LESS INFLAMMATION
LESS NEUROMATA
LESS O.R. TIME.
LESS IS MORE.


EVIDENCE SUMMARY
Reconstruction of Digital Nerves with Collagen Conduits

To evaluate effective options for the reconstruction of lacerated digital nerves in situations where direct end-to-end repair would result in undue tension.

19 patients with 22 proper digital nerve lacerations underwent nerve repair using NeuraGen Nerve Guides when the nerve gap was intraoperatively measured at... <2cm and primary repair would result in undue tension.

There were no painful neuroma formations or nerve sensitivity at final follow-up reported.

Graded Satisfaction Results

- 59% EXCELLENT
- 14% GOOD
- 27% FAIR
- 0% POOR

Reflected as Outcome Measurement for M2PD and S2PD

Study Conclusion
The authors state that this study confirms that collagen conduits reliably provide a repair that restores nerve function for nerve gaps measuring less than 2 cm.

Clinical results may vary.
Prospective Study of Type 1 Collagen Nerve Conduits for Median Nerve Repairs in the Forearm

To evaluate clinical outcomes in patients with traumatic median nerve lacerations repaired with collagen conduits.

9 patients with median nerve gaps measuring 1 to 2 cm following traumatic laceration underwent entubulation nerve repair within 18 hours of the injury.

Manual Muscle Strength Testing

- M3 = 33%
- M4 = 45%
- M5 = 22%

M0 = NO MUSCLE STRENGTH
M5 = FULL MUSCLE STRENGTH

No painful neuromas or tender scars reported.

Study Conclusion
Patients demonstrated good motor functioning in clinical and nerve conduction velocity measurements.

"This study indicates that purified type 1 bovine collagen conduits are a practical and efficacious method for the repair of median nerves in the distal forearm."
2-Year Follow-Up of a Prospective, Blinded Clinical Multicenter Randomized, Controlled Trial.³

Comparison of collagen conduit vs. direct end-to-end repair during acute mixed sensory-motor nerve lacerations.

31 adult patients. 32 complete laceration nerve repairs of the median or ulnar nerves in the distal third of the forearm. 72 hours or less after injury.

The subjects were randomized at the time of surgery following nerve gap measurements used to determine suitability for direct end-to-end suture repair vs collagen conduit repair with no gaps exceeding 20mm.

The use of Collagen Nerve Guide Conduits for repair of median and ulnar nerve lacerations is associated with recovery of sensory and motor function are equivalent to direct suture repair at 24 months.

40% less O.R. time than direct sutures.

A semipermeable membrane also allows for exclusion of fibrogenic cells responsible for fibrosis and scar formation from entering the repair site.³
**Different by Design.** An *in-vivo* pre-clinical head-to-head evaluation between Integra® Nerve Collagen Technology and AxoGen® AxoGuard® Porcine SIS material was performed subcutaneously in rats (N=6 implants per group) and evaluated by an independent histopathologist after 2 weeks\(^4\), an important time point in nerve regeneration.

Histological images reveal that AxoGen® AxoGuard® porcine small intestinal submucosa (SIS) xenograft material elicits greater inflammatory response than Integra's UltraPure Collagen™ material (H&E Stain; 100x).*

*Based on *in vivo* laboratory testing; clinical results may vary.

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**Biologic Materials Matter.**

Biologically-derived materials are commonly used to create a protective interface between the nerve and surrounding soft tissue during peripheral nerve repair surgeries.

A growing concern regarding the use of porcine small intestinal submucosa (SIS) for medical applications has led researchers to evaluate its potential to elicit an undesirable tissue response.\(^5-7\)

Peer-reviewed studies demonstrate porcine SIS xenografts have been associated with increased inflammation after implantation.\(^6-9\)

Integra’s UltraPure Collagen™ is manufactured using validated processing methods to remove species-specific information to maximize tissue compatibility.\(^10-11\)
More Sizes Than Any Other Conduit on the Market

- 21 available NeuraGen® Nerve Guide & NeuraWrap® Nerve Protector sizes versus 16 sizes offered by AxoGen® AxoGuard® Product options
- NeuraGen Nerve Guide is the only type I bovine collagen conduit available in 1.5mm diameter, ideal for digital nerve repairs
- Readily available supply, extended shelf-life, dependable and precise sizes available

### NeuraGen® Nerve Guide Ordering Information

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### NeuraWrap® Nerve Protector Ordering Information

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** actual size

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NeuraGen® Nerve Guide Description: NeuraGen nerve guide is an absorbable implant for the repair of peripheral nerve discontinuities. NeuraGen nerve guide provides a protective environment for peripheral nerve repair after injury, and is designed to be an interface between the nerve and surrounding tissue and to create a conduit for axonal growth across a nerve gap. When hydrated, NeuraGen nerve guide is an easy to handle, soft, pliable, nonfibrous, porous collagen tube. Indications For Use: NeuraGen nerve guide is indicated for the repair of peripheral nerve discontinuities where gap closure can be achieved by flexion of the extremity. Contraindications: NeuraGen nerve guide is not designed, sold or intended for use except as described in the indications for use and is contraindicated for patients with a known history of hypersensitivity to bovine derived materials. Adverse Events: Possible complications can occur with any nerve repair surgical procedure including pain, infection, decreased or increased nerve sensitivity, and complications associated with use of anesthetics.

NeuraWrap® Nerve Protector Description: NeuraWrap nerve protector is an absorbable collagen implant that provides a non-constricting enasurance for injured peripheral nerves for protection of the neural environment. NeuraWrap nerve protector is designed to be an interface between the nerve and the surrounding tissue. When hydrated, NeuraWrap nerve protector is an easy to handle, soft, pliable, nonfibrous, porous collagen conduit. The resilience of the collagen conduit allows NeuraWrap nerve protector to recover and maintain closure once the device is placed around the nerve. Indications For Use: NeuraWrap nerve protector is indicated for the management of peripheral nerve injuries in which there has been no substantial loss of nerve tissue. Contraindications: NeuraWrap nerve protector is not designed, sold or intended for use except as described in the indications for use and is contraindicated for patients with a known history of hypersensitivity to bovine derived materials. Adverse Events: Possible complications can occur with any peripheral nerve surgical procedure including pain, infection, decreased or increased nerve sensitivity, and complications associated with use of anesthetics.

* As the manufacturer of this device, Integra LifeSciences Corporation does not practice medicine and does not recommend this or any other surgical technique for use on a specific patient. The surgeon who performs any procedure is responsible for determining and using the appropriate technique in each patient.


Availability of these products might vary from a given country or region to another, as a result of specific local regulatory approval or clearance requirements for sale in such country or region.

Non contractual document. The manufacturer reserves the right, without prior notice, to modify the products in order to improve their quality.

Warning: Applicable laws restrict these products to sale by or on the order of a physician.

Consult product labels and inserts for any indication, contraindications, hazards, warnings, precautions, and instructions for use.

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For more information or to place an order, please contact:

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