SPACE SHORTAGE ANALYSIS

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Name: ___________________________ Date of Record: ______________

Age: _______________ Gender: □M □F Race: _______________

Using a dental caliper, measure the width of the upper four central incisors and transpalatal distance from 1st bicuspid to 1st bicuspids (occlusal fissure).

<table>
<thead>
<tr>
<th>Measurement</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>U/R Central</td>
<td></td>
</tr>
<tr>
<td>U/L Central</td>
<td></td>
</tr>
<tr>
<td>U/R Lateral</td>
<td></td>
</tr>
<tr>
<td>U/L Lateral</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Total +8</td>
<td></td>
</tr>
<tr>
<td>“Adequate” Space Required</td>
<td></td>
</tr>
<tr>
<td>“Actual” Transpalatal</td>
<td></td>
</tr>
<tr>
<td>Measurement</td>
<td></td>
</tr>
</tbody>
</table>

SPACE SHORTAGE CROWDING ANALYSIS

1-2mm Space Shortage = Minimal Crowding
4-6mm Space Shortage = Moderate Crowding
7-12mm Space Shortage = Severe Crowding

See Treatment Considerations based on patient’s age.

<table>
<thead>
<tr>
<th>Age</th>
<th>Treatment Consideration Based on Patient’s Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 9 years</td>
<td>Non-Extraction. DO NOT consider 2nd molar replacement until prognosis for 3rd molar can be evaluated.</td>
</tr>
<tr>
<td>9 to 12 years</td>
<td>Dental arches can be developed approximately 2mm transversely without 2nd molar replacement. <strong>If the space shortage is 4mm or greater, 2nd molar replacement should be considered for case stability</strong> while accommodating the wisdom teeth.</td>
</tr>
<tr>
<td>12 to 18 years</td>
<td>Perform 2nd molar replacement if prognosis of 3rd molars is favorable in order to improve case stability. Some minor uprighting may be required. <strong>Inform before you perform.</strong></td>
</tr>
<tr>
<td>Over 18 years</td>
<td>Moderate to severe crowding with an arch length discrepancy will result in critical relapse if 2nd molar replacement is not considered provided the prognosis for 3rd molar eruption is favorable. Some minor uprighting may be required. <strong>Inform before you perform.</strong></td>
</tr>
</tbody>
</table>

EXTRACTION OF 2ND MOLARS

□ YES □ NO

Important Note: If interproximal reduction (slenderizing) is a treatment option, it may alter the above treatment considerations. **Slenderizing is discouraged on adolescent patients.**
Please visit [www.orthodontic.ca](http://www.orthodontic.ca) under CASE EVALUATION to obtain further information about 2nd Molar Replacement.

**Additional information includes:**
- A Bibliography of 100 printed articles to supporting your decision to perform 2nd molar replacement.
- Images of pre/post 2nd molar replacement provided by Dr. Merle Bean, a Pediatric Dentist, who has performed more than 3,000 2nd molar extractions cases.
- Self-Study Continuing Education DVD Programs available supporting 2nd Molar Replacement:
  - Dr. James Broadbent, DDS, MS:
    - Achieving Excellence in Functional Jaw Orthopedics and Case Finishing (23 Hours)
  - Dr. Merle Bean, Pediatric Dentist:
    - Merle’s Pearls (12 Hours)

### Guidelines for 2nd Molar Replacement

**INDICATIONS INCLUDE:**
- Excessive Crowding in both arches
- Normal or Open Growth Direction
- Steep mandibular plane angle with an open bite tendency
- Patient has an obtuse nasofacial angle
- Maxilla position is posterior, develop pre-maxilla prior to 2nd molar replacement
- Prognosis for wisdom teeth is favorable if 2nd molars were removed

**CONTRA-INDICATIONS INCLUDE:**
- Minimal crowding in both arches
- Deep bite with deep growth direction
- Maxilla position is Normal or Anterior
- Prognosis for wisdom teeth is poor
- Wisdom teeth are congenitally missing

**Option:** Heavy restoration on the 1st molars.
- At an early age, 1st molar replacement may be considered as taught by Dr. Wilson (WWII treatment)

### When considering 2nd Molar replacement, when is the **prognosis for wisdom teeth considered POOR?**

- Roots are fully formed
- Crowns are facing you in the panorex
- Crown Deformity
- Congenitally missing

### 2nd Molar Replacement

- Orthodontists generally remove bicuspids and wisdom teeth leaving the patient with 24 teeth
- 2nd molar replacement leaves the patient with 28 teeth and:
  - ✔️ A Broad Smile
  - ✔️ Healthy TMJ
  - ✔️ Full Mid-Face

**It is far less traumatic to perform 2nd molar replacement when indicate than to surgically remove severely impacted wisdom teeth.**

**It is also more cost-effective for the family!**

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**American Journal of ORTHODONTICS**

**1955**

#41 Page 354

The role of upper second molar extractions in orthodontics. Dr. TM Graber

Visit [www.orthodontic.ca](http://www.orthodontic.ca) under CASE EVALUATION for a Bibliography of 100 printed articles on 2nd Molar Replacement.