



The Technology of Human Performance

# Treatment Guidelines - Elbow

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

<b>Description</b>	The following represents suggested areas of assessment and uses of the PrimusRS for clients' with elbow involvement. This assessment focuses on the elbow; however you are encouraged to evaluate the client as a whole.
<b>Contraindications</b>	Treatment needs of an elbow 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.
<b>Early Intervention</b>	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.
<b>Establish need</b>	<ol style="list-style-type: none"> <li>1. Strength – implement an isometric comparison test for the elbow motions to compare injured side to non-injured side.</li> <li>2. Endurance – to further establish need.</li> <li>3. Neuromuscular coordination – CPM with target force</li> <li>4. Effects of repetition, if indicated</li> <li>5. Work or other functional tolerance (tool use, lifting, etc...)</li> </ol>
<b>Develop Treatment</b>	<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 elbow 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>
<b>Primus Attachment Suggestions</b>	<p>#701 - elbow flexion and extension          #601 – supination/pronation</p> <p>#504/502 - Screwdrivers          #302 - Round knob</p>

# Positioning Suggestions

## Elbow Flexion/Extension



Elbow Flexion - Start Position



Elbow Extension - Start Position

### Set-up:

**Exercise Head Tilt:** Number five position (alternate: use position number 7 – see example below)

**Attachment:** 701

**Tool Setup:** 701 - Use foam or plastic cylinder. Place handle in the B position. Adjust tool length to accommodate client forearm length. (Alternate handle: use padded block – see example below)

**Client Positioning Chair Setup:** Not needed, but may be utilized for additional stabilization.

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

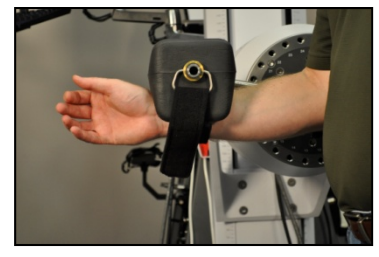
### Alternative Set-up Ideas:



Head tilt at #7

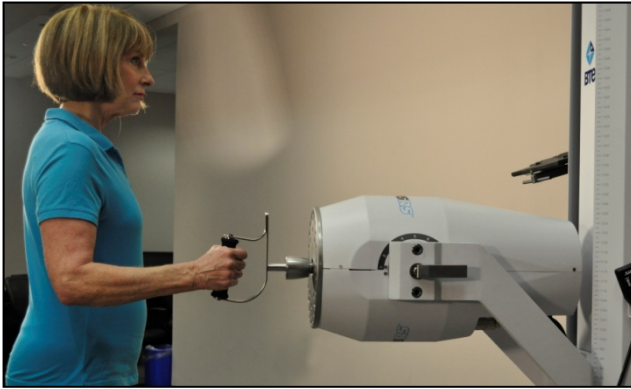


Use V-Block for stabilization



Use padded block

# Supination/Pronation



Positioning for Forearm Supination/Pronation – Side view.



**Error! No text of specified style in document.** Positioning for Forearm Supination/Pronation – Overhead view.

## Set-up:

**Exercise Head Tilt:** Number five position

**Attachment:** 601

**Tool Setup:** 701 – Set height of head so the Primus shaft and the client's forearm form a straight line, as demonstrated in the pictures above.

**Client Positioning Chair Setup:** Not needed, but may be utilized for additional stabilization.

**Client:** Place client facing the PrimusRS slightly offset to the left or right side, depending on which side is exercising. Make sure the forearm is aligned with the axis of rotation of the exercise head shaft.

## Alternative Set-up Ideas:

- Tool attachments 504, 502, 302 may also be used for supination and/or pronation. These may offer a more integrated or functional positioning.