

Robert A. Keller, M.D.

Address

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## **Return to Swimming Protocol**

### **Dry-Land Rehabilitation**

PHASE ONE: 0-2 weeks

→→Establish stable base and strengthen rotator cuff UBE

Scapular squeezes – upper and low trapezius Sleeper stretch – posterior deltoid

Chin tucks – scalenes/deep anterior cervical musculature T band ER/IR – rotator cuff

Isometric supermans – thoracic/lumbar musculature Pectoral stretch on foam roller

Thoracic mobilizations

PHASE TWO: 2-4 weeks

→→Strengthening exercises in 0-90 degrees ROM T band rows – latissimus dorsi/rhomboids

Serratus punches and wall push-up plus – serratus anterior Y's, W's, T's – middle

deltoid/rhomboids/lower trapezius SLER – infraspinatus/teres minor

T band Scaption with scapula squeezes – lower trapezius/subscapularis Dumbbell Shrugs – upper trapezius

PHASE THREE: 4-6 weeks

→→Functional training to include core and lower extremity strengthening Lat pull down – latissimus dorsi

D1 – posterior deltoid/subscapularis Chest flies – pectoralis major

Dumbbell one arm row – rhomboids/posterior deltoid Smith press push-ups – serratus anterior

Medicine ball chops – serratus anterior

Cable reverse fly – rhomboids/posterior deltoid High pulls – upper trapezius

Prone HAB with ER – lower trapezius Abdominal Planks – core strength

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PHASE FOUR: week 6 – return to swimming

→→ Progressive return to swimming Power shrugs – core/upper trap Cable upright row – upper trap

Cable high to low chops – serratus anterior Supine dumbbell pullovers – serratus anterior

Seated cable row --- rhomboids

Incline bench press – pectoralis major/minor Dumbbell lateral raises – middle deltoid

Barbell push-press – quadriceps/gluteus maximus/deltoid Power rope circuit – core stability/upper body strength Lower body strengthening program

Initiate interval swimming program only when swimmer has full pain-free range of motion and full strength of glenohumeral and scapulothoracic muscles.

### **Return to the Pool**

Progressive return to swimming is vital. Yardage and frequency of workouts should be adjusted to each individual. Prior to beginning this program a starting point of yardage should be determined based on the average daily yardage performed before the injury. A good place to start is a 1000-yard swim of any stroke in order to for the swimmer to “feel the water” and gain confidence. Any increase in pain or discomfort throughout this program warrants re-evaluation of stroke mechanics and a decrease in yardage by 500 to 1000 yards per practice until swimmer is pain-free.

Stroke progression: breast →→ crawl →→ back →→ butterfly

Initial focus is on proper technique. Begin with slow cadence and increase speed as tolerated. Increase rest time between laps by 5-10 minutes as yardage increases.

Recommended initial frequency is 3x/week with a rest day between each session. Begin back-to-back sessions 4x/week followed by 5x/week followed by 6x/week every 2 weeks as long as swimmer is pain-free.

#### **100 to 300 YARD STAGE**

Step 1: Swim 100 yards

Rest 5 minutes

Swim 100 yards

Step 2: Swim 100 yards

Rest 5 minutes

Swim 100 yards

Rest 10 minutes

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Swim 100 yards

Step 3: Swim 150 yards

Rest 10 minutes

Swim 150 yards

Step 4: Swim 300 yards

300 to 600 YARD STAGE

Step 1: Swim 300 yards

Step 2: Swim 300 yards

Rest 10 minutes

Swim 100 yards

Step 3: Swim 300 yards

Rest 5 minutes

Swim 100 yards

Rest 5 minutes

Swim 100 yards

Step 4: Swim 300 yards

Rest 5 minutes

Swim 100 yards

Rest 5 minutes

Swim 100 yards

Rest 5 minutes

Swim 100 yards

Step 5: Swim 600 yards

600 to 1000 YARD STAGE

Step 1: Swim 600 yards

Step 2: Swim 600 yards

Rest 10 minutes

Swim 100 yards

Step 3: Swim 600 yards

Rest 5 minutes

Swim 100 yards

Rest 5 minutes

Swim 100 yards

Step 4: Swim 600 yards

Rest 5 minutes

Swim 100 yards

Rest 5 minutes

Swim 100 yards

Rest 5 minutes

Swim 100 yards

Step 5: Swim 600 yards

Rest 5 minutes

Swim 100 yards

Rest 5 minutes

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Swim 100 yards

Rest 5 minutes

Swim 100 yards

Rest 5 minutes

Swim 100 yards

Rest 5 minutes

Step 6: Swim 1000 yards

Continue dry-land rehabilitation 2-3x/week

Focus on one stroke at a time. When second stroke is incorporated, begin at first stage. Return to team practice when all strokes can be performed for 1000 yards with increased speed and only if swimmer is completely pain-free.