



Arthroscopic Rotator Cuff Repairs with the Regeneten Biologic Implant

What is Regeneten?

The **Regeneten Bioinductive Implant** is an innovative, biologically active collagen-based scaffold designed to promote healing of rotator cuff tendons. Made from highly purified type I collagen derived from bovine Achilles tendon, the implant mimics the natural extracellular matrix, encouraging the body's own regenerative processes to form new tendon-like tissue.

Clinical Benefits

Regeneten is used arthroscopically and placed directly over the partial tear. It functions as a **bioinductive scaffold**, stimulating collagen formation and tendon thickening while reducing the need for more invasive repair procedures. This is especially useful for **bursal-sided partial-thickness rotator cuff tears**.

Evidence-Based Outcomes

- A **prospective multicenter study** (Bokor et al., *JSES*, 2016) showed that Regeneten significantly increased tendon thickness and improved functional scores with **no adverse implant-related events**.
- In a **comparative analysis**, Thon et al. (*AJSM*, 2019) found that patients treated with Regeneten demonstrated greater improvements in pain and function than those managed with debridement alone.
- A 2022 systematic review by Hevesi et al. (*JSES Reviews, Reports, and Techniques*) concluded that the implant is **safe, biocompatible**, and leads to **low re-tear rates** in partial-thickness tear management.

How is this performed?

The procedure is performed arthroscopically, utilizing small incisions around the shoulder. Typically, there are about 3 to 5 incisions made. These incisions heal well and are closed with absorbable sutures.

Length of Stay

This is an outpatient procedure. You will need to arrange for someone to take you home after the surgery. Your ride does not need to remain for the entire duration of the procedure.

Anesthesia

Patients usually have two types of anesthesia for this surgery. The first is general anesthesia, which means you are asleep. The second type of anesthesia is a nerve block. Your arm will be numb and will feel very strange. The nerve block will last about 12-14 hours. The anesthesiologist will speak to you on the day of surgery. The ultimate choice of anesthesia technique is up to you and your anesthesiologist. It is normal for the hand and arm to feel "tingly" for up to 24 hours.

Incision

This surgery is performed arthroscopically. You will have about 5 small arthroscopic incisions about 1 cm each around the shoulder. The sutures are buried and absorbable. There will be small "Steri-Strips" on the wounds after you remove the dressings, and these will stay on for about 2 weeks. The steri-strips can get wet in the shower.

Pain

Shoulder surgeries are initially very uncomfortable. You will have pain medication prescribed for you prior to discharge. After the nerve block wears off you will have discomfort. Most of the pain is related to your very swollen shoulder. That swelling will resolve in 24-48 hours. It is important to stay on top of the pain medication. Most patients receive Toradol, which is a strong anti-inflammatory. Begin taking this medication when you get home. The Narcotic you are prescribed should be used as a rescue medication as needed. For the first 2 days it is advised that you take 1 of these pills around the clock to stay on top of the pain. If it is too strong, you can take Extra strength Tylenol in its place.

Sling

Your arm will be placed in a sling prior to leaving the operating room. You are to remain in your sling 24 hours a day for the first week. This includes sleeping in your sling. Sling use can be discontinued on average of 19 days after surgery. You can remove the sling to take showers and get dressed. You may allow the operative arm to dangle at the side and avoid active lifting of the arm.

Post Op Ice Therapy

If you can obtain an Ice Machine Unit these are very helpful. **Please be sure to bring it in with you on the day of surgery.** Plan to use ice on the shoulder intermittently at least for the first 48 hours after surgery. You should use ice therapy on the shoulder for 15-minute increments throughout the day. Using ice therapy helps decrease pain and swelling. You can use it daily as needed throughout your recovery period.

Driving

You are not allowed to drive until you are out of the sling and you feel safe. This is usually about 2 weeks post op.

Dressings

You will go home with dressings and gauze. You may shower after surgery as long as the TEGADERM or MEPILEX dressing is intact. If the tegaderm begins to fall off it may be removed after 3 days. The actual skin incision CANNOT get wet prior to 3 days. After the dressings are removed, simply allow the water to wash over the site and then pat dry. Do not rub the incisions. Make sure your axilla (armpit) is completely dry after showering.

Physical Therapy

Formal Physical Therapy can begin after 2 weeks. You should set up your appointments with your therapists before surgery. You will attend formal physical therapy until you are about 6 months after your surgery. Physical Therapy is an important part of restoring strength and motion after a tendon transfer.

Nutritional Supplementation :Optimize Recovery with Targeted Amino Acids

Nutrition plays a pivotal role in tendon healing and collagen synthesis—yet it's often overlooked in orthopedic surgery.

I recommend Xcellerated Recovery™, a clinical-grade supplement that provides:

Essential amino acids (EAAs)

Collagen-specific peptides

Micronutrients essential for connective tissue repair

 Purchase here: www.XRscience.org Discount code: ACEMD20

Supporting Research

Tipton et al. (2009): EAAs independently stimulate muscle protein synthesis post-operatively.

Oikawa et al. (2017): Amino acid intake improved tendon collagen cross-linking in rehab settings.

Shaw et al. (2017) (Nutrients): Collagen peptide supplementation enhances connective tissue remodeling and reduces joint pain in athletes.

This supplementation protocol can accelerate healing, reduce inflammation, and enhance recovery outcomes when paired with physical therapy.

Restrictions

Day of surgery to Week 1-2: remain in sling, no use of arm, out of work, no driving

Weeks 2-6: No lifting and carrying anything greater than 5 lbs.

Weeks 6-12: No lifting and carrying anything greater than 10 lbs and only occasional over shoulder reaching

>3 months: No restrictions, resume activities as tolerated

Follow Up Appt

You should have had your follow up appointment made at the time of your preoperative appointment. You should be seen at around 10-14 days.