



The Technology of Human Performance

Treatment Guidelines - Shoulder

These guidelines may be applicable to a variety of diagnosis, injuries and dysfunctions. Use your clinical judgment when proceeding on any course of treatment.

Description	The following represents suggested areas of assessment and uses of the PrimusRS for clients with shoulder involvement. This assessment focuses on the shoulder; however you are encouraged to evaluate the client as a whole.
Contraindications	Treatment needs of a shoulder can vary greatly based on diagnosis and intervention goals. Utilize your clinical knowledge and skills in determining the appropriateness of any treatment plan prior to beginning a program with a client. Always consider client safety a priority.
Early Intervention	There may be ROM deficits that will need to be addressed. Utilize the CPM mode to increase ROM when appropriate for diagnosis and/or surgical procedure.
Establish need	<ol style="list-style-type: none"> 1. Strength – implement an isometric comparison test for the shoulder motions to compare injured side to non-injured side. 2. Endurance – to further establish need. 3. Neuromuscular coordination – CPM with target force 4. Effects of repetition, if indicated 5. Work or other functional tolerance (tool use, arms overhead, lifting, etc...)
Develop Treatment	<p>Isometric and dynamic strength (endurance) of isolated muscle groups can be measured by performing isolated joint motions and, of combined muscle groups, by performing specific tasks. This will help determine if there is a weak area to focus on.</p> <p>Initiate a treatment program that includes the shoulder motions for which you have established a need. Set initial resistance at 30% of current strength level. Perform exercise to fatigue. Set new goal based on exercise result for next session.</p> <p>In addition, you may perform a task analysis to determine appropriate exercises based on return to work, ADL or other functional needs.</p>
Primus Attachment Suggestions	<p>#701/802 - shoulder flexion and extension - shoulder abduction and adduction #701 - shoulder internal and external rotations #191 - flexion and extension - abduction and adduction - internal and external rotations #139 steering wheel #122 upper body ergometer</p>

Positioning Suggestions

Shoulder Internal/External Rotation



Align the humerus with the axis of rotation



Shoulder at 45 degrees abduction

Set-up:

Exercise Head: Number three position. This places the shoulder at 45 degrees of abduction. Other angles may also be used

Attachment: - 701

Tool Setup: Use foam or plastic cylinder. Place handle in the B position. Adjust tool length to accommodate client forearm length. Place V-block in hole on the 701 tool over point of rotation.



Shoulder at 90 degrees abduction

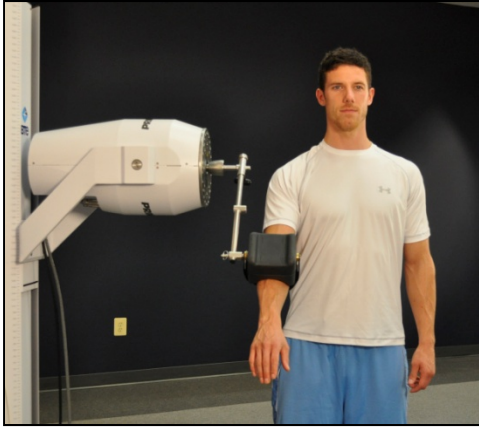
Positioning Chair Setup: Not needed, but may be used if additional stabilization is desired.

Client: Place client in front of the PrimusRS facing the side. Make sure the humerus is aligned with the axis of rotation of the exercise head shaft.

Alternate Set-Up Ideas:

- Head angles 2 through 5 may be used to set the angle of shoulder abduction for this exercise.
- The padded block may be used in place of the standard handle. This would allow the exercise to be performed without requiring the client to grip and hold a handle.

Shoulder Flexion/Extension



Position client in front of the PrimusRS



Align the shoulder with the axis of rotation of the shaft

Set-up:

Exercise Head: Number five position. Adjust height to axis of rotation is at the clients shoulder.

Attachment: - 701

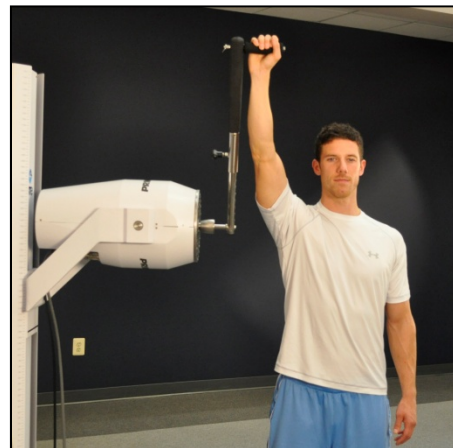
Tool Setup: Use padded block. Place handle in the B position. Adjust tool length to place the pressure point proximal or distal to the elbow.

Positioning Chair Setup: Not needed, but may be used if additional stabilization is desired.

Client: Place client in front of the PrimusRS facing the side. Make sure the shoulder is aligned with the axis of rotation of the exercise head shaft.

Alternate Set-Up Ideas:

- Attachment 802 may be used (see pictures below for configuration).



Shoulder flexion/extension using the 802 attachment.

Shoulder Abduction/Adduction



Position client in front of the PrimusRS



Align the shoulder with the axis of rotation of the shaft

Set-up:

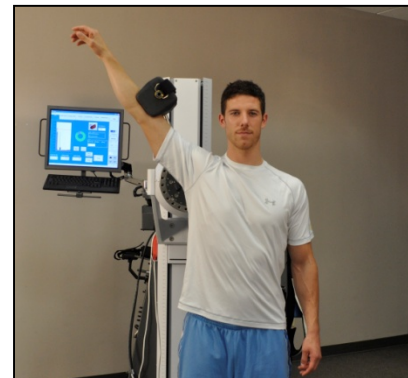
Exercise Head: Number five position

Attachment: 701

Tool Setup: Use padded block. Place block in the B position. Adjust tool length to place pressure point above or below the elbow.

Positioning Chair Setup: Not needed, but may be used if additional stabilization is desired.

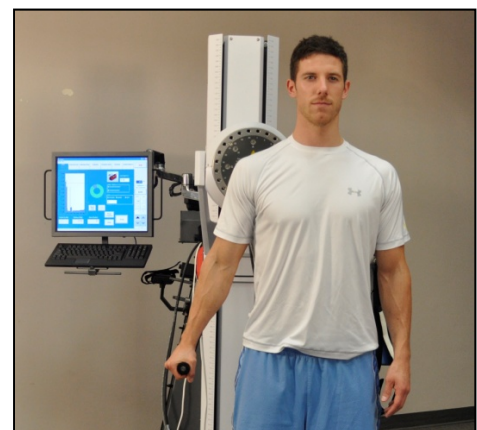
Client: Place client in front of the PrimusRS facing away from the machine. For a more effective shoulder ROM, have the client rotate the hand to a supinated position.



Shoulder in abduction

Alternate Set-Up Ideas:

- Attachment 802 may be used (see picture at right for configuration).
- Positioning chair may be used for additional stabilization.



Shoulder adduction/abduction using the 802 attachment.

Shoulder Protraction/Retraction



Retraction



Protraction

Set-up:

Exercise Head: Number five position. Set height of the exercise head so the handle is at shoulder height.

Attachment: 701

Tool Setup: Use foam or plastic cylinder. Place handle in the B position. Adjust tool length to its longest setting.

Positioning Chair Setup: Not needed. The Positioning chair may be used if a seated position is desired, however the client should not lean back against the back of the chair as it may interfere with the retraction motion.

Client: Place client in front of the PrimusRS facing away to the side. Shoulder should be flexed to 90 degrees.