

Operation technique of tooth removal I.

Indications and contraindications of tooth removal. Biomechanical basis and surgical technique of tooth extraction.

Tooth removal – a mutilating surgical procedure with soft tissue and bone injury

- Indication
- Operative plan
- Surgical intervention
- Postoperative management

Always
the least serious
intervention is to be
carried out, that is still likely to
provide the best results.

Teeth can be extracted:

- Affected, painful
- Affected, but painless,
and sometimes
- Healthy.

Decision on tooth removal

INDICATIONS



absolute > relative I. > relative II. > relative III.

CONTRAINDICATIONS

absolute > relative I. > relative II. > relative III.

INDICATIONS



CONTRAINDICATIONS

Rare, but usually stronger
than indications

Indications of tooth removal

Tooth removal requires individual indication account several factors

Factors:

General condition of the patient, other diseases, inflammation process, condition of the tooth and the parodontium, dental status, other features

Indications of tooth removal

'Absolute' indication:

- Serious, progressive dental inflammations:
 - Cellulitis
 - Odontogenic thrombophlebitis
 - Odontogenic sepsis

Indications of tooth removal

Relative I. indications:

- Acute or chronic odontogenic infections, focal diseases (if there are no other therapeutical possibilities)
- Parodontitis, irreversibly destroyed parodontium, highly mobile teeth
- Impossible to root canal treat or irreparably destroyed teeth
- Some cases of injuries of teeth or jaws

Indications of tooth removal

Relative II. indications:

- Unerupted teeth
- Connatal teeth
- Orthodontic indications (persisting-, supernumerary-, misshapen teeth)
- Incurable malposition
- Prosthetic indications

Indications of tooth removal

Relative III. indications:

Social circumstances

(for maintenance of tooth):

- Missing personal competency
- Missing instruments, equipments, materials
- Lack of time
- Financial question

Contraindications of tooth removal

„Absolute” contraindications

General contraindications of operations

Acute (cardiac, pulmonal, cerebral) vascular catastrophe e.g.. myocardial infarct, coronal thrombosis, stroke, shock

- Haemopoietic diseases (acute leukaemia, agranulocytosis)
- Irradiation of jaws

Contraindications of tooth removal

Relative I. contraindications:

- General bad state (cahexia, anaemia, ...)
- Increased susceptibility to infections (any hypo immunity, immunosuppressive therapy, corticosteroid therapy)
- Acute contagious diseases
- Acute infections of the oral cavity
- Coagulopathy, anticoagulant therapy (without consultation or pre-treatment)
- Bisphosphonate administration, high dosage

Contraindications of tooth removal

Relative II. contraindications:

Preserving the space

- Orthodontic &
- Prosthetic aspects

Contraindications of tooth removal

Relative III. contraindications:

- Prosthetic
- Esthetical
- Economical aspects

The steps of tooth removal

After the medical history, **the clinical examination, treatment planning** and anaesthesia:

1. Positioning of the patient and the dentist
2. Gingival separation
3. Protection of soft tissues
4. Application of forceps
5. Fixation of jaw
6. Removal of tooth
7. Wound care
8. Postoperative instructions

Clinical examination, treatment planning

Accurate examination of selected tooth

- Condition of the crown
- Periodontal condition, mobility
- X-ray exam
- State of neighbouring teeth

Decision of operative technique, operative plan:
extraction by forceps, elevator, dissection or
surgical removal

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Positioning of the patient and the dentist

- Setting the dental chair, the backrest
- Setting the headrest

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Gingival separation

- Balogh gingival separator
- Raspatory or chisel (narrow)
- Bein elevator
- Beak of forceps



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Protection of soft tissues

- By fingers or
- Possibly by mirror (on upper jaw)



Application of forceps

- Optimal forceps size – similar curvature of beak of forceps and the neck of tooth – contact on larger area
- Correct holding of forceps
- Grasping the neck of the tooth as apical as possible



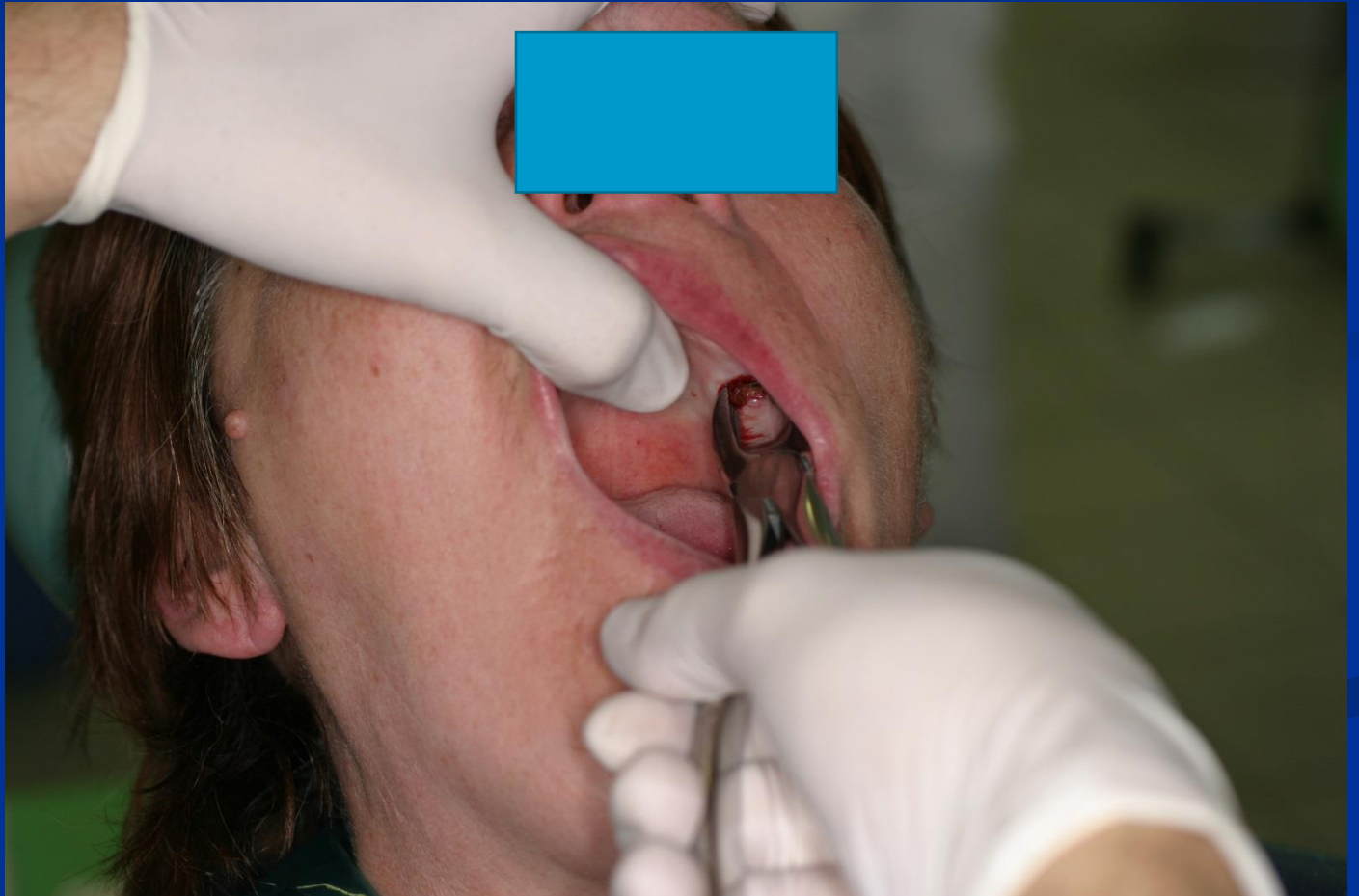
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Fixation of jaw

- Continuing the protection of soft tissues



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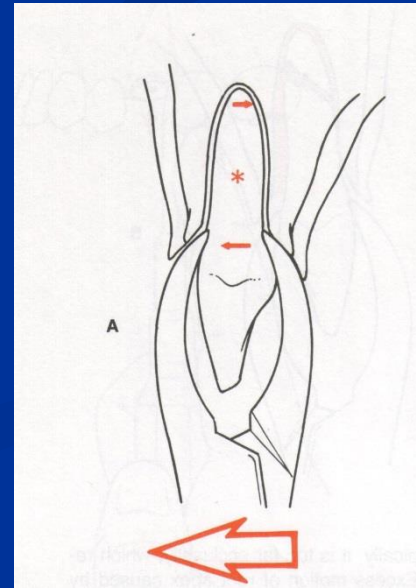
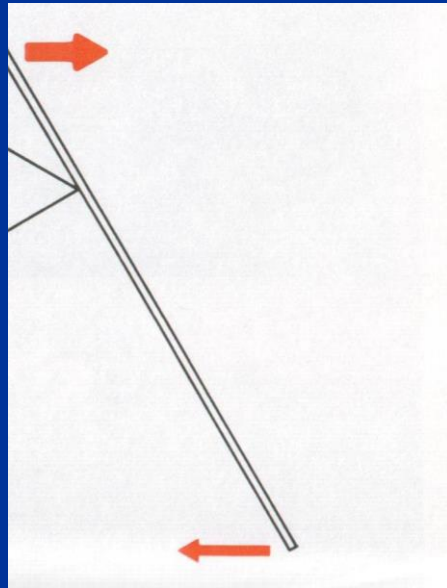
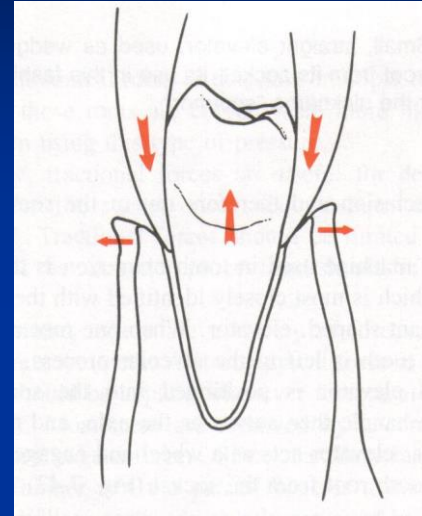
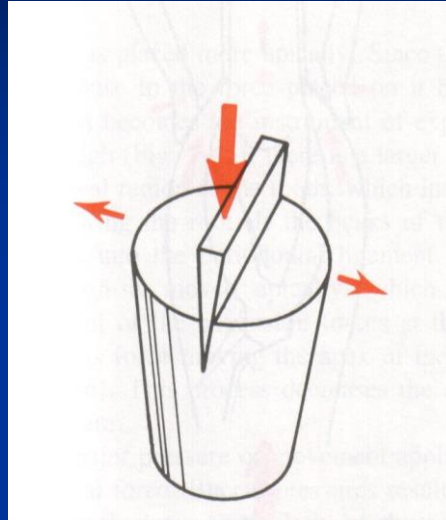
Removal of tooth

According to the type and anatomy of the extracted tooth:

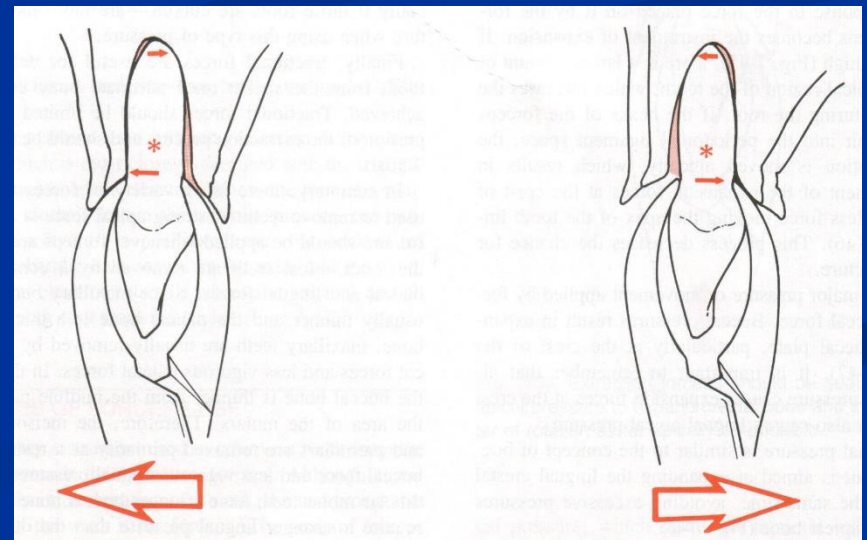
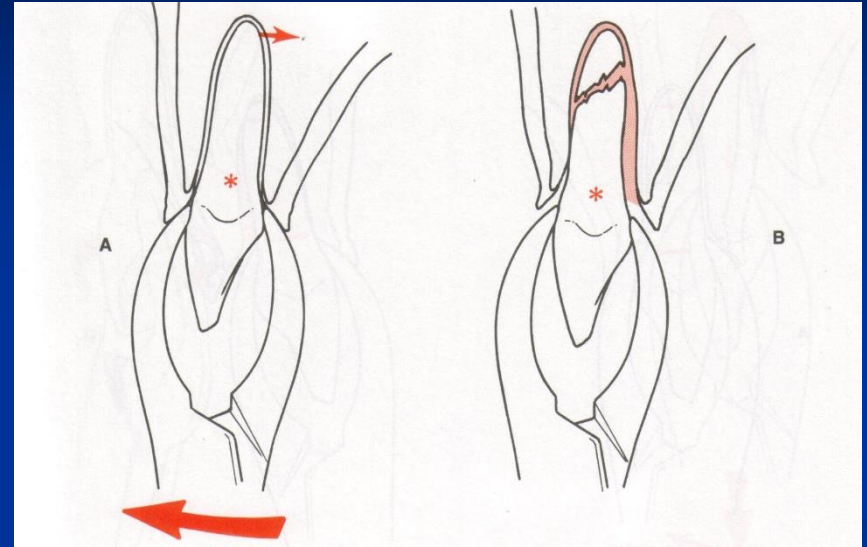
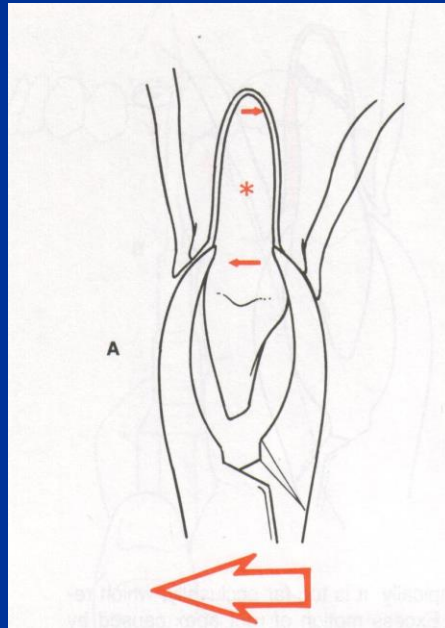
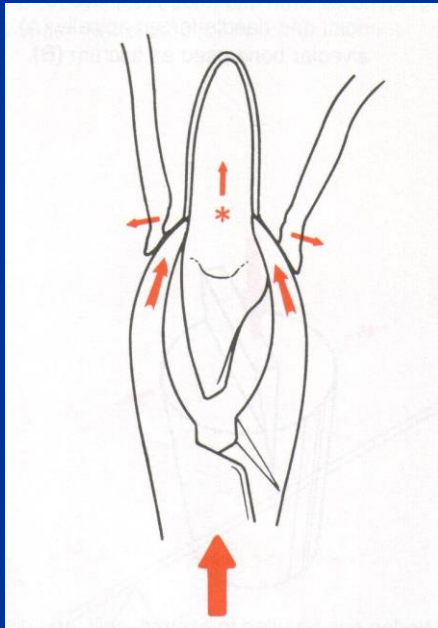
- Luxation (vestibular and oral direction)
- Rotation movement (around the axis of the root)
- Combination of different movements
- Extracting ('pulling') movement – only at last stage of removal

Removal of tooth

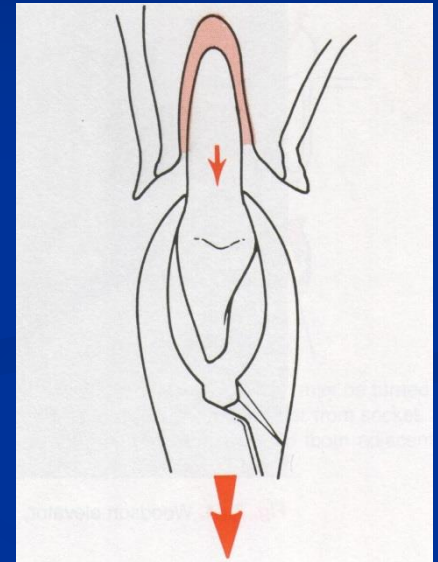
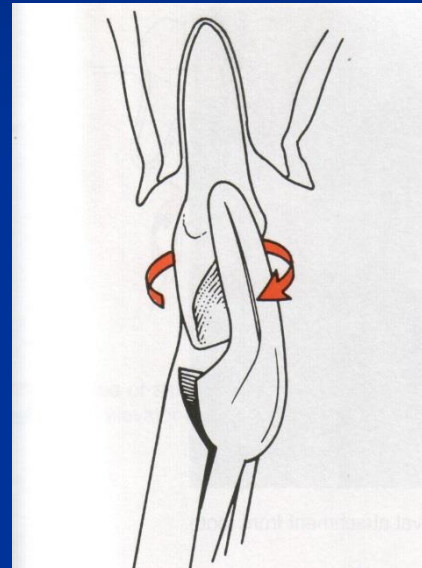
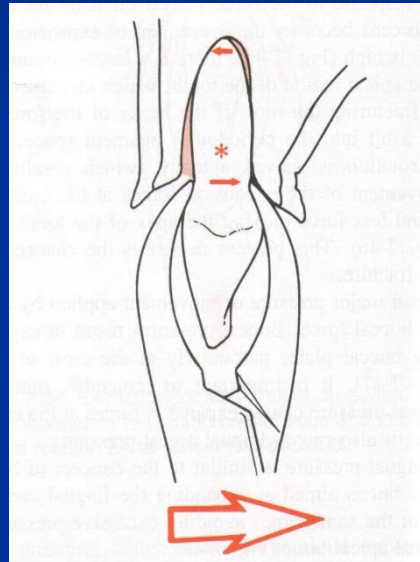
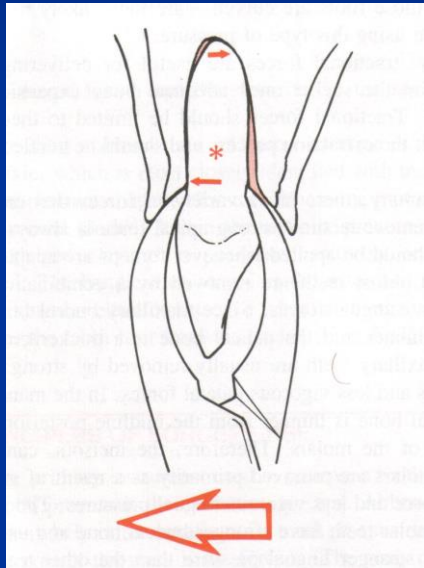
Biomechanical basis of tooth extraction.



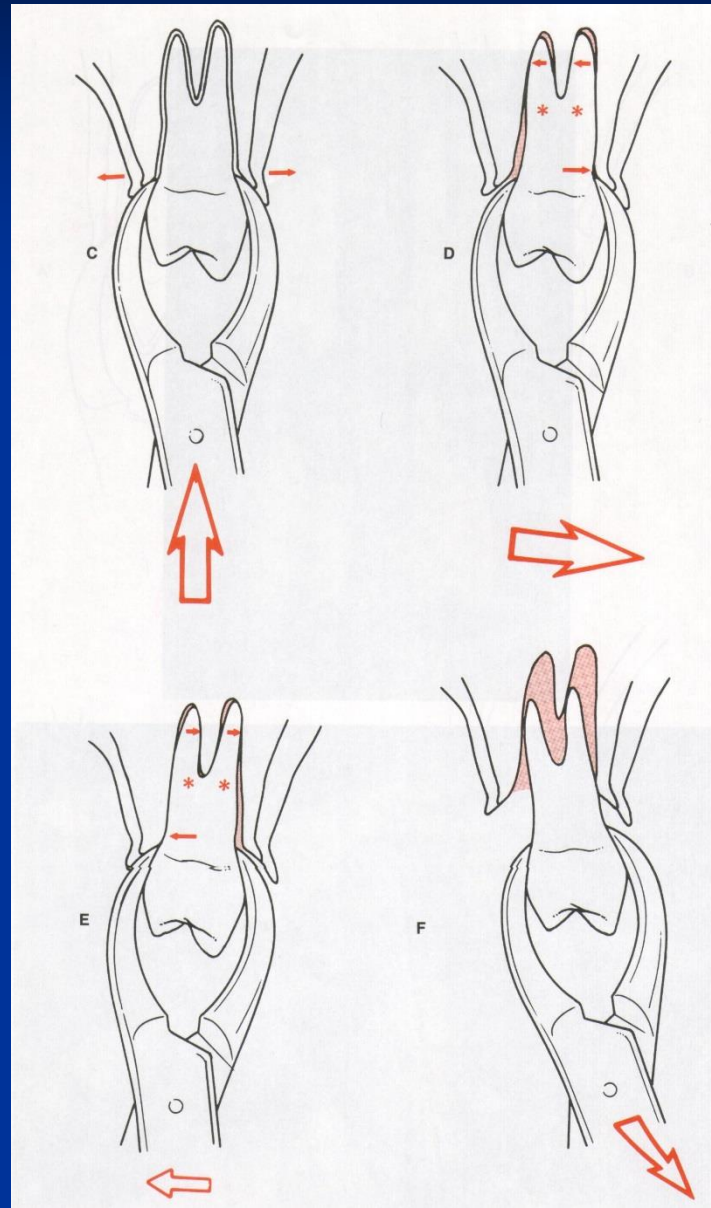
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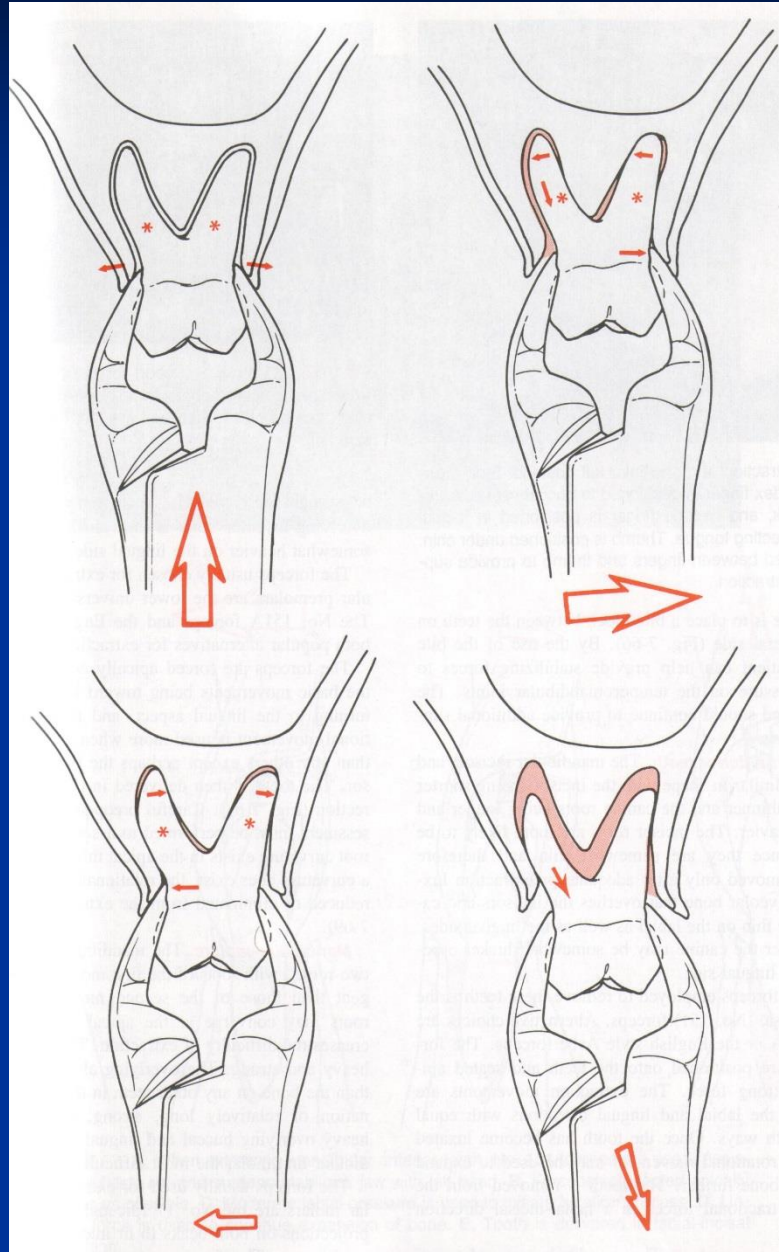
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Biomechanical basis of tooth extraction



Biomechanical basis of tooth extraction





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Wound care

- Control and cleaning of alveolar socket – broken bone and coronal fragments, pathological soft tissues
- Looking for possible complications (e. g. injury of maxillary sinus)
- Compressing of alveolar socket
- Control of bleeding
- Biting on a gauze tampon?





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Postoperative instructions

- Not to suck the wound, not to rinse and spit
- Eating, drinking, smoking
- Oral hygiene
- Painkillers (if necessary)
- Control

