At Covidien, Hernia Care means

LEADING THE FUTURE
OF FIXATION

ProGrip™
Laparoscopic Self-Fixating Mesh
**ProGrip™ Laparoscopic Self-Fixating Mesh**

**The Future of Fixation**

**DEVELOPED TO ADDRESS KEY ISSUES IN LAPAROSCOPIC INGUINAL HERNIA REPAIR**

<table>
<thead>
<tr>
<th>Key Issues</th>
<th>Traditional Tack and Mesh</th>
<th>ProGrip™ Laparoscopic Mesh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall, moderate to severe chronic pain experienced by 10-12% of LIHR patients</td>
<td>Tack fixation can cause trauma to the tissue (^4)</td>
<td>Eliminates the pain associated with traditional tack fixation (^5,6)</td>
</tr>
</tbody>
</table>
| Increasing cost pressure on equipment, especially in laparoscopic procedures | • Increased post-operative pain  
• Longer hospital stays |  
EU hospitals look for alternative solutions and less costly fixation techniques |
| Up to 2.84% recurrence rate in LIHR and often occurring along the inferior edge of the mesh \(^3\) | Tacking below the inguinal ligament is contraindicated \(^9\) | Combines the functionality of mesh and fixation into one product |
|  | • Medially due to vessels  
• Laterally due to nerves | Delivers tack-free fixation over the entire anatomy, including below the inguinal ligament where tacks cannot be placed \(^1,0,7\) |

Laparoscopic inguinal hernia repair is a well-established alternative to open inguinal repair with comparable outcomes. However, the use of tacks for mesh fixation can increase the risk of chronic post-operative pain \(^1\).

The future of laparoscopic inguinal fixation will reduce pain and provide fixation of the entire surface while lowering the cost of the procedure.
ProGrip™ Laparoscopic Self-Fixating Mesh
The Future of Fixation

PRODUCT FEATURES

- Fast resorbing film on posterior side for easy deployment†,1,12
- Green medial marking to aid in orientation
- Lightweight, semi-resorbable construction reduces foreign material in patient†,10
- Macroporous, hydrophilic textile promotes rapid tissue integration†,11
- More than 5,000 resorbable PLA microgrips† eliminate the need for traditional fixation†,1,8,9
- Tack-free fixation over the entire anatomy, even in places where traditional fixation cannot be placed†,10,7
- 3D shape conforms to the anatomy
- Available in flat as well as left and right anatomical configurations for versatility

PLA — Polylactic Acid
ProGrip™ Laparoscopic Self-Fixating Mesh
The Future of Fixation

**PRODUCT BENEFITS**

**ProGrip™ laparoscopic self-fixating mesh:**

- **Decreases the security** of the laparoscopic inguinal hernia repair⁷,⁸,¹³
- **Eliminates the pain** associated with traditional tack fixation⁵,⁶
- **Is easy to use**¹²
- **Potentially lowers the cost** of the laparoscopic inguinal procedure by combining the functionality of mesh and fixation into one device and reducing the pain management costs¹⁴,¹⁶

**Self-Fixating**

- More than 5,000 microgrips² eliminate the need for traditional tack fixation or glue¹,⁵,⁸,⁹
- Superior fixation strength compared to Bard 3DMax™ light textile with SorbaFix™ tacks or fibrin sealant⁴,¹³
- Equivalent recurrence rate compared to laparoscopic repair with fixation¹,⁵,⁶,¹⁴
- Tack-free fixation over the entire anatomy, including below the inguinal ligament where tacks cannot be placed⁴,⁷

**Less Pain**

- Eliminates the pain associated with traditional tack fixation⁰,⁵,⁶
- Low post-operative pain and fast recovery in laparoscopic inguinal hernia repair⁵,⁶,¹⁴,¹⁵
- 40% of the mesh weight resorbs reducing foreign material presence in patient over time¹⁰
- Resorbable, atraumatic microgrips² preserve cord⁴,¹,⁷

**Easy to Use**

- Doesn’t stick to itself making it easy to handle and unfold laparoscopically¹²
- Easy to orient with green medial marking

**Potential Cost Savings**

- Combines the functionality of mesh and fixation into one device
- Less post-operative pain may result in lower cost of pain management therapy⁴,¹⁶
TECHNICAL SPECIFICATIONS AND ORDERING INFORMATION

Technical Specifications†,8,10,12,17,18

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile Material</td>
<td>Monofilament Polyethylene Terephthalate (PET)</td>
</tr>
<tr>
<td>Microgrip Material</td>
<td>Monofilament Polylactic Acid (PLA)</td>
</tr>
<tr>
<td>Microgrips/cm²</td>
<td>36</td>
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<tr>
<td>Microgrip Absorption Time</td>
<td>&gt;18 Months</td>
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<tr>
<td>Fast Resorbing Film Composition</td>
<td>70% Collagen, 30% Glycerol</td>
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<tr>
<td>Fast Resorbing Film Dissolution Time</td>
<td>&lt;1 Day</td>
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<tr>
<td>Weight Before Absorption (g/m²)</td>
<td>82</td>
</tr>
<tr>
<td>Weight After Absorption (g/m²)</td>
<td>49 (lightweight)</td>
</tr>
<tr>
<td>Pore Size (mm) (height by width)</td>
<td>1.8 x 1.8 (macroporous)</td>
</tr>
<tr>
<td>Sterilization Method</td>
<td>Ethylene Oxide</td>
</tr>
<tr>
<td>Shelf-Life</td>
<td>18 Months</td>
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Ordering Information

<table>
<thead>
<tr>
<th>Code</th>
<th>Product Description</th>
<th>Product Configuration</th>
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</thead>
<tbody>
<tr>
<td>LPG1510</td>
<td>10x15</td>
<td>1 Unit per Box</td>
</tr>
<tr>
<td>LPG1510AR</td>
<td>Right Anatomical</td>
<td>1 Unit per Box</td>
</tr>
<tr>
<td>LPG1510AL</td>
<td>Left Anatomical</td>
<td>1 Unit per Box</td>
</tr>
</tbody>
</table>

Pre-PLA Absorption

Monofilament Non-Resorbable PET textile

Post-PLA Absorption

Monofilament Resorbable PLA Microgrips

† Indicates a U.S. trademark of Covidien AG. ™ Trademark of its respective owner. Other brands are trademarks of a Covidien company.

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REFERENCES


5 Laxa, B and Jacob, B. An ongoing prospective study evaluating self-gripping mesh (Parietex ProGrip™) without additional fixation during laparoscopic total extraperitoneal (TEP) inguinal hernia repair: initial analysis. IHS 2012 P1620.


8 Covidien Internal Test Report 0902CR123 (June 2012).

9 ProGrip™ laparoscopic self-fixating mesh Instructions For Use.

10 Covidien Internal Test Report TEX033-a (October 2012).

11 Covidien Internal Test Report 98640 (February 2012).

12 Covidien Internal Test Report 0902CR122 (June 2012).

13 Covidien Internal Test Report 0902CR114 - In vivo pre-clinical pig study at 4 and 8 weeks: comparing ProGrip™ laparoscopic self-fixating mesh fixation strength to Bard™ soft mesh with SorbaFix™ fixation system and Baxter Tisseel™ fibrin sealant (October 2011). Bard™ soft mesh and Bard 3DMax™ light mesh have the same textile base.


17 Covidien Internal Test Report 0902CR132a (July 2012).

18 Covidien Internal Test Report 0902CR138a (October 2012).

19 ProGrip™ laparoscopic self-fixating mesh and ProGrip™ self-gripping mesh have equivalent gripping and mechanical properties.

20 Based on preclinical animal and/or benchtop studies.

21 Measured in millimeter scale.

22 If the mesh is cut to size, additional fixation should be used based on surgeon’s discretion.

Ω ProGrip™ laparoscopic self-fixating mesh and ProGrip™ self-gripping mesh have equivalent gripping and mechanical properties based on preclinical animal and/or benchtop studies. Measured in millimeter scale. If the mesh is cut to size, additional fixation should be used based on surgeon’s discretion.