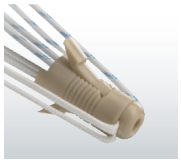
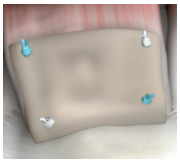
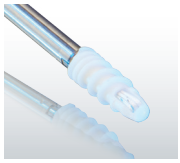
Treating Massive Rotator Cuff Tears and Revisions

The solutions leading surgeons are using to help achieve higher success rates and better patient outcomes.

Shoulder Restoration System™







To learn more about these and other innovative products, call **800-237-0169** or visit **ConMed.com**.

Advancing the Future of Minimally Invasive and Orthopaedic Surgery.

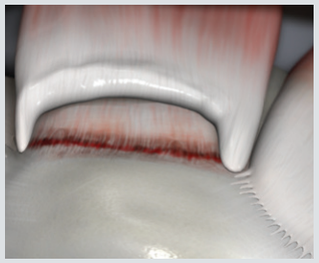
Together.

SHOULDER RESTORATION SYSTEM™

Problem:
Massive Tears Have the Highest Failure Rates

Many surgeons and their patients would prefer rotator cuff repair over reverse arthroplasty.

Even with recent advances in rotator cuff repair techniques and technology, tissue quality, biomechanical forces and lack of a good vascular supply have led to reported failure rates of as high as 68%[1] in large to massive tears (Grades III and IV).[1,2,3,4]



Large to massive tears have shown failure rates as high as **68%**[1]

However, surgeons who use a biologic scaffold and innovative anchors like the Y-Knot® RC are achieving significantly higher success rates while still preserving the joint.[2,4]

> **"Rotator cuff tears are still one of the most challenging healing environments faced by orthopaedic surgeons. However, there are proven ways to help mitigate the failure risks and achieve better outcomes."**

Thomas Gill, M.D.
Massachusetts General Hospital

[1] Jost B, Pfirrmann CWA, Gerber C. Clinical outcome after structural failure of rotator cuff repairs. *J Bone Joint Surg Am* 2000; 82:304-14.

[2] Barber FA, Burns JP, Deutsch A, Labbé MR, Litchfield RB. A prospective, randomized evaluation of acellular human dermal matrix augmentation for arthroscopic rotator cuff repair. *Arthroscopy.* 2012 Jan;28(1):8-15. doi: 10.1016/j.arthro.2011.06.038. Epub 2011 Oct 5.

[3] Barber, FA, Aziz-Jacobo J. Biomechanical testing of commercially available soft-tissue augmentation materials. *Arthroscopy* 2009;25:1233-1239.

[4] Agrawal, V. Healing rates for challenging rotator cuff tears utilizing an acellular human dermal reinforcement graft. *Int J Shoulder Surg.* 2012 Apr;6(2):36-44. doi: 10.4103/0973-6042.96992.

ConMed Solution:
Augment the Repair with an Extracellular Matrix (ECM) Scaffold

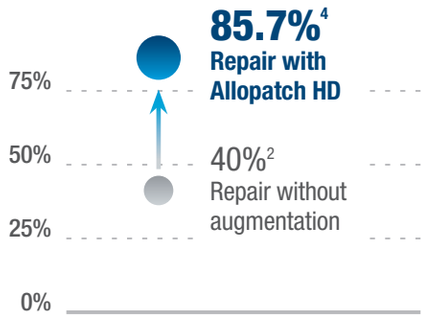
In massive tears and revisions, poor tissue quality is one of the biggest obstacles to performing a successful repair.

By augmenting the tissue with an ECM scaffold like Allopatch HD®, peer-reviewed research has shown that surgeons can potentially go from a 40%[2] success rate without augmentation to an 85.7%[4] success rate with augmentation.

> **"For massive or revision rotator cuff tears, the patient has the best chance with a low-tension repair and an acellular human dermal matrix allograft."**

Steve Snyder, M.D.
Southern California Orthopedic Institute

Proven **85.7%**[4] success rates when using biologic augmentation



Success rate
of large rotator cuff tear repair techniques

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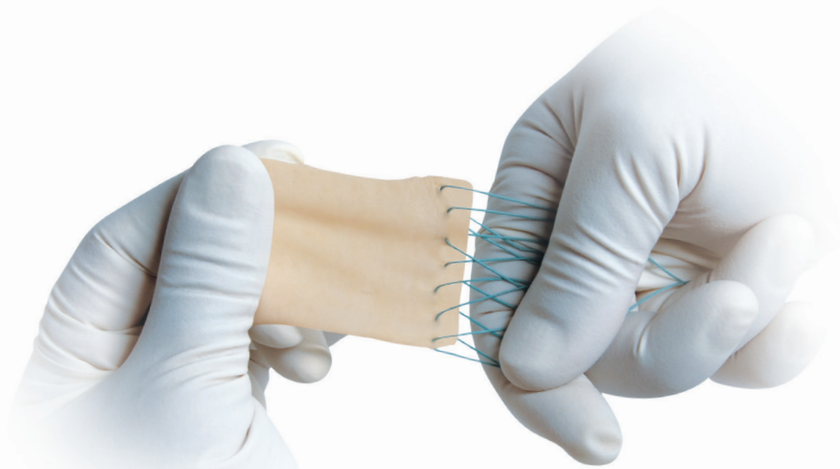
ConMed Solution:
Take the uncertainty out of choosing the right solution with Allopatch HD®



A stronger scaffold option than synthetics and xenografts

Among the available scaffold types, clinical studies have shown that ECMs like Allopatch HD® are stronger–exhibiting better suture retention and greater ultimate load failure rates than synthetics and xenografts.[3]

No rehydration required

Unlike other ECMs that need to be hydrated for 60 minutes or longer before being used – delaying completion of the procedure and prolonging OR time – Allopatch HD® requires no refrigeration or rehydration and it is ready to use off the shelf almost immediately.

"I don't always use a patch, but I always have one in the room for massive and revision rotator cuffs. If I decide that I want to augment once I'm in the joint, the fact that Allopatch is ready in a matter of seconds is a real advantage. With other patches, everyone has to wait – me, my staff and the patient."

Marc Labbé, M.D.
Bone and Joint Clinic of Houston

[3] Barber, FA, Aziz-Jacobo J. Biomechanical testing of commercially available soft-tissue augmentation materials. *Arthroscopy* 2009;25:1233-1239.

In partnership with MTF Musculoskeletal Transplant Foundation

Tissue Quality

Not all allografts are the same.

While it is often assumed that all allograft tissue is the same, tissue quality can vary greatly depending on the standards of the tissue bank. Musculoskeletal Transplant Foundation (MTF) is the tissue bank that supplies ConMed allograft tissue. MTF's stringent donor criteria standards exceed those set by the AATB, FDA, and most tissue banks. Starting with better tissue is critical, that is why **less than 3% of donors meet their criteria.** These strict criteria help to ensure high quality tissue.

Minimally processed

Allopatch HD® is minimally processed and not crosslinked which better preserves and maintains the graft's natural biomechanical, biochemical and matrix properties.

"For all large, recurrent or irreparable rotator cuff tears that require grafting, I use MTF grafts. They have very high donor selection standards and the grafts have been the most reliable of any grafts I have used in terms of their thickness, consistency and healing. I know that the tissue I'm using is both safe and high quality."

Joseph Burns, M.D.
Southern California Orthopedic Institute

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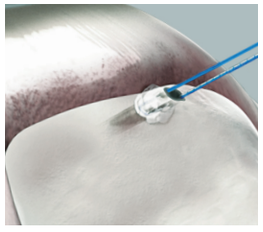


Y-KNOT® RC ALL-SUTURE ANCHORS FEATURE 360° FORMFIT FIXATION

ConMed Solution:
Choose the Right Anchors for the Right Procedure

All-Suture Anchors
Y-Knot® RC Self-Punching Anchors

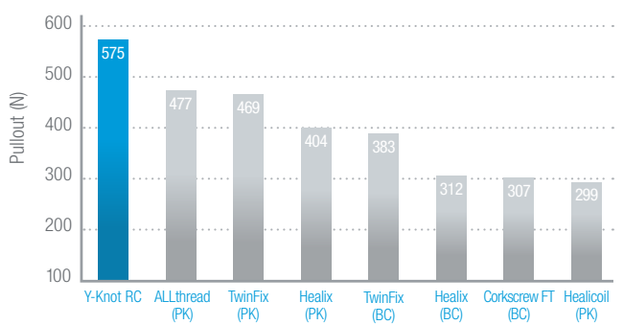
To help simplify the technique, the self-punching Y-Knot® RC anchors provide strong purchase in bone with a smaller footprint than traditional fixation methods.

With a 2.8mm size that's available double or triple loaded, Y-Knot® RC anchors require less bone removal than larger metal, PEEK and biocomposite anchors – improving placement options when bone real estate is limited or if the original anchors remain intact from a failed repair. The combination of small size, high pullout strength and simple technique make the Y-Knot® RC the ideal anchor for massive rotator cuff tears.

"The Y-Knot RC anchor is an excellent choice for routine or revision rotator cuff repair. The design provides single step, self-punching insertion in the majority of cases, simplifying surgical procedures by eliminating steps. The Y-Knot RC also permits fixation in critical areas due to their small size, which is particularly important in revision cases where space may be limited by previous anchors."

L. Pearce McCarty III, M.D.
Sports and Orthopaedic Specialists
Edina, MN

Loads-to-Failure in Porcine Cortical Bone[5,6]



In addition to the preferable 2.8mm footprint, these anchors deploy to 5.0mm under the cortex for firm fixation even in soft bone.

PEEK/Biocomposite
CrossFT™ Fully-Threaded Suture Anchors

CrossFT™ fully threaded suture anchors are available in PEEK or GENESYS™ biocomposite material, which combines strength and bone-in-growth[7] seldom found in other anchors. The cortical and cancellous threads provide industry-leading pullout strength of 689N.[6] The anchor's cannulation may channel growth factors to the healing tendon. CrossFT anchors are available with swaged on needles for a mini-open technique or may also be used arthroscopically.

Double-Row Repairs
PopLok® Knotless Suture Anchors

For surgeons who perform double-row repairs or wish to secure the Allopatch HD® laterally, PopLok® Knotless Suture Anchors feature a suture locking mechanism that traps suture within the anchor for dependable fixation. They also provides the ability to tension the suture after the anchor is seated in the pilot hole.

Additional Surgeon Resources

At ConMed, we believe everything we do should be an answer, a solution to a challenge that our customers face.

Please visit **SRS.CONMED.COM** for video surgical techniques, surgeon testimonials, and product demonstrations as well as information about in-depth labs and other learning opportunities.

[5] Data on File. Y-Knot RC triple-loaded and Arthrex Corkscrew® FT (double-loaded) tested in porcine cortical bone.

[6] Barber FA, et al., Cyclic Loading Biomechanical Analysis of the Pullout Strengths of Rotator Cuff and Glenoid Anchors: 2013 Update, *Arthroscopy* 2013; 29:832-844.

[7] Daculsi G, et al., Osteoconductive properties of poly(96L/4D-lactide)/beta-tricalcium phosphate in long term animal model, Biomaterials 2011, doi:10.1016/j.biomaterials.2011.01.033

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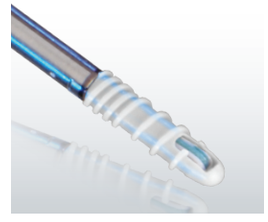
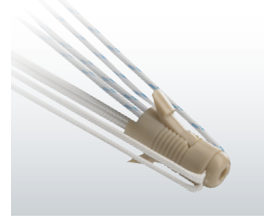


GENESYS™ CROSSFT ANCHOR



POPLOK ANCHOR

"These are reliable and strong anchors that work very well in all my patients."

Jeffrey Abrams, M.D.
Princeton Orthopaedic Associates

ConMed
525 French Road, Utica, NY 13502

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Ordering Information

Description	Size	Catalog Number	
Allopatch HD® Human Dermis		Hydrated	Dehydrated
Allopatch HD® – Thick (0.8mm-1.7mm)	5cm x 5cm	471505	371505
Allopatch HD® – Ultra Thick (1.8mm-3.9mm)	5cm x 5cm	472505	–
Allopatch HD® – Thick (0.8mm-1.7mm)	4cm x 8cm	471408	371408
Allopatch HD® – Ultra Thick (1.8mm-3.9mm)	4cm x 8cm	472408	–
Additional Allopatch HD® sizes available.			
Y-Knot® RC All-Suture Anchors		Double-loaded	Triple-loaded
Y-Knot® RC All-Suture Anchor w/#2 Hi-Fi® Sutures	2.8mm	YRC02	YRC03
GENESYS™ CrossFT™ Suture Anchor		Double-loaded	Triple-loaded
GENESYS™ CrossFT™ w/#2 Hi-Fi® Sutures	4.5mm	CFBC-4502	CFBC-4503
GENESYS™ CrossFT™ w/#2 Hi-Fi® Sutures	5.5mm	CFBC-5502	CFBC-5503
GENESYS™ CrossFT™ w/#2 Hi-Fi® Sutures	6.5mm	CFBC-6502	CFBC-6503
GENESYS™ CrossFT™ Suture Anchor w/Needles		Double-loaded	Triple-loaded
GENESYS™ CrossFT™ w/#2 Hi-Fi® Sutures w/ Needles	4.5mm	CFBC-4502N	CFBC-4503N
GENESYS™ CrossFT™ w/#2 Hi-Fi® Sutures w/ Needles	5.5mm	CFBC-5502N	CFBC-5503N
GENESYS™ CrossFT™ w/#2 Hi-Fi® Sutures w/ Needles	6.5mm	CFBC-6502N	CFBC-6503N
CrossFT™ Suture Anchor		Double-loaded	Triple-loaded
CrossFT™ w/#2 Hi-Fi® Sutures	4.5mm	CFP-4502	CFP-4503
CrossFT™ w/#2 Hi-Fi® Sutures	5.5mm	CFP-5502	CFP-5503
CrossFT™ w/#2 Hi-Fi® Sutures	6.5mm	CFP-6502	CFP-6503
CrossFT™ Suture Anchor w/Needles		Double-loaded	Triple-loaded
CrossFT™ w/#2 Hi-Fi® Sutures w/ Needles	4.5mm	CFP-4502N	CFP-4503N
CrossFT™ w/#2 Hi-Fi® Sutures w/ Needles	5.5mm	CFP-5502N	CFP-5503N
CrossFT™ w/#2 Hi-Fi® Sutures w/ Needles	6.5mm	CFP-6502N	CFP-6503N
PopLok® Knotless Suture Anchors			
PopLok® Knotless Suture Anchor	3.5mm	CKP-3500	
PopLok® Knotless Suture Anchor	4.5mm	CKP-4500	

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In partnership with MTF Musculoskeletal Transplant Foundation

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