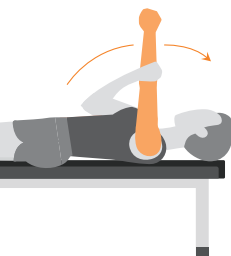# Exercise reference

Pendulum exercise

Remove your sling, bend over at the waist and let the arm hang down. Using your body to initiate movement, swing the arm gently forward and backward and in a circular motion.

Supine passive forward elevation

Lie on your back. Hold the affected arm at the elbow with the opposite hand. Assisting with the opposite arm, lift the operated arm upward, as if to bring the arm overhead. Slowly lower the arm back to the bed.

Supine external rotation

Lie on your back. Keep the elbow of the operated arm against your side with the elbow bent 90 degrees. Using a cane or a long stick in the opposite hand, push against the hand of the operated arm so that the operated arm rotates outward. Hold for 10 seconds, relax and repeat. The amount of allowed external rotation will be specified after surgery.
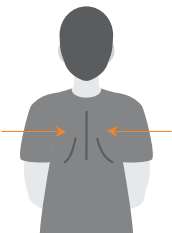
Shoulder blade pinches

While standing, pinch shoulder blades backward and together.

Let's get you back to YOU

We must emphasize that this protocol is recommended ONLY for partial thickness tears receiving just the implant with no repair or anything additional.

The following protocol guide was prepared under the guidance and collaboration of the Rotation Medical Scientific Advisory Board (which included Dr. Jeffrey Abrams, Dr. Steven Arnoczky, Dr. Desmond Bokor, Dr. Charles Ho, Dr. Leslie Matthews, Dr. Marc Labbé, Dr. Scott Rodeo, Dr. Richard Ryu, Dr. Theodore Schlegel, Dr. Brad Bushnell, Dr. Sean McMillan, Dr. Scott Sigman, Dr. Shariff Bishai, Dr. Paul Favoritto, Dr. Scott Trenhaile and Dr. Lou McIntyre. Dr. Felix Savoie) This protocol contains a summary of medical techniques and opinions based upon their training and expertise in the field, along with their knowledge of Smith+Nephew's REGENETEN◊ Bioinductive Implant. Smith+Nephew does not provide medical advice and recommends that surgeons exercise their own professional judgment when determining a patient's course of treatment. This guide is presented for educational purposes only. For more information on the REGENETEN Bioinductive Implant, including its indications for use, contraindications, and product safety information, please refer to the product's label and the Instructions for Use packaged with the product.
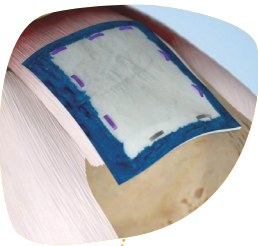
Rehabilitation protocol

for REGENETEN partial thickness tears without repair

Smith+Nephew

REGENETEN◊
Bioinductive Implant

1 Phase I

Immediate post-op phase
(first 5-7 days after surgery, prior to starting PT)

Goals

- Protect the surgical site
- Ensure wound healing
- Diminish pain and inflammation
- Prevent stiffness and regain motion

Activities

Sling: Use your sling for 24-48 hours. Remove the sling 4 or 5 times a day to do pendulum exercises. You will need to sleep with your sling and pillow in place. It is often more comfortable to sleep in a recliner or on several pillows.

Use of the affected arm: You may use your hand on the affected arm in front of your body. It is all right for you to flex your arm at the elbow. Continue to move your elbow wrist and hand to help circulation and motion.

- ❌ No lifting of objects over 5 lbs.
- ❌ No excessive shoulder extension
- ❌ No excessive stretching or sudden movements
- ❌ No supporting of body weight by hands

Ice: Continue to ice on a regular basis. At least 20 minutes at a time, 4-5 times per day.

Appointment: Your first therapy appointment should be within 5-7 days after your surgery.

Exercises

Program: 7 days per week, 4-5 times per day

Pendulum exercises	1-2 sets	20-30 reps
Supine external rotation	1-2 sets	10-15 reps
Supine passive arm elevation	1-2 sets	5-10 reps
Scapular retraction	1-2 sets	5-10 reps
Shoulder Shrug	1-2 sets	10-15 reps

2 Phase II

Intermediate phase
(1-6 weeks post-op)

At this point you should begin your formal physical therapy, the instructions that follow are to aid your therapist in maximizing the results of your surgery while still protecting the repair. Bring these instructions to your therapy appointment.

Your therapist will instruct you on how to perform the exercises below and give you a home exercise program. It is important that you stay within the limits demonstrated and that you perform your exercises daily. You should strive to do your home exercise program at least 3-4 times per day, every day. The success of your repair depends on your rehab.

PT should not hurt. Do not force painful motions.

Goals

- Restore non-painful range of motion (ROM)
- Retard muscular atrophy
- Decrease pain/inflammation
- Improve postural awareness
- Minimize stress to healing structures
- Independent with activities of daily living (ADLs)
- Prevent muscular inhibition
- Wean from sling

Activities

Sling: You should now have weaned out of using your sling. It is a good idea, however, to continue to use your sling when you are away from your house to "send a signal" that others should not hit your shoulder.

Ice: Continue to ice on a regular basis. At least 20 minutes at a time, 4-5 times per day.

Driving: Unless instructed otherwise it should be okay to drive at this point.

Use of the affected arm: You can actively use your arm for daily living: bathing, dressing, driving, typing on a computer, eating, and drinking.

Range of Motion

- PROM (non-forceful flexion and abduction)
- Active assisted range of motion (AAROM)
- AROM
- Pendulums
- Pulleys
- Cane exercises
- Self stretches

Strengthening

Isometrics: scapular musculature, deltoid, and rotator cuff as appropriate

Isotonic: theraband internal and external rotation in 0 degrees abduction

Once patient has pain free full ROM and no tenderness, may progress to the exercises below

Exercises

- Initiate isotonic program with dumbbells
- Strengthen shoulder musculature- isometric, isotonic, Proprioceptive Neuromuscular Facilitation (PNF)
- Strengthen scapulothoracic musculature - isometric, isotonic, PNF
- Initiate upper extremity endurance exercises

Manual treatment

- Joint mobilization to improve/restore arthrokinematics if indicated
- Joint mobilization for pain modulation

3 Phase III

Intermediate phase
(6 weeks and beyond)

Goals

- Improve strength, power, and endurance
- Improve neuromuscular control
- Prepare athlete to begin to throw, and perform similar overhead activities or other sport specific activities

Criteria for progression to this phase

- Full painless ROM
- No pain or tenderness on examination

Exercises

- Continue dumbbell strengthening (rotator cuff and deltoid)
- Progress theraband exercises to 90/90 position for internal rotation and external rotation (slow/fast sets)
- Theraband exercises for scapulothoracic musculature and biceps
- Plyometrics for rotator cuff
- PNF diagonal patterns
- Isokinetics
- Continue endurance exercises (UBE)
- Diagonal patterns

Return to sport

12 weeks and beyond once adequate strength achieved for sports specific criteria.