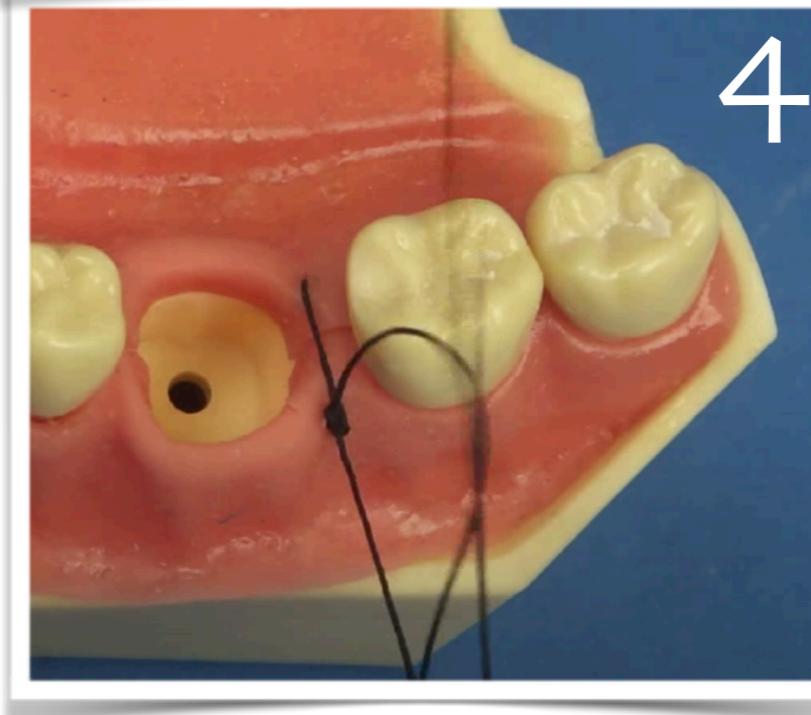
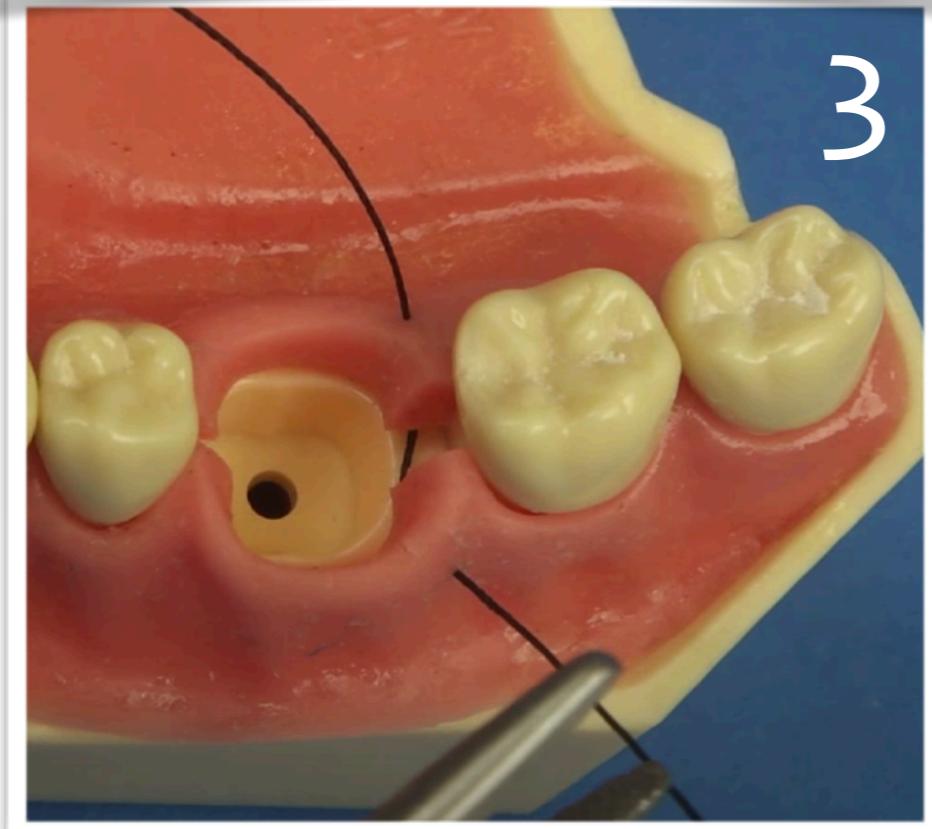
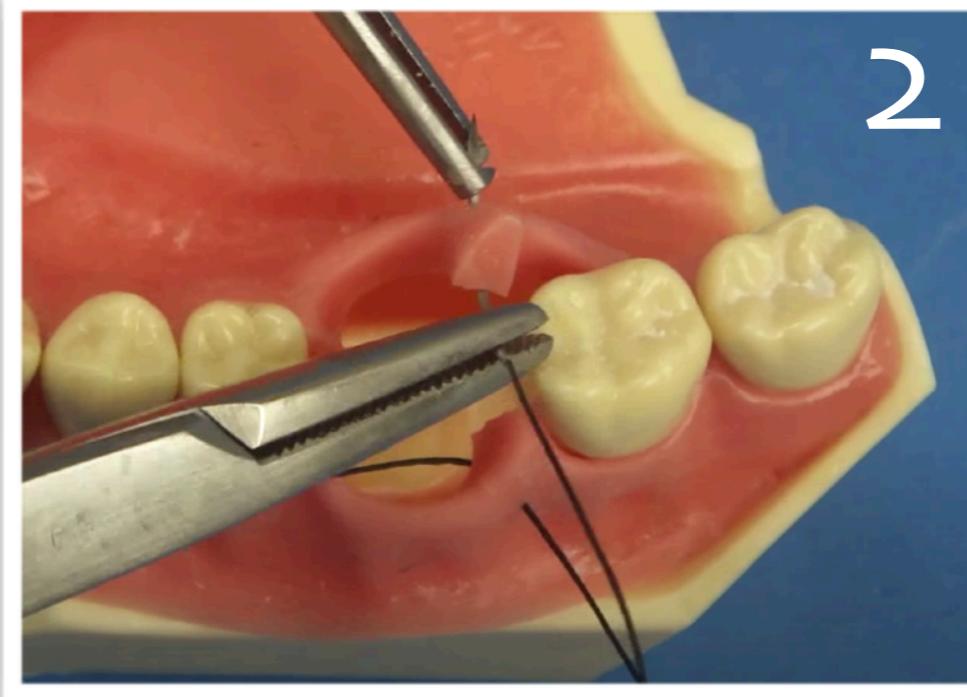
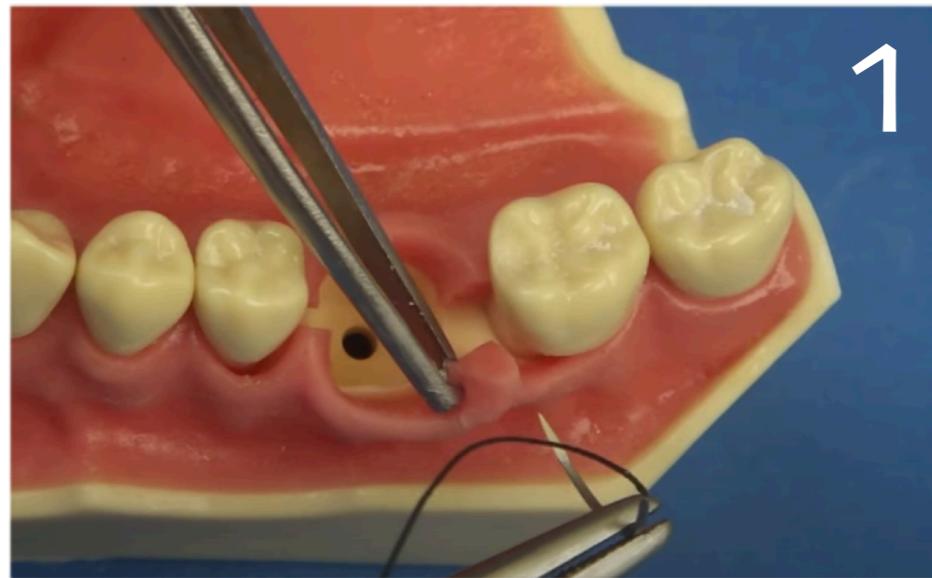
Wound Management/Suture

1. Manage soft tissue to maximize healing



Put soft tissue back where it came from.
ONLY suture if soft tissue cut or torn.

Wound Management/Suture



Wound Management - Hemostasis



Moist gauze

IN defect, forcing pressure with occlusion

Check before patient leaves to confirm lack of "active bleeding"

Hemostasis achieved!

Conclusions

1. Have a reason for using every instrument you use, in the way you're using it.
2. Don't do the same thing forever = insanity.
3. If you're struggling, adjust light and chair, ask for a different instrument.