A STRAIGHT ANSWER for kids.

No Casting
No Physical Therapy
No or Reduced Osteotomy

The Guided Growth Technique with the eight-Plate corrects axial deformities in the upper and lower limb with a minimally invasive approach. The extra-periosteal eight-Plate acts as a tension band and does not violate the physis or inhibit its growth. Use of the eight-Plate can avoid osteotomy and overcomes the drawbacks associated with traditional implants.
**Guided Growth Technique With The eight-Plate Corrects Deformities Without Osteotomies**

**Indications**
The Guided Growth Technique with the eight-Plate is indicated for any growing child or adolescent (age range 18 months to 17 years) with any angular deformity, regardless of etiology.

**Benefits to Surgeons**
- Simple, minimally invasive technique
- Learning curve = 1 to 2 cases
- Addresses multiple / complex deformities simultaneously
- Modular correction - repeat as indicated

**Benefits to Patients**
- Outpatient procedure - minimal impact on school / work schedule
- Reduced surgical pain / risks
- Immediate mobilization / rehabilitation
- Flexible implant will tether (not compress) the physis, allowing more rapid correction

Diverging screws function like a hinge to avoid physis compression.

**Review Of Cases**
*Dr. Peter Stevens, University of Utah School of Medicine*
Cases were performed as part of an IRB Approved Study with implantation between 4/04 and 4/05.

**Purpose**
- Determine if hemi-epiphysiodeses using a plate is safe, reliable, and reversible
- Determine the age criteria
- Determine for which diagnoses this method is applicable

**Patient Demographics**
- N = 34 patients with genu varum / valgum
- N = 65 segmental deformities
- Age 19 mos. to 17 years
- Weight 14 kg. to 150 kg.
- Duration plate(s) = 6 to 18 mos

**Deformity Correction**
- Full correction 32/34 patients – plate(s) removed @ average of 11 months
- Pending correction 2/34 patients – awaiting further correction /c growth
- Anticipated osteotomies 1/34 (1 patient with adolescent Blount’s disease)
- “Rebound” repeat plating will depend upon further growth / follow-up

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Patients</th>
<th>Deformities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idiopathic</td>
<td>20</td>
<td>43</td>
</tr>
<tr>
<td>Skeletal dysplasia</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Blount’s</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Limb deficiency</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Trauma</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Rickets</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Study Conclusions**
- Hemi-epiphysiodeses with a plate is safe, reliable, and reversible
- Permits deformity correction at or near the CORA(s)
- Directional control may be frontal, sagittal, or oblique
- Addresses multi-focal and bilateral deformities simultaneously
- Is applicable for any age group and any diagnosis
- The extraphyseal eight-plate = tension band
- These patients might otherwise have had 64 osteotomies

The safety, comfort and cost / benefit ratio clearly favor the eight-Plate.

* Data on file at the University of Utah
Operative Brief

1. Insert localizing pin in physis and verify position with fluoroscope.

2. Apply contoured eight-Plate over pin.

3. Using the drill guide, first insert the epiphyseal guide wire, followed by the metaphyseal guide wire. It is not necessary for these two guides to be parallel; it is more important to avoid the physis. Remove the center guide wire.

4. Drill using the drill guide and the step cannulated drill bit to a depth of 5 millimeters. First drill the epiphyseal hole, followed by the metaphyseal.

5. Insert two cannulated self tapping screws. Note the position of the screw proximal and distal to the physis. Screws do not need to be parallel. Remove the guide wires.

Preoperative

One year postoperative: leg straight, then right femoral plate removed

Two years postoperative: leg straight, then left femoral plate removed
# Ordering Information

<table>
<thead>
<tr>
<th>INTL. #</th>
<th>U.S. #</th>
<th>Description</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>GP200CE</td>
<td>GP200</td>
<td>eight-Plate Guided Growth Plate</td>
<td>12 mm</td>
</tr>
<tr>
<td>GP400CE</td>
<td>GP400</td>
<td>eight-Plate Guided Growth Plate</td>
<td>16 mm</td>
</tr>
<tr>
<td>GP116CE</td>
<td>GP116</td>
<td>eight-Plate Guided Growth Screw</td>
<td>16 mm</td>
</tr>
<tr>
<td>GP224CE</td>
<td>GP224</td>
<td>eight-Plate Guided Growth Screw</td>
<td>24 mm</td>
</tr>
<tr>
<td>GP432CE</td>
<td>GP432</td>
<td>eight-Plate Guided Growth Screw</td>
<td>32 mm</td>
</tr>
<tr>
<td>GP520CE</td>
<td>GP520</td>
<td>Cannulated Drill Bit, 3.2mm Dia.</td>
<td></td>
</tr>
<tr>
<td>GP510CE</td>
<td>GP510</td>
<td>Screwdriver, eight-Plate 3.5 mm cannulated</td>
<td></td>
</tr>
<tr>
<td>GP530CE</td>
<td>GP530</td>
<td>Drill Guide</td>
<td></td>
</tr>
<tr>
<td>GP540CE</td>
<td>GP540</td>
<td>K-Wire, 1.6 mm Dia.</td>
<td></td>
</tr>
<tr>
<td>GP200KCE</td>
<td>GP200K</td>
<td>eight-Plate, Guided Growth Plate Kit, includes</td>
<td></td>
</tr>
<tr>
<td>GP400KCE</td>
<td>GP400K</td>
<td>eight-Plate, Guided Growth Plate Kit, includes</td>
<td></td>
</tr>
<tr>
<td>GP600CE</td>
<td>GP600</td>
<td>Steri-Tray Kit</td>
<td></td>
</tr>
<tr>
<td>GP601CE</td>
<td>GP601</td>
<td>Empty Steri-Tray</td>
<td></td>
</tr>
</tbody>
</table>

- **Color Coded Screws**: Purple = 16 mm, Green = 24 mm, Blue = 32 mm
- **Color coded plates**: Green = 12 mm plate, Blue = 16 mm plate
- **Measurement guide**: No misplaced screws - all screws have dedicated holes with matching depth
- **Slightly elevated seat**: for easy grasp

![Screw Tray Caddy Image](image_url)

For more information contact your local representative or call 1.800.BoneFix

*www.orthofix.com*