

POST-OPERATIVE **ACUTE CARE** SHOULDER PROGRAM

PASSIVE RANGE OF MOTION (PROM)

Performed during the period of 0 to 6 weeks after surgery.
(Or at the discretion of your Physician and Therapist.)

The success achieved in the PROM phase of rehabilitation is the foundation from which all further gains will be determined. By definition PROM means your involved arm or upper extremity (UE) is being supported by the UE Ranger and all movements are to be produced exclusively by your non-injured arm, while your surgical shoulder remains at rest. The goals of this phase of your rehabilitation are as follows.

PROM Goals

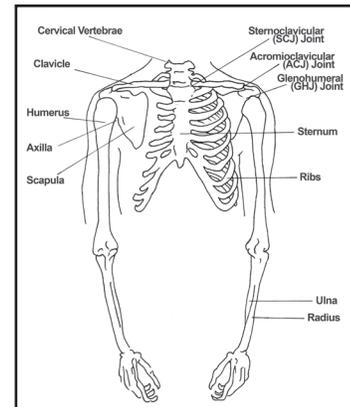
- Protection of your surgical repair
- Resolution of pain and swelling
- Circulatory support to site of healing
- Restoration of resting tone of the involved muscles
- Reduce the need of medications and restore a full night's sleep
- Restoration of Range of Motion to between approximately 90 to 110 degrees of elevation and with understanding of proper biomechanics
- Prevent Adhesions
- Prevent Compensations



EXECUTION OF MOTIONS

INITIATION AND PROGRESSION OF FORWARD REACHING AND ELEVATIONS

The Upper Extremity as a functional system includes the foundational Spine and Torso, Shoulder Girdle (Humerus, Scapula, and Clavicle) Elbow, Forearm, Wrist, and Hand. (**Illustration A**)



s ILLUSTRATION A

With the patient in a standing position, adjust the length of the UE Ranger to duplicate the height of the supported and resting position of their forearm in its sling (**figure 1**).

If a person is unable to stand simply duplicate this measurement and all further instructions/applications from a seated position (**figure 2**).



s FIGURE 1



s FIGURE 2

Place their involved hand in the molded support and comfortably secure it with the overlying strap (**figure 3**).



s FIGURE 3



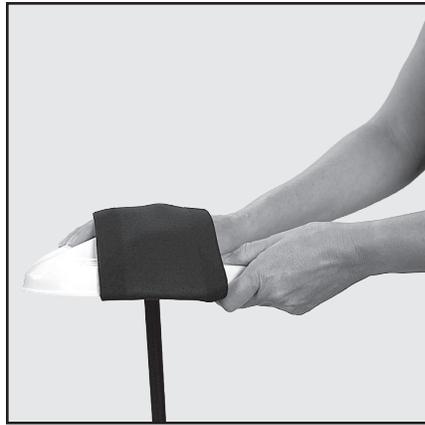
s FIGURE 4

Their arm should now be able to resume a sensation of security and relaxation, similar to that of their sling (**figure 4**).

Place your non-involved hand in either position option **A** or **B** - **figures 5(A)** and **6(B)**.



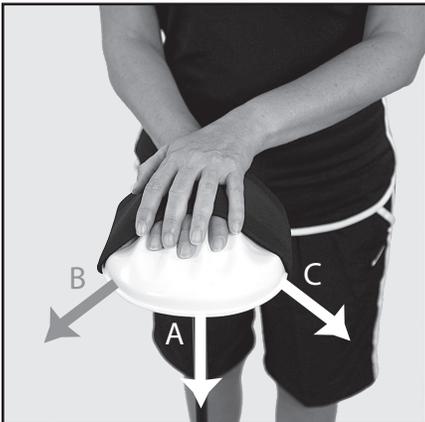
s FIGURE 5 (A)



s FIGURE 6 (B)

Position **A** is recommended in the beginning because it offers the most support; as you progress in comfort and confidence you may progress to Position **B** which offers more freedom of movement.

All production of movement should be from the non-injured arm.



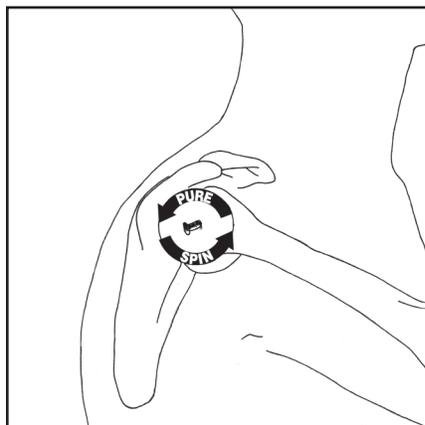
s FIGURE 7

You will want to begin with a straight ahead motion as shown in (**figure 7**) and labeled by arrow (**A**). While under the guidance of your therapist, as you become more comfortable with this plane of movement, you may vary your planes of motion to correspond with label arrow **B** and **C**.

It is important in this stage of motion recovery that the involved humeral head moves independently in its joint (made up of the arm and the shoulder blade) with "**Pure Spin**". This means that your arm and shoulder blade move freely of one another (**figure 8** and supported by **illustration B**).



s FIGURE 8



s ILLUSTRATION B

This capacity is necessary to reduce pain, excessive muscle tension, and swelling.

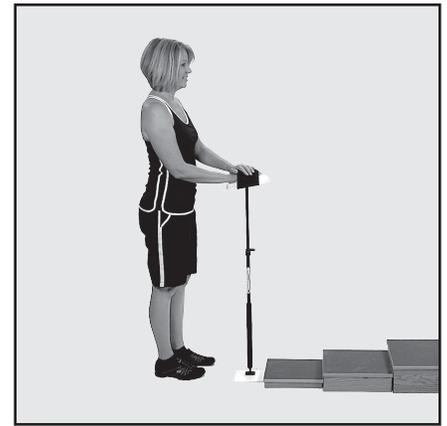
To succeed in producing pure spin motion you will need to move yourself **slow enough to perceive or feel this articulation or dissociation occurring**.

*If you feel strain or compression you are likely failing to move freely.

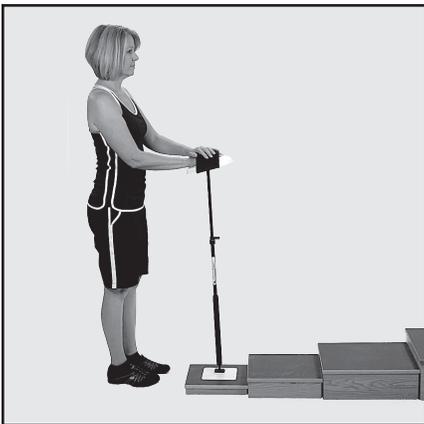
Always begin with a warm up using the base on or near the ground (**figure 9**). All warm-ups and any progressions in height should begin with **partial movements and gradually progress to fuller movements**.

Partial movements mean that your forward motions are progressive and pain free.

At this level, avoid fully straightening your elbow as this can place an excessive force through your shoulder. Your therapist will train you in how to straighten your elbow without potential strain to your shoulder. (Remember this phase requires the shoulder to be relaxed). Also, avoid moving the elbow past your side upon the return of forward motion since this can potentially stress the front of the shoulder.



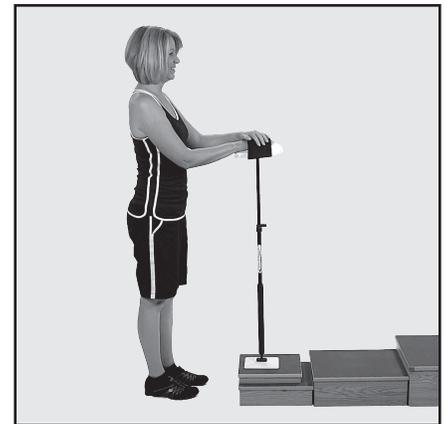
s FIGURE 9



s FIGURE 10



s FIGURE 11



s FIGURE 12

Within your capacity to produce healthy biomechanics, increase your elevation heights by placing the base on progressively increasing platform heights. Perform up to 6 -10 total movements per height progressions. In the early stages only execute 1 to 3 height intervals (**figures 10-12**).

As you progress in post-operative time and endurance, you will reach up to 3 to 5 height interval increases from your beginning height and working towards the goal of approximately 90 to 110 degrees of elevation (**figure 13 and 14**).

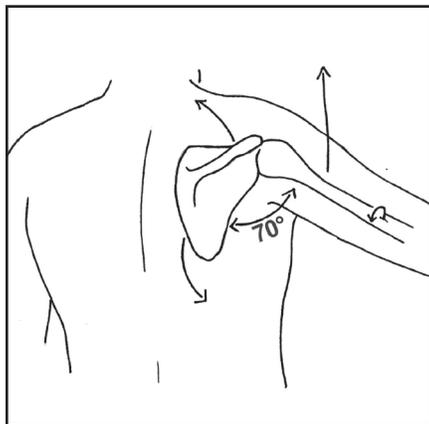


s FIGURE 13



s FIGURE 14

For progressions in elevation above 70 degrees it is supportive of healthy movement to rotate your involved arm and shoulder blade outward as shown in **Illustration C**. To produce this correctly your thumb will ultimately point toward the ceiling. Observe how Position **B** of your non-involved hand can support this effort. (**figure 15**) Further, your therapist will spend extensive time in training you to effectively produce this integral portion of achieving full elevations.



s ILLUSTRATION C



s FIGURE 15

Always finish with a cool down, by working back down each of your height interval progressions until reaching your beginning level. During your cool down you can reduce your repetitions to 3 - 8 as well as shorten your movements. **Maintain pure spin motions and slow speed.**

FREQUENCY AND VOLUME OF USE

FOR PAIN RELIEF: Perform as needed very gradual partial forward movements and proceed to fuller movements for 1 to 3 sets at 6 -10 repetitions per set. For pain relief you will keep your height intervals from one to three and at a non challenging final height.

FOR MAINTENANCE OF CURRENT MOTION: Up to 3 to 5 times per day utilizing 1 to 5 height intervals with 6 -10 repetitions per height interval.

FOR PROGRESSION OF MOTION CAPACITIES: In addition to your daily maintenance, your therapist may authorize you to challenge your current available motion. If given the authorization by your therapist, it is recommended to challenge yourself after a warm-up reaching your limit and then carefully work into a challenge. At your challenge height, perform 4 to 8 very light challenges and then proceed to work down your intervals for an appropriate cool down. This should be done no greater than one to two times per week with at least two days in between to allow your body to integrate the effort.

Never continue motions if you are experiencing any progressions of pain.

Any pain stemming from use of the UE Ranger could be related to the following reasons:

REASONS FOR PAIN:

- Going too fast
- Not supporting a Pure Spin Motion
- Failure to produce other correct biomechanics (Quality and speed of your motions).
- Over extending your current physical capacities

EXECUTION OF MOTIONS INITIATION AND PROGRESSION OF EXTERNAL ROTATION AND COMBINED ELEVATIONS

Caution – Before proceeding be sure to clear this motion introduction with your therapist.

For this application remove the articulating base from the UE Ranger, and support your involved upper extremity (**figure 16**).

Depending on whether you have been advised to use a standard sling or one with a pillowed bolster it is recommended that you rest your arm against your side or utilize a standard pillow during this level of motion for support and comfort as shown in (**figures 17 and 18**).



s FIGURE 16



s FIGURE 17



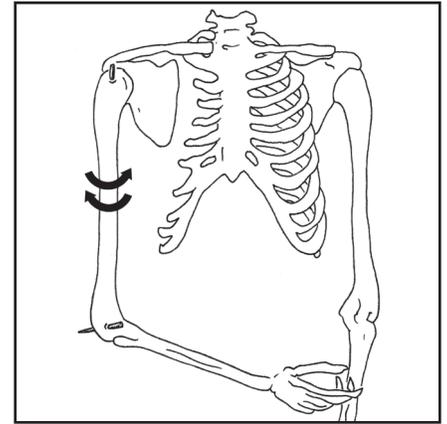
s FIGURE 18



s FIGURE 19



s FIGURE 20



s ILLUSTRATION D

As shown in (**figures 19 and 20** supported by **Illustration D**) proceed to assist your shoulder through external rotation with the following criteria:

- The available pain free range of motion.
- The range of motion limit advised by your therapist

You will want to perform up to 6 to 10 partial to full motions. If advised by your therapist you can perform one to three sets of this exercise per session. **It is advised to end each session of external rotation motion support with a similar cool down as previously described.**

USE OF ICE, REST, POSTURAL AWARENESS, AND RESPIRATION

Following each session of UE Ranger Phase One exercise, it is imperative to rest and if prescribed by your therapist to ice your shoulder (15 to 25 minutes). For optimal circulatory and motor relaxation support, position your upper extremity as shown in (figure 21).



s FIGURE 21

HOME ICE RECIPE: Place two parts water to one part rubbing alcohol in a Ziploc bag. Put this mixture in the freezer, which will produce a flexible slush instead of a solid. This flexibility allows the most contact area of your skin. Use two bags, one over the shoulder and one in the axilla (arm pit). It is advised for safety and comfort to use some form of barrier (pillow case or T-shirt) between your skin and the ice.

When at rest, and separate from your icing times support your upper extremity at the elbow with pillows as previously shown in (figure 21). In this situation your sling should be off and efforts made to gradually move your elbow, forearm, and hand without moving your shoulder. This will be reviewed by your therapist as a means of supporting circulation, preventing stiffening of these supportive joints, and alleviating some forms of pain related to reduced activity.



PROVIDING A HARMONY OF HEALING SUPPORT AND FUNCTIONAL RECOVERY