

Handicapping Labio-Lingual Deviation (HLD) Index Scoring Sheet and Instructions

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HLD Index Scoring Instructions

The Handicapping Labio-Lingual Deviation (HLD) Index is designed to measure the presence or absence and the degree of the handicap caused by the components of the Index and not to diagnose malocclusion. All measurements are made with a Boley Gauge (or a disposable ruler) scaled in millimeters. Absence of any conditions must be recorded by entering "0" (refer to the above scoring sheet).

Providers are encouraged to include images of casts with measurements or screenshots of 3D models with measurements for the scoring sheet.

The following information is provided to help clarify the categories on the HLD Index Scoring Sheet:

Cleft Palate Deformity or Cranio-Facial Anomaly: Indicate an "X" on the score sheet and do not score any further if present. This condition is considered a handicapping malocclusion. Documentation must include photographs and a written report from a qualified specialist(s) treating the deformity/anomaly.

Deep Impinging Overbite with Severe Soft Tissue Damage: When the lower incisors are destroying the soft tissue of the palate. Tissue laceration and/or clinical attachment loss must be present. Indicate an "X" on the score sheet and do not score any further if present. This condition is considered a handicapping malocclusion.

Crossbite of Individual Anterior Teeth: When clinical attachment loss and recession of the gingival margin are present. Indicate an "X" on the score sheet when destruction of soft tissue is present and do not score any further. This condition is considered a handicapping malocclusion.

Severe Traumatic Deviations: Traumatic deviations include loss of a premaxilla segment by burns or by accident, the result of osteomyelitis or other gross pathology. Include a written report and photographs. Indicate with an "X" on the score sheet and do not score any further. This condition is considered a handicapping malocclusion.

Impacted Permanent Anterior Teeth: Demonstrate that anterior tooth (teeth) (incisors and / or cuspids) is (are) impacted (soft or hard tissue); exposure and passive eruption is unlikely; extraction would compromise the integrity of the arch; and, the tooth (teeth) are treatment planned to be exposed ligated / banded and brought into the normal arch form; and, there is, or will be sufficient arch space for correction. Indicate with an "X" on the score sheet and do not score any further. This condition is considered a handicapping malocclusion.

Overjet Greater Than 9mm or Mandibular Protrusion (Reverse Overjet) Greater Than 3.5mm: Overjet is greater than 9mm with incompetent lips or the reverse overjet (mandibular protrusion) is greater than 3.5mm with reported masticatory and speech difficulties. Indicate with an "X" on the score sheet and do not score any further. This condition is considered a handicapping malocclusion. If the reverse overjet is not greater than 3.5mm score under the "Mandibular Protrusion in Millimeters" item.

Overjet Equal to or Less Than 9mm: This is recorded with the patient's teeth in centric occlusion and measure from the labial portion of the lower incisors to the labial of the upper incisors. The measurements may apply to

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the protruding single tooth as well as to the whole arch. Round this measurement to the nearest millimeter and enter on the score sheet.

Overbite in Millimeters: A pencil mark on the tooth indicating the extent of overlap facilitates this measurement. Round off to the nearest millimeter and enter on the score sheet. "Reverse" overbite may exist in certain conditions and should be measured and recorded.

Mandibular Protrusion (Reverse Overjet) Equal to or Less Than 3.5mm: Score exactly as measured from the labial of the lower incisor to the labial of the upper incisor. The measurement in millimeters is entered on the score sheet and multiplied by five (5). A reverse overbite, if present, should be shown under "overbite."

Open Bite in Millimeters: This condition is defined as the absence of incisal contact in the anterior region. It is measured from edge to edge in millimeters. Enter the measurement on the score sheet and multiply by four (4). In cases of pronounced protrusion associated with open bite, measurement of the open bite is not always possible. In those cases, a close approximation can usually be estimated.

Ectopic Eruption: Count each tooth, excluding third molars. Each qualifying tooth must be more than 50% blocked out of the arch. Enter the number of teeth on the score sheet and multiply by three (3). If anterior crowding is present with an ectopic eruption in the anterior portion of the mouth, score only the most severe condition. DO NOT SCORE BOTH CONDITIONS. However, posterior ectopic teeth can still be counted separately from anterior crowding when they occur in the same arch.

Anterior Crowding: Arch length insufficiency must exceed 3.5mm. Mild rotations that may react favorably to stripping or mild expansion procedures are not to be scored as crowded. Enter five (5) points each for maxillary and mandibular anterior crowding. If ectopic eruption is also present in the anterior portion of the mouth, score the most severe condition. DO NOT SCORE BOTH CONDITIONS. Posterior ectopic teeth can still be counted separately from anterior crowding when they occur in the same arch.

Labio-Lingual Spread: Use a Boley Gauge or a disposable ruler to determine the extent of deviation from a normal arch. Where there is only a protruded or lingually displaced anterior tooth, the measurement should be made from the incisal edge of that tooth to the normal arch line. Otherwise, the total distance between the most protruded anterior tooth and the most lingually displaced anterior tooth is measured. The labio-lingual spread probably comes close to a measurement of overall deviation from what would have been a normal arch. In the event that multiple anterior crowding of teeth is observed, all deviations from the normal arch should be measured for labiolingual spread, but only the most severe individual measurement should be entered on the index.

Posterior Unilateral Crossbite: This condition involves two or more adjacent teeth, one of which must be a molar. The crossbite must be one in which the maxillary posterior teeth involved may either be both palatal or both completely buccal in relation to mandibular posterior teeth. The presence of posterior unilateral crossbite is indicated by a score of four (4) on the score sheet. THERE IS NO SCORE FOR BI-LATERAL CROSSBITE.

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Instructions

1. Position the patient's teeth in centric occlusion.
2. Record all measurements in the order and round off the nearest millimeter (mm).
3. Enter a score of "0" if the condition is absent.
4. Use the HLD Index Scoring Instructions on page 2 for guidance in completion of the assessment.

Condition	HLD Score
The conditions in this section automatically qualify for treatment:	
Cleft palate deformity or cranio-facial anomaly <i>Indicate an "X" if present and score no further.</i>	
Deep impinging overbite with severe soft tissue damage <i>Indicate an "X" if present and score no further.</i>	
Crossbite of individual anterior teeth when clinical attachment loss and recession of the gingival margin are present <i>Indicate an "X" if present and score no further.</i>	
Severe traumatic deviations <i>Indicate an "X" if present and score no further.</i>	
Impacted permanent anteriors where extraction is not indicated <i>Indicate an "X" if present and score no further.</i>	
Overjet greater than 9mm with incompetent lips or reverse overjet greater than 3.5mm with reported masticatory/speech difficulties <i>Indicate an "X" if present and score no further.</i>	
Overjet equal to or less than 9mm	
Overbite in mm	
Mandibular protrusion (reverse overjet) in mm equal to or less than 3.5mm	___ X 5 = ___
Open bite in mm	___ X 4 = ___
Note: If both anterior crowding and ectopic eruption are presentation in the anterior portion of the mouth, score only the most severe condition. Do NOT score both conditions.	
Ectopic eruption: Count each tooth, excluding 3rd molar	___ X 3 = ___
Anterior crowding: Score one point for MAXILLA, and/or one point for MANDIBLE; two (2) points maximum.	___ X 5 = ___
Labio-Lingual spread (in mm)	
Posterior unilateral crossbite (involving at least one molar): Score 4 if present.	
Total Score: _____	