Rotator Cuff Repair Rehabilitation Protocol

Rehabilitation after rotator cuff repair is a structured, phased process. Progress is determined by both time and individual clinical milestones such as soft tissue healing, pain levels, and range of motion. This guide outlines a general framework; individual protocols may vary based on factors like tear size, tissue quality, and whether the injury is acute, chronic, or a revision.

General Rehabilitation Considerations

- **Individualized Approach**: Each patient's rehabilitation should be tailored based on pre-operative condition, surgical findings, and rate of recovery.
- **Tear Size & Tissue Quality**: Smaller tears and younger patients with good tissue quality may progress more quickly. Larger or massive tears require slower rehabilitation due to increased failure risk and motion limitations.
- **Pain Monitoring**: Pain should gradually decrease. Persistent or worsening pain may signal the need for modification in the rehab plan.
- **Emphasis on Range of Motion (ROM)**: Early phases focus on restoring passive and active ROM before initiating strengthening.
- **Quality of Movement**: Exercise technique is critical. Avoid compensatory motions that can reinforce dysfunctional movement patterns.
- **Tendon Healing Timeline**: Healing of the tendon to bone takes approximately 12 weeks. Strengthening is generally delayed until this point to protect the repair.

Post-Operative Expectations

- Mild swelling, bruising, and shoulder discomfort are normal post-operatively.
- Nausea or vomiting may occur for the first 24 hours.
- Contact your provider for unmanageable pain, persistent nausea, or if signs of infection or blood clots develop.

Signs Requiring Immediate Medical Attention

- **Infection**: Fluid leakage, foul odor, redness, warmth, increased pain, fever over 101°F, chills, or feeling unwell.
- **Blood Clot**: Swelling, tenderness, or redness in the leg; chest pain or difficulty breathing (call 911 immediately if these occur).

Rehabilitation Phases

Phase I: Immediate Post-Operative / Passive Motion

Timeframe: 0–4 weeks (may extend to 6–10 weeks depending on severity)

Goals:

- Protect surgical repair
- Minimize pain and inflammation
- Prevent stiffness and muscle inhibition
- Normalize scapular mechanics

Sling Use:

- Worn continuously (with small abduction pillow if needed)
- May be removed for hygiene, therapy, and controlled activities

Precautions:

- No active shoulder use or weight-bearing through the arm
- Avoid behind-the-back movements or sudden motion
- Specific restrictions for subscapularis or biceps procedures

Exercises:

- **Cold therapy**: Frequent icing for 15 minutes
- **Wound care**: Showering permitted after 48 hours; no submersion until fully healed
- **Gentle movement**: Elbow, wrist, hand, and neck ROM; ball squeezes (if no biceps repair)
- **Pendulums**: Begin within 1 week
- **Passive ROM**: Therapist-assisted flexion, ER, IR, abduction
- **Scapular exercises**: Elevation, depression, retraction, protraction

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Phase II: Active-Assisted to Active Range of Motion

Timeframe: 4–10 weeks (may extend to 14–18 weeks)

Goals:

- Increase ROM without compensation

- Reduce resting pain
- Begin functional movement below shoulder level

Precautions:

- No lifting, pushing, pulling, or sudden motion
- Continue activity modification to protect repair

Exercises:

- **AAROM**: Begin at 4 weeks using stick, pulleys, or water therapy
- **AROM**: Gradual transition from assisted to independent motion
- **Scapular control**: Continued exercises for positioning and coordination
- **Isometrics**: Begin once sufficient motion is achieved
- **Manual therapy**: Joint mobilizations and scar massage as appropriate

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Phase III: Strengthening / Intermediate Phase

Timeframe: 8–12 weeks (may extend to 14–24 weeks)

Goals:

- Nearly full ROM
- Improve dynamic shoulder control
- Begin light strengthening and endurance

Precautions:

- Avoid lifting >5 lbs
- No overhead or high-risk exercises (e.g., "empty can")
- Avoid jerky or uncontrolled motions

Exercises:

- **Isometrics**: Initiated with submaximal effort
- **Resistance training**: Introduced gradually with bands or light weights (focus on endurance)
- **Rotator cuff strengthening**: Internal/external rotation with bands, side-lying ER
- **Deltoid/scapular strengthening**: Protraction, retraction, rowing, closed chain work
- **Stretching**: Gentle ROM stretches daily
- **Cardio**: Non-impact lower body aerobic exercises

Phase IV: Advanced Strengthening

Timeframe: 12–22 weeks (can extend beyond 6 months)

Goals:

- Restore full, pain-free ROM
- Build strength, endurance, and power
- Return to functional activity

Precautions:

- Avoid pain-provoking exercises or forceful movements
- Monitor lifting thresholds

Exercises:

- **Progressive strengthening**: Full-body and shoulder-specific resistance training
- **Rotator cuff**: Varied positions, resistance, and tempo
- **Scapular control**: Dynamic and multiplanar movement patterns
- **Stretching**: Aggressive stretches as needed

Phase V/VI: Return to Activity or Sport

Timeframe: 20–30 weeks (up to 1 year)

Goals:

- Full strength and mobility for return to work or sport
- Emphasis on endurance, stability, and overhead strength

Precautions:

- Avoid any activity causing pain or excessive strain

Exercises:

- **Home program**: Continued stretching and strengthening 3x/week
- **Plyometrics**: If needed, progress from two-arm to one-arm, and from below to above shoulder height
- **Functional training**: Activity-specific drills and strengthening based on occupational/sport demands

Return-to-Activity Criteria:

- No pain at rest or during exercise
- Full ROM to meet activity demands
- Demonstrated strength and endurance (e.g., 5/5 rotator cuff strength, 65–70% ER/IR balance)
- Clearance by physician or therapist

Rehab Tracking

Patients are encouraged to keep a log of therapy sessions and home exercises, and bring this to each visit for progress monitoring and guidance.
