

Anatomic Shoulder Arthroplasty

<i>Phase I (surgery to 4 weeks after surgery)</i>	
Rehabilitation appointments	<ul style="list-style-type: none"> • Physician appointment within 1 week of surgery • Rehabilitation appointments begin within 1 week of surgery
Rehabilitation goals	<ul style="list-style-type: none"> • Reduce pain and swelling in the shoulder after surgery • Maintain active range of motion (AROM) of the elbow, wrist and neck • Protect healing of repaired tissues and implanted devices
Drs. Day and Grogan Precautions	<ul style="list-style-type: none"> • Sling only when sleeping for first 6 weeks or per pt's discretion in "unsafe" situations (crowds, ice, uneven ground etc) • OK to drive when pt feels they can safely drive after being off narcotic pain medications x 24 hours. • Avoid extremes of internal and external rotation for 6 weeks, no active internal rotation
Drs. Anderson and Woellegger Precautions	<ul style="list-style-type: none"> • Use sling continuously except while doing therapy or light, protected activities – such as desk work, for 4 weeks • Wear sling while sleeping for 6 weeks • No active shoulder motion for 4 weeks, all planes • No active internal rotation for 6 weeks • External rotation range of motion limited to 20 degrees
Suggested therapeutic exercise	<ul style="list-style-type: none"> • Elbow, wrist and neck AROM • Ball squeezes • Passive and active assistive range of motion (AAROM) for shoulder flexion and abduction to patient tolerance • Codmans/Pendulum exercises • Pain free isometrics for shoulder flexion, abduction, extension and external rotation
Cardiovascular exercise	<ul style="list-style-type: none"> • Walking and stationary bike with sling on • No treadmill
Progression criteria	<ul style="list-style-type: none"> • 4 weeks after surgery

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<i>Phase II (begin after meeting Phase I criteria, usually 4-8 weeks after surgery)</i>	
Rehabilitation appointments	<ul style="list-style-type: none"> • 1 time per week
Rehabilitation goals	<ul style="list-style-type: none"> • Controlled restoration of passive and active assistive range of motion • Activate shoulder and scapular stabilizers in a protected position of 0 degrees to 30 degrees of shoulder abduction • Correct postural dysfunctions
Suggested therapeutic exercises	<ul style="list-style-type: none"> • Passive and active assistive range of motion for the shoulder in all cardinal planes • Pain free, progressive, low resistance shoulder isotonic • Gentle, low velocity rhythmic stabilizations to patient tolerance • Scapular strengthening with the arm in neutral • Cervical spine and scapular active range of motions • Postural exercises • Core strengthening
Dr. Grogan Precautions	<ul style="list-style-type: none"> • Discontinue use of sling slowly based on safety of environment during weeks 5 and 6. Quit using sling by end of week 6.
Drs. Anderson and Woelger	<ul style="list-style-type: none"> • Wean out of the sling slowly based on the safety of the environment during weeks 5 and 6. Discontinue use of the sling by the end of week 6 • Wear sling while sleeping for 6 weeks • No active internal rotation for 6 weeks • External rotation range of motion limited to 30 degrees weeks 5 and 6, then to 45 degrees for weeks 7 and 8
Cardiovascular exercise	<ul style="list-style-type: none"> • Walking and stationary bike • No treadmill or stair master • Avoid running and jumping because of landing impact
Progression criteria	<ul style="list-style-type: none"> • 8 weeks after surgery

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<i>Phase III (begin after meeting Phase II criteria, usually 8 weeks after surgery)</i>	
Rehabilitation appointments	<ul style="list-style-type: none"> • Physician appointment 8 to 10 weeks after surgery • Rehab every 1-2 weeks
Rehabilitation goals	<ul style="list-style-type: none"> • Functional shoulder range of motion in all planes • Normal (rated 5/5) strength for shoulder internal rotators and external rotators with the shoulder in 0 degrees of abduction • Correct any postural dysfunction
Suggested therapeutic exercises	<ul style="list-style-type: none"> • Shoulder internal rotation and external rotation with theraband or weights that begin at 0 degrees of shoulder abduction—gradually increase shoulder abduction as strength improves • Open kinetic chain shoulder rhythmic stabilizations in supine (ie. starts or alphabet exercises) • Gentle closed kinetic chain shoulder and scapular stabilization drills—wall ball circles and patterns • Proprioceptive neuromuscular facilitation patterns • Side lying shoulder flexion • Scapular strengthening • Active, active assistive and passive range of motion at the shoulder as needed • Core strengthening • Begin trunk and hip mobility exercises
Precautions	<ul style="list-style-type: none"> • External rotation range of motion limited to 60 degrees
Cardiovascular exercise	<ul style="list-style-type: none"> • Walking and stationary bike • No treadmill, stair master or swimming • Avoid running and jumping because of landing impact
Progression criteria	<ul style="list-style-type: none"> • 12 weeks after surgery

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<i>Phase IV (begin after meeting Phase III criteria, usually 12 weeks after surgery)</i>	
Rehabilitation appointments	<ul style="list-style-type: none"> • Physician appointment 12 weeks after surgery • Rehab every 2-3 weeks
Rehabilitation goals	<ul style="list-style-type: none"> • Normal (rated 5/5) rotator cuff strength and endurance at 90 degrees of shoulder abduction and scaption • Advance proprioceptive and dynamic neuromuscular control retraining • Achieve maximal shoulder external rotation (no limitations) • Correct postural dysfunctions with work and sport specific tasks • Develop strength and control for movements required for work or sport
Suggested therapeutic exercises	<ul style="list-style-type: none"> • Multi-plane shoulder active range of motion with a gradual increase in the velocity of movement while making sure to assess scapular rhythm • Shoulder mobilization as needed • Rotator cuff strengthening in 90 degrees of shoulder abduction and overhead (beyond 90 degrees of shoulder abduction) • Scapular strengthening and dynamic neuromuscular control in open kinetic chain and closed kinetic chain positions • Core and lower body strengthening
Precautions	<ul style="list-style-type: none"> • Soreness should go away within 12 hours of activities
Cardiovascular exercise	<ul style="list-style-type: none"> • Walking, stationary bike and stair master • No treadmill or swimming • Begin light jogging and running if patient has normal (rated 5/5) rotator cuff strength in neutral and normal shoulder active range of motion
Progression criteria	<ul style="list-style-type: none"> • Full shoulder active range of motion in all planes and multi-plane movements • Normal (rated 5/5) strength at 90 degrees of shoulder abduction

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<i>Phase V (begin after meeting Phase IV criteria, usually 18 weeks after surgery)</i>	
Rehabilitation appointments	<ul style="list-style-type: none"> • Physician appointment 18 weeks after surgery • Rehab every 2-3 weeks
Rehabilitation goals	<ul style="list-style-type: none"> • Normal (rated 5/5) strength at 90 degrees of shoulder abduction • Advance proprioceptive and dynamic neuromuscular control retraining • Correct postural dysfunctions with work and sport specific tasks • Develop strength and control for movements required for work or sport • Develop work capacity cardiovascular endurance for work/sport
Suggested therapeutic exercises	<ul style="list-style-type: none"> • Multi-plane shoulder active range of motion with a gradual increase in the velocity of movement while making sure to assess scapular rhythm • Shoulder mobilization as needed • Rotator cuff strengthening in 90 degrees of shoulder abduction as well as in provocative positions and work/sport specific positions, including eccentric strengthening, endurance and velocity specific exercise • Scapular strengthening and dynamic neuromuscular control in overhead positions and work/sport specific positions • Work and sport specific strengthening • Core and lower body strengthening • Work specific program, golf program, swimming program or overhead
Precautions	<ul style="list-style-type: none"> • Soreness should go away within 12 hours of exercise
Cardiovascular exercise	<ul style="list-style-type: none"> • Use work and sport specific energy systems
Progression criteria	<ul style="list-style-type: none"> • Return to sport after receiving surgeon clearance • Return to sport is based on meeting goals