Continuous Compression Implants

Continuous Compression Implants may provide better clinical outcomes, economic value and enhanced patient value.

**CLINICAL VALUE**

**FAVORABLE STRENGTH, STIFFNESS, AND STABILITY**

DePuy Synthes SPEED™ Compression Implant Constructs Demonstrated:

- Statistically higher (p<0.001) mean compressive loads and contact areas across the osteotomy compared to plate fixations.

- Significantly higher stiffness and endured larger loads before 2mm gap formation compared to plate fixations in the dorsoventral plane (p<0.001).

**FOOT & ANKLE**

**HIGH RATES OF UNION**

93.8% Union Rate

for midfoot and hindfoot arthrodesis using DePuy Synthes Nitinol Continuous Compression Implants.

**DYNAMIC FIXATION WITH SUSTAINED COMPRESSION ACROSS THE ARTHRODESIS**

Single and Double Compression Implants Induced Significantly Greater Contact Force and Area Across the Arthodesis Than Crossed Screw and Claw Plate Constructs.

Contact Force and Area Across the Arthodesis at 2mm Gap Formation

<table>
<thead>
<tr>
<th>Contact Force (N)</th>
<th>Contact Area [mm^2]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Compression Implant</td>
<td>97</td>
</tr>
<tr>
<td>Double Compression Implant</td>
<td>158</td>
</tr>
<tr>
<td>Cross Screw</td>
<td>112</td>
</tr>
<tr>
<td>Claw Plate</td>
<td>144</td>
</tr>
</tbody>
</table>

* Denotes statistical significance against single & double compression implants (p<0.05)

**HAND & WRIST**

**LOWER RATES OF COMPLICATION**

Superior Rate of Nonunion

↓ 0% VS. 18.2% for capitolunate arthrodesis using continuous compression implants and screws respectively.

Low Rate of Implant-Related Complication

↓ 6.3% VS. 27.3% rates of implant-related complications for compression implants and screws respectively.

**PATIENT VALUE**

18.1 DAYS to No Pain and No Pain Medication Usage

14.3 DAYS to 1st Metatarsophalangeal Joint (MPI) Range of Motion >65

21.6 DAYS to Full Activity for hallux valgus deformity treated with Austin Bunionectomy using continuous compression implants

* Denotes statistical significance against single & double compression implants (p<0.05)

** Denotes statistical significance against single & double compression implants (p<0.01)
REFERENCES:


4. Sarchino WJ, Banh MN, McGuire SM, Yoo EK. Surgical outcomes of BME SPEEDTRIAD staple for chevron osteotomy. American College of Foot and Ankle Surgeons; February 27-March 2, 2017; Las Vegas, NV, USA.


6. Budny A. Use of SPEEDTRIAD and SPEEDARC shape memory implants for fixation of Austin and Akin osteotomies. BME (BioMedical Enterprises, Inc); 2016.


Limited Warranty and Disclaimer: DePuy Synthes products are sold with a limited warranty to the original purchaser against defects in workmanship and materials. Any other express or implied warranties, including warranties of merchantability or fitness, are hereby disclaimed. Please also refer to the package insert(s) or other labeling associated with the devices identified in this value analysis brief for additional information.

CAUTION: Federal Law restricts these devices to sale by or on the order of a physician.

Some devices listed in this value analysis brief may not have been licensed in accordance with Canadian law and may not be for sale in Canada. Please contact your sales consultant for items approved for sale in Canada.

Not all products may currently be available in all markets.