



# NEUROLAC®

Comfortable nerve entubulation. Biologically safe and resorbable.



- Peripheral Nerve Repair

**POLYGANICS**

Bioresorbable Medical Device Solutions

# NEUROLAC®

Safe and optimal nerve repair. Clearly Different.

Many peripheral nerve injuries can only be treated through reconstructive surgical procedures. Peripheral nerve repair is still one of the most challenging tasks in neurosurgery, as functional recovery is rarely satisfactory in these patients<sup>1</sup>. When primary repair cannot be performed without undue tension, nerve grafting or tubulization techniques are required. Nerve autografting, long the standard for bridging nerve gaps, has disadvantages. Important ones are limited length of available graft material and donor site morbidity, which may lead to a secondary sensory deficit and occasionally neuroma and pain<sup>1</sup>. In addition, non-matching donor and recipient nerve diameters often occur, which may be the basis of poor functional recovery.

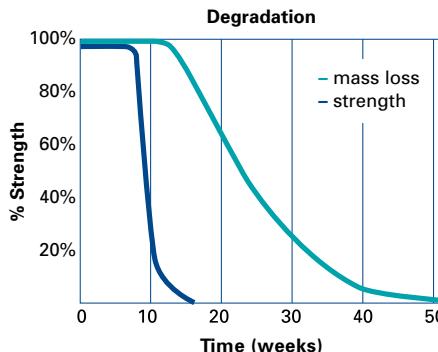
More and more hand and neurosurgeons around the world have discovered the distinct advantages of the use of synthetic and bioresorbable nerve conduits for optimal peripheral nerve regeneration.

<sup>1</sup> Luis, A.L., et al. Biomed Mater Eng. 2007;17(1):39-52.

## NEUROLAC®

NEUROLAC® is indicated for reconstruction of a peripheral nerve discontinuity up to 20 mm in patients with a complete division of a peripheral nerve. NEUROLAC® is the first synthetic, bioresorbable and transparent nerve guide used in humans. Using NEUROLAC®, nerves will regenerate from the proximal nerve stump towards the distal one whereas neuroma formation and ingrowth of fibrous tissue into the nerve gap are prevented. NEUROLAC® offers tension-less nerve repair to further improve healing and function recovery<sup>2</sup> without the need for autologous transplants. NEUROLAC® is designed to prevent kinking and collapse. Patient comfort is increased, and early flexion of joints is feasible. Its complete transparency allows for efficient nerve stump positioning and early observa-

tion of blood clots. Additionally, NEUROLAC® keeps neurotrophic factors and other substances released by the injured nerve tissue, contained near the junction. Its semi-permeable property helps to maintain the influx of low molecular weight nutrients required for optimal nerve regeneration.



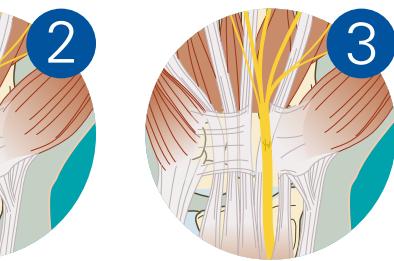
NEUROLAC® is made of 100% synthetic material and is 100% biologically safe. It is non-immunogenic, in contrast to collagen based nerve tubes. Mechanical support is given to the healing nerve for a period of 10-12 weeks, whereafter degradation is observed by rapid loss of strength and mass. The degradation products of NEUROLAC® are less acidic, which, in contrast to nerve tubes of polyglycolic origin, is favorable for the surrounding tissue. Approximately 24 months after implant NEUROLAC® is completely absorbed<sup>2</sup>.

<sup>2</sup> Bertleff, M., et al. The Journal of Hand Surgery, May 2005, Vol. 30A/No. 3, 513-518.

## NEUROLAC® Key Features

- Nerve repair without the need to harvest an autograft
- Significant reduction of operation time when compared with autografts procedures

Please contact your local NEUROLAC® representative for more information



- No morbidity or loss of sensation
- Reducing the risk of donor-site deficit, scarring, and neuroma formation
- Improved nerve-function recovery (with less adverse side effects)
- Designed not to kink or collapse
- High transparency to enable optimal positioning of nerve ends and detection of blood clots
- A tensionless repair for improved patient outcomes
- Semi-permeable – allows small-sized nutrients and neurotrophic factors to pass
- Fully synthetic - clinically proven to be biologically inert
- Metabolic breakdown products are resorbed via normal metabolic pathways
- Full resorption in approximately 24 months after implantation

## NEUROLAC® Product Description

Article number	Internal diameter	Length
NG01-015/03	1.5 mm	3 cm
NG01-020/03	2.0 mm	3 cm
NG01-025/03	2.5 mm	3 cm
NG01-030/03	3.0 mm	3 cm
NG01-040/03	4.0 mm	3 cm
NG01-050/03	5.0 mm	3 cm
NG01-060/03	6.0 mm	3 cm
NG01-070/03	7.0 mm	3 cm
NG01-080/03	8.0 mm	3 cm
NG01-100/03	10.0 mm	3 cm



All NEUROLAC® products are available in boxes of 1 unit. Store NEUROLAC® at or below 4°C. Shelf life of NEUROLAC® is 42 months.

NEUROLAC® is CE-approved under CE 0344 and filed at the FDA under number K032115 (1.5-3.0 mm) and K050573 (4.0-10 mm).

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The information presented in this brochure is intended to inform and demonstrate the product. Always refer to the package insert, product label and/or user instructions before using this product. NEUROLAC® is a registered trademark of and manufactured by Polyganics B.V., The Netherlands.

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