

ABO DISCREPANCY INDEX INSTRUCTIONS

Updated 8/3/2015

Occlusion for plaster models is determined by placing the separated, properly trimmed study casts (Mx/Mn) on a flat surface and then bringing them together into maximum intercuspation. All measurements must be made from this position. For digital models, measurements will be made from a standard 3D orientation that is described in [ABO Digital Model Requirements](#).

OVERJET: Overjet is a measurement between two antagonistic anterior teeth (lateral or central incisors) comprising the greatest overjet and is measured from the facial surface of the most lingual mandibular tooth to the middle of the incisal edge of the more facially positioned maxillary tooth.

- For ≥ 0 to < 1 mm, score 1 pt (edge-to-edge)
- For ≥ 1 to ≤ 3 mm, score 0 pts
- For > 3 to ≤ 5 mm, score 2 pts
- For > 5 to ≤ 7 mm, score 3 pts
- For > 7 to ≤ 9 mm, score 4 pts
- For > 9 mm, score 5 pts.
- In addition, if there are anterior teeth with negative overjet (canine to canine in anterior crossbite > 0 mm), measure from the facial surface of the maxillary tooth to the middle of the incisal edge of the mandibular tooth.
 - Round any fractional remainder to the next full mm,
 - Then score 1 pt per mm per anterior tooth in crossbite.

OVERBITE: Overbite is a measurement between two antagonistic anterior teeth (lateral or central incisors) comprising the greatest overbite.

- For > 0 to ≤ 3 mm, score 0 pts
- For > 3 to ≤ 5 mm, score 2 pts
- For > 5 to ≤ 7 mm, score 3 pts
- If any of the lower incisors are impinging on the palatal tissues (≤ 0.5 mm) or there is 100% overbite (a complete vertical overlap of antagonistic incisors), score 5 pts.

ANTERIOR OPEN BITE: For each anterior tooth (canine to canine) in an open bite relationship with an opposing tooth, measure from the incisal edge of the Mx tooth to the incisal edge of the Mn tooth.

- For each anterior tooth in edge-to-edge relationship (0 mm), score 1 pt per tooth.
- For each anterior tooth in open bite (> 0 mm), round any fractional remainder to the next full mm,
- Then add 1 pt per mm per tooth in open bite.
- No points are scored for any anterior tooth that is blocked-out of the arch due to space deficiency or not fully erupted.

LATERAL OPEN BITE: For each maxillary posterior tooth (from the 1st premolar to 2nd molar) in an open bite relationship ≥ 0.5 mm from its opposing tooth, measure cusp to cusp.

- Round any fractional remainder to next full mm
- Then score 2 pts per mm of open bite for each tooth.
- No points are scored for any tooth that is blocked-out of the arch due to space deficiency or not fully erupted.

CROWDING: Measure the most crowded arch (only one arch) from the mesial contact point of the right first molar to the mesial contact point of the left first molar. If there are conditions such as missing, fractured or decayed teeth, then measure crowding consistent with your treatment objectives and be prepared to defend the score at your oral examination.

- For ≥ 0 to ≤ 1 mm, score 0 pts
- For > 1 to ≤ 3 mm, score 1 pt
- For > 3 to ≤ 5 mm, score 2 pts
- For > 5 to ≤ 7 mm, score 4 pts
- For > 7 mm, score 7 pts.

OCCUSAL RELATIONSHIP: Models must exhibit the patient's maximum intercuspation. The Angle molar classification is used.

- If the mesiobuccal cusp of the maxillary first molar occludes with the buccal groove of the mandibular first molar or anywhere between the buccal groove and the mesiobuccal or distobuccal cusps (Class I to End On) - Score 0 pts.
- If the mesiobuccal cusp of the maxillary first molar occludes with the mesiobuccal (Class II end-to-end) or distobuccal (Class III end-to-end) cusps of the mandibular first molar – Score 2 pts per side.
- If the relationship is a full Class II or III - Score 4 pts per side.
- If the relationship is beyond Class II or III, measure the additional distance, round any fractional remainder to next full mm – Score 4 pts plus 1 addl. pt per mm per side.

LINGUAL POSTERIOR CROSSBITE: For each maxillary posterior tooth (from the 1st premolar to the 2nd molar) where the maxillary buccal cusp is > 0 mm lingual to the buccal cusp tip of the opposing tooth - Score 1 pt per tooth.

BUCCAL POSTERIOR CROSSBITE: For each maxillary posterior tooth (from the 1st premolar to the 2nd molar) where the maxillary palatal cusp is > 0 mm buccal to the buccal cusp of the opposing tooth - Score 2 pts per tooth.

CEPHALOMETRICS: (See [Construction of Mandibular Plane](#))

- If the ANB angle is $\geq 6^\circ$ OR $\leq -2^\circ$, score 4 pts; then, add 1 pt for each full degree $> 6^\circ$ OR $< -2^\circ$.
- If the SN-MP angle is between 27° and 37° score 0 pts.
- If the SN-MP angle is $\geq 38^\circ$, score 2 pts; then, add 2 pts for each full degree $> 38^\circ$.
- If the SN-MP angle is $\leq 26^\circ$, score 1 pt; then, add 1 pt for each full degree $< 26^\circ$.
- If the Lower Incisor to MP angle is $\geq 99^\circ$, score 1 pt; then, add 1 pt for each full degree greater than 99° .

OTHER: (List number of occurrences and total points.)

- **Supernumerary teeth** – Score 1 pt for each extra tooth.
- **Ankylosis** of permanent teeth – Score 2 pts per tooth.
- **Anomalous morphology** of tooth size & shape (e.g. natural and/or iatrogenic) - Score 2 pts per tooth.
- **Impaction** of teeth (except 3rd molars) – Score 2 pts per tooth.
- **Midline discrepancy** – The midline for each arch equals the mid-point between the Mx central incisors and the Mn central incisors demonstrated by two vertical reference lines. The discrepancy is the difference between the two vertical reference lines measured in the horizontal plane – Score 2 pts for ≥ 3 mm.
- **Missing teeth** (except 3rd molars) -
 - Non-congenital – Score 1 pt per tooth.
 - Congenital – Score 2 pts per tooth.
- **Spacing** –
 - For generalized spacing per arch in which there is ≥ 0.5 mm of space on both sides of any 4 teeth or more - Score 2 pts per arch.
 - For Mx central diastema of ≥ 2 mm - Score 2 pts.
- **Tooth transposition** – Score 2 pts for each event.
- **Skeletal asymmetry** (treated nonsurgically) – Score 3 pts (appropriate diagnostic information recommended)
- **Additional treatment complexities** - Score 2 pts each and identify.