HELPING YOU
FEEL SECURE

Polysorb™ Suture

For Nurses
WOUND HEALING: THE FIRST 2 WEEKS AFTER SURGERY ARE CRITICAL

Wound repair following surgery is a long-term process, but the first 2 weeks are particularly crucial — this is the critical wound healing period (CWHP).1,2

During early tissue repair, wound tensile strength is only 7–10% of that of undamaged skin.3 Wound dehiscence most commonly occurs in the CWHP, and may require repeat surgery, placing a potentially substantial burden on healthcare systems.4

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Polysorb™ suture provides strength during the CWHP

POLYSORB™ SUTURES ARE STRONG DURING THE CWHP

The strength of Polysorb™ suture, provided by tighter braided filaments, provides security during the CWHP.⁴⁻⁶

As Polysorb™ suture is designed to provide superior strength when needed during the CWHP, and to then be rapidly absorbed, its tensile strength decreases after 3 weeks of implantation.

A direct comparison between Polysorb™ suture and Vicryl™* using a knot-pull test showed that Polysorb™ suture has:

- 37% greater knot pull strength out of the package⁷
- 21% greater knot pull strength after one week⁷
- 8% greater knot pull strength after two weeks⁷

The greater strength of Polysorb™ suture is complemented by superior knot security, in both wet and dry conditions, compared with Ethicon Vicryl™*.⁷

2/0 BRAIDED SYNTHETIC ABSORBABLE SUTURE

<table>
<thead>
<tr>
<th>WeeK 0</th>
<th>weeK 1</th>
<th>weeK 2</th>
<th>weeK 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polysorb™ Suture</td>
<td>6.0</td>
<td>5.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Vicryl™* Suture</td>
<td>5.0</td>
<td>4.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Polysorb™ suture is 37% stronger out-of-package⁷

Polysorb™ suture provides 21% greater strength during the critical wound-healing period⁷

†Compared to Vicryl™* suture.
‡Critical wound healing period
§In R&D testing, Polysorb™ sutures were statistically significantly comparable or stronger than Vicryl™ sutures during the CWHP: p<0.001 for weeks 0–2 for commonly use size USP 2–0, October 2013.
DOES ANTIBACTERIAL SUTURE COATING PROTECT AGAINST SURGICAL SITE INFECTIONS?

Some sutures are coated with an antibacterial agent, such as triclosan, in an effort to reduce the risk of wound infection which can be costly to treat.⁶

Contrary to findings from single-centre studies, a recently published large, multicentre, randomised clinical trial after colorectal surgery demonstrated that surgical sutures coated with triclosan do not appear to be effective in reducing the rate of surgical site infection.⁸

This was supported by in vitro data showing no significant difference in Staphylococcus aureus colonisation between Polysorb™ suture and main competitor products, including those coated with triclosan.⁹

Concerns about the potential environmental impact of triclosan and the possible emergence of antibiotic resistance factored into the decision of the manufacturer of the main triclosan-coated Vicryl™ to phase out triclosan in consumer products by 2015.¹⁰

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**Occurrence of surgical site infections**⁸

<table>
<thead>
<tr>
<th>Surgical site infections (%)</th>
<th>Triclosan-coated</th>
<th>Conventional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Superficial</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Deep</td>
<td>6</td>
<td>8</td>
</tr>
</tbody>
</table>

300 adult patients received triclosan-coated (n=140) or conventional (n=141) sutures

**Bacterial colonization³ (Staphylococcus aureus)**

- **Vicryl™ suture**
- **Polysorb™ suture**
- **Vicryl™ Plus suture**
- **Biosyn™ suture**

CFUs, colony-forming units
The favourable handling characteristics of Polysorb™ suture were demonstrated in a study showing that:

Polysorb™ suture was the preferred choice of surgeons, in terms of ease of handling, in a test of four absorbable, multifilament sutures (size 2 USP), providing:

- The smoothest surface
- The greatest ease of knot positioning
- The best knot tightness
- The best knot security

FAVOURABLE HANDLING CHARACTERISTICS OF POLYSORB™ SUTURE MAY FACILITATE WOUND CLOSURE
POLYSORB™ SUTURE COMBINES STRENGTH AND SECURITY DURING THE CWHP WITH EASE OF HANDLING

The CWHP is well-documented in many studies.

Compared with Vicryl™ products, Polysorb™ suture is uniquely suited to aid wound healing due to:

**Greater strength during the CWHP**

†Compared to Vicryl™ suture.
‡Critical wound healing period
§In R&D testing, Polysorb™ sutures were statistically significantly comparable or stronger than Vicryl™ sutures during the CWHP: p<0.001 for weeks 0–2 for commonly use sizes USP 1 to 3–0, October 2013.

REFERENCES
7. Based on internal test report, Comparing the most popular sizes used in the market. 2013.
9. Based on internal test report. In vitro evaluation of staphylococcus aureus of commercial braided synthetic absorbable BSA suture materials (some containing triclosan) and monofilament synthetic absorbable (MSA) sutures.

For more information visit us at medtronic.com/covidien

IMPORTANT: Please refer to the package insert for complete instructions, contraindications, warnings and precautions.

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