

First Review \_\_\_\_\_  
Second Review \_\_\_\_\_  
Third Review \_\_\_\_\_

Models \_\_\_\_\_  
Orthocad \_\_\_\_\_  
Ceph Films \_\_\_\_\_  
X-Rays \_\_\_\_\_  
Photos \_\_\_\_\_  
Narrative \_\_\_\_\_

**NM HANDICAPPING LABIO-LINGUAL DEVIATIONS**  
**(The HLD Index No. 4)**

You will need this score sheet and a Boley Gauge.

**Procedure:**

1. Occlude patient or models in centric position.
2. Record all measurements in the order given, and rounded off to the nearest millimeter.
3. ENTER SCORE "O" IF CONDITION IS ABSENT.
4. Start by measuring OVERJET of the most protruding incisor.
5. Measure OVERBITE from the labio-incisal edge of overlapped front tooth or teeth to point of maximum coverage.
6. Score all other conditions listed.
7. ECTOPIC ERUPTION and ANTERIOR CROWDING<sup>1</sup>: DO NOT DOUBLE SCORE. Record the more serious condition and follow your first impression.
8. The use of a recorder (hygienist, assistant) is recommended.

**PRINT:**

Patient's Name: \_\_\_\_\_ Examiner: \_\_\_\_\_  
Recorder: \_\_\_\_\_

Address: \_\_\_\_\_  
Street City/County State Zip Code

**CONDITIONS OBSERVED**

|   |           | <u>HLD SCORE</u> |
|---|-----------|------------------|
| Cleft Palate  | Score "X" | _____            |
| Deep Impinging Overbite   | Score "X" | _____            |
| Crossbite of individual anterior teeth causing impingment           | Score "X" | _____            |
| Severe traumatic deviations   | Score 15  | _____            |
| Overjet in mm   | X1        | _____            |
| Overbite in mm  | X1        | _____            |
| Mandibular protrusion in mm   | X5        | _____            |
| Open bite in mm   | X4        | _____            |
| Ectopic eruption, (# of teeth, excluding third molars) <sup>1</sup> | X3        | _____            |
| Anterior Crowding <sup>1</sup> : Maxilla: _____ Mandible: _____     | X5 ea.    | _____            |
| Labio-Lingual Spread, in mm (anterior spacing)                      | X1        | _____            |
| Posterior Unilateral Crossbite                                      | Score 4   | _____            |
|   | TOTAL:    | _____            |

A score of 30 and over constitutes a PHYSICAL HANDICAP.

Diagnosis: \_\_\_\_\_ Authorization No: \_\_\_\_\_  
Kathie Arena, DDS David Bogenschutz, DDS , DDS Thomas Gengler, DDS James Thommes, DDS Richard Nellen, DDS Paul Schulze, DDS

## **HANDICAPPING LABIO-LINGUAL DEVIATION INDEX SCORING INSTRUCTIONS**

The intent of the HLD Index is 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 scaled in millimeters. Absence of any conditions must be recorded by entering "0". (Refer to attached scoresheet.)

The following information should help clarify the categories on the HLD Index:

1. Cleft Palate Deformities: Indicate an "X" on the scoresheet. (This condition is considered to be handicapping malocclusion.)
2. Deep Impinging Overbite: Indicate an "X" on the scoresheet when lower incisors are destroying the soft tissue of the palate. (This condition is considered to be handicapping malocclusion.)
3. Crossbite of Individual Anterior Teeth: Indicate an "X" on the scoresheet when destruction of soft tissue is present. (This condition is considered to be handicapping malocclusion.)
4. Severe Traumatic Deviations: Traumatic deviations are, for example, loss of a premaxilla segment by burns or by accident; the result of osteomyelitis; or other gross pathology. The presence of severe traumatic deviations is indicated by a score of 15 of the scoresheet.
5. Overjet in Millimeters: This is recorded with the patient in the centric relationship and measured from the labial of the lower incisor to the labial of the upper incisor. The measurement could apply to a protruding single tooth as well as to the whole arch. The measurement is read and rounded off to the nearest millimeter and entered on the scoresheet.
6. Overbite in Millimeters: A pencil mark on the tooth indicating the extent of overlap facilitates this measurement. It is measured by rounding off to the nearest millimeter and entered on the scoresheet. "Reverse" overbite may exist in certain conditions and should be measured and recorded.
7. Mandibular Protrusion in Millimeters: 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 scoresheet and multiplied by 5. A reverse overbite, if present, should be shown under "overbite".
8. Open Bite in Millimeters: This condition is defined as the absence of occlusal contact in the anterior region. It is measured from edge to edge, in millimeters. This measurement is entered on the scoresheet and multiplied by 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.
9. Ectopic Eruption: Count each tooth, excluding third molars. Enter the number of teeth on the scoresheet and multiply by 3. If condition No. 10, anterior crowding, is also present, with an ectopic eruption in the anterior portion of the mouth, score only the most severe condition. Do not score both conditions.
10. Anterior Crowding: Arch length insufficiency must exceed 3.5 mm. Mild rotations that may react favorably to stripping or mild expansion procedures are not to be scored as crowded. Enter 5 points for maxillary and mandibular anterior crowding. If condition No. 9, ectopic eruption, is also present in the anterior portion of the mouth, score the most severe condition. Do not score both conditions.
11. Labio-Lingual Spread: The Boley Gauge is used 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 tooth and the 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 labio-lingual spread, but only the most severe individual measurement should be entered on the index.
12. 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 the mandibular posterior teeth. The presence of posterior unilateral crossbite is indicated by a score of 4 on the scoresheet.