How to prepare orthodontics patient for the surgical treatment
Take a history
Examine the patient
Take records

Personal information
Chief concerns
Medical, dental and TMJ histories
Growth assessment

TMJ examination
Front facial
Profile facial
Dental examination

Quality of records
Natural head position
Photographs
Radiographs
Mounted models
How to take the records

- Natural head position
- Seated condils
  CR-CO
- Relexet lip postur
Postural Horizontal

Class I Profile A

Head Up

Class III Profile B

Head Down

Class II Profile C
Photos produced electronically using the Dolphin DIGITAL Imaging System.
If the patient shows an anterior skid, with a corresponding anterior condyle position, it is beneficial to continue with headgear or Class II mechanics to allow the condyles to seat in the fossae.
A waxbite is required to accurately record the A/P position of the mandible, with condyles centered. In this way, accurate treatment planning will be possible, based on records taken with the mandible at the CR position.
Mandibular displacements are frequently found in Class III malocclusions. They need to be identified and accurately recorded.
If the patient shows a significantly posterior condylar position, further treatment should be provided, to achieve a more centered position.
Črna je CO  
Povprečje: Distalno (x): 0.1  
Rdeča je CR  
Navpično (y): -0.1
Mounted models may be used to re-evaluate mandibular position and check functional movements as the finishing stage commences.
Open bite
Relaxed lip
A

Closed Lip
B
The clinical examination

- Profil view
- Frontal view
- The joints
Mid brow
Subnasale
Menton

Middle third

Lower third
Photos produced electronically using the Dolphin DIGITAL Imaging System.
A change in the length of the mandible
A change in the A/P position of the mandible, due to changes in the position of the condyles in the fossae
Idiopathic condylar resorption is fortunately seldom seen, and is difficult to manage. It can result in unfavorable downward and backward movement of ‘B’ point during or after orthodontic treatment.
Idiopathic condylar resorption occurs mainly in females. It is not well understood, and fortunately is rare. It can be unilateral. It causes a reduction in the length of the mandible, and this in turn results in an increase in overjet and anterior open bite.
Facial treatment plan

• Soft Tissue Cefalometric Analysis STCA

• Cefalometric Treatment Planing
Only seven measurements from the STCA are included here. The upper incisor torque is measured relative to the maxillary occlusal plane and the lower incisor torque is measured relative to the mandibular occlusal plane. In this diagram, the following are projected to the true vertical line (TVL): Soft tissue ‘A’ point, upper lip anterior, lower lip anterior, soft tissue ‘B’ point, and soft tissue pogonion. Black numbers are within 1 SD to normal.
During the final stages of treatment the Arnett analysis may be used to evaluate facial profile and dentoskeletal structures.

<table>
<thead>
<tr>
<th></th>
<th>female</th>
<th>male</th>
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<tbody>
<tr>
<td>MxOP</td>
<td>95.6 ± 1.8</td>
<td>95.0 ± 1.4</td>
</tr>
<tr>
<td>Mx1 to MxOP</td>
<td>56.8 ± 2.5</td>
<td>57.8 ± 3.0</td>
</tr>
<tr>
<td>Md1 to MdOP</td>
<td>64.3 ± 3.2</td>
<td>64.0 ± 4.0</td>
</tr>
<tr>
<td>overjet</td>
<td>3.2 ± 0.4</td>
<td>3.2 ± 0.6</td>
</tr>
<tr>
<td>overbite</td>
<td>3.2 ± 0.7</td>
<td>3.2 ± 0.7</td>
</tr>
</tbody>
</table>

TVL
The Arnett analysis relates upper incisor position to a true vertical line (TVL) and requires different ideals for males and females.
Conventional orthodontic analysis does not provide clear goals for vertical upper incisor position. In contrast, the Arnett analysis quantifies incisor overbite and incisor exposure, with lips at rest.
Upper incisors to maxillary occlusal plane

Female 57°
Male 58°
Female and male 64°

Lower incisors to mandibular occlusal plane
Upper lip thickness

Inside of upper lip

Female 13 mm
Male 15 mm

Upper lip anterior

Female 4 mm
Male 3 mm

Upper lip projection to TVL

Upper lip angle

Female 12°
Male 8°

Subnasale
1.5 mm overbite

3 mm overjet
Maxillary occlusal plane

93° to 97°

Soft tissue pogonion

Female: -2.6 mm
Male: -3.5 mm

TVL
'Chin height'
Male 56 mm
Female 49 mm
3D Diagnosing

- Patient with disturbance of breathing
Uroš Mezeg dr. dent. med
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- FACIAL AND DENTAL PLANNING FOR ORTHODONTISTS AND ORAL SURGEONS; G. William Arnett, Richard P. McLaughlin
- SYSTEMIZED ORTHODONTIC TREATMENT MECHANICS; Richard P. McLaughlin, John C. Bennett, Hugo J. Trevisi

- G. W. Arnett:
  - PROGRESSIVE MANDIBULAR RETRUSION part I and II
  - FACIAL KEYS part I and II
  - STCA DIAGNOSIS AND TREATMENT
  - A REDEFINITION OF BSO ADVANCEMENT RELAPSE
  - COMPARISON OF SKELETAL AND DENTAL NORMAL JOINTS
  - COMPARISON OF SKELETAL AND DENTAL MORPHOLOGY BILATERAL DJD
  - COMPARISON OF SKELETAL AND DENTAL UNILATERAL DISK DISPLACEMENT
  - FACIAL ANALYSIS