

MyoPro 2+ Harness Instructions

The MyoPro 2+ has two harness model options:

- Cross Body Harness
- Figure 8 Harness

The provider should choose the harness that best meets the user's needs based on fit, suspension, and comfort.

MYOPRO 2+ CROSS-BODY HARNESS COMPONENTS

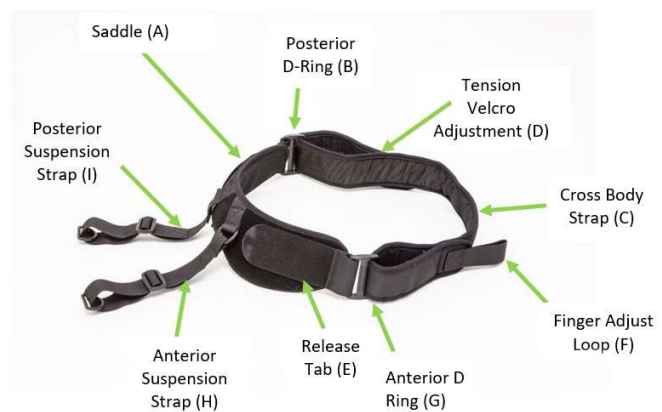
Reference the diagram below to understand the various components related to the MyoPro 2+ cross-body harness.

The harness provided with the MyoPro 2+ serves to protect the shoulder joint and suspend the MyoPro 2+ in the correct position on the arm so it does not slide distally. The harness also serves to hold the arm in a position appropriate for function and counteract muscle imbalances that move the arm in dysfunctional ways. The benefits of the cross-body harness are that it's easier to adjust and understand, while providing more shoulder mobility. The compromises are that it's less effective at controlling shoulder rotation, and may interfere with chest anatomy.

Follow the appropriate instructions for each harness model type.

Identify the components:

1. Saddle (A)
2. Posterior D-Ring (B)
3. Cross Body Strap (C)
4. Tension Velcro Adjustment (D)
5. Release Tab (E)
6. Finger Adjust Loop (F)
7. Anterior D Ring (G)
8. Posterior Suspension Strap (H)





Harness Set-up:

1. Apply the Shoulder Saddle (A) so that it sits on the shoulder between the neck and the tip of the shoulder. The Velcro for the Release Tab is placed anterior, and the Posterior D Ring for the Cross Body Strap is placed posteriorly. The AC joint and end of the shoulder fits into the cutout between the two suspension straps. The suspension straps should straddle the shoulder. The middle of the saddle should be at the apex of the shoulder, touching neither the neck nor shoulder joint.
2. Bring the Cross Body Strap (C) under the axilla of the opposite side and secure the strap by applying the Release Tab to the anterior velcro. The Saddle should lay flat against the body. Adjust the angle of the fastened Release Tab to make the Saddle sit evenly and comfortably. There should be slack in the finger adjust loop at this point.
3. On the Cross Body Strap (C), adjust the posterior strap to provide proper tension. The anterior Velcro should follow a path over the contralateral pectoral muscle belly. The user can adjust for comfort by pulling the Finger Adjust Loop. The posterior Velcro should be fastened in a position that allows the user to make all necessary tension adjustments using the Finger Adjust Loop. The adjustment to the Tension Velcro Adjustment posteriorly is a one-time adjustment and should not be adjusted by the user.

Harness Clips

Having the harness connected to the appropriate retention clip will influence mobility at the shoulder and the alignment of the MyoPro 2+. Shoulder mobility is optimized as the suspension straps track the glenohumeral joint and humeral midline. However, compromises to mobility have to be made in order to produce external rotation and abduction forces that are typically needed to counteract the muscle imbalance typically present. Once the combination of attachment clips and strap tensions that optimize fit and function have been determined, it is recommended to mark which strap lengths and attachment points were used.

There are two anterior clip options. Increased tension on either anterior clip will primarily increase the shoulder elevation and flexion forces, while producing small influence on shoulder rotation.

- a) Medial - produces a small external rotation attitude
- b) Lateral - produces a small internal rotation attitude

Two anterior clip options



There are three posterior clip options. Each posterior suspension strap will primarily produce a shoulder elevation and extension force, while providing clip-dependent rotation forces.

- a) Medial - produces a minor internal rotation attitude
- b) Lateral - produces a minor external rotation attitude
- c) External Rotation- produces a moderate external rotation attitude

Three posterior clip options



1) Place the Anterior Suspension Strap (E) on the medial or lateral clip, depending on the line of pull required for the user. Ensure the clip is securely locked in place. Tighten this strap while offloading the weight of the arm and MyoPro. Ensure the strap is running anterior to the shoulder.

2) Place the Posterior Suspension Strap (F) on the medial, lateral, or external rotation clip, depending on the line of pull required for the user. Ensure the clip is securely locked in place. Tighten the strap while offloading the weight of the arm and holding it in the desired rotation. Check that glenohumeral subluxation has been reduced and make adjustments to suspension strap tension as indicated. Make minor adjustments to the Finger Adjust Loop (F) tension until a good balance is reached between suspension and comfort. The Velcro will secure the tension.

3) Fine tune the harness as necessary to maximize ROM while protecting and controlling the shoulder. Check that the harness is flat against the body and comfortable.

If needed, all straps have an adjustable end. The adjustable end has a removable Velcro closure that can be separated from the strap, allowing the strap to be cut to length, then re-attach the Velcro closure. No sewing is necessary.

4) If necessary, the provided O-ring(s) can be placed over the end of the harness D-ring to secure the D-ring in the MyoPro clip.



Though each patient's case is individual, final assembly should resemble:

Anterior View



Posterior View



MYOPRO 2+ FIGURE-8 HARNESS COMPONENTS

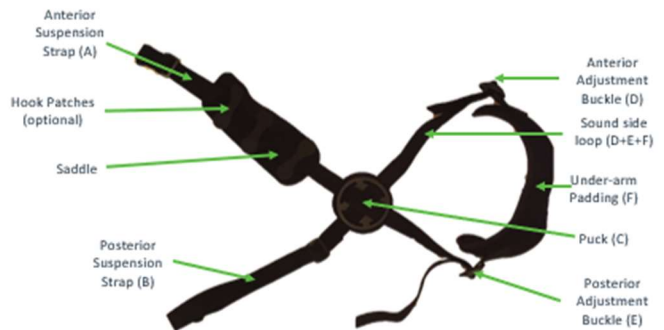
Reference the diagram below to understand the various components related to the MyoPro 2+ cross-body harness. Keep in mind that the MyoPro2+ figure-8 harness has goals that are different from one used for a body-powered prosthetic system. Some principles of those systems are not applicable to this one.

The harness provided with the MyoPro 2+ serves to protect the shoulder joint and suspend the MyoPro 2+ in the correct position on the arm so it does not slide distally. The harness also serves to hold the arm in a position appropriate for function and counteract muscle imbalances that move the arm in dysfunctional ways. The benefits of the figure-8 harness are that it's lower-profile, easier for the client

to adjust, provides better rotation control, and avoids interfering with chest anatomy. The compromises are that it's more restraining of shoulder rotation and flexion, requires more initial adjustment by the clinician to set-up, and it may take more training for the client to use consistently.

Identify the Components:

1. Anterior Suspension Strap (A)
2. Posterior Suspension Strap (B)
3. Puck (C)
4. Anterior Adjustment Buckle (D)
5. Posterior Adjustment Buckle (E)
6. Under-Arm Padding (F)
7. Sound-Side Loop (D+E+F)
8. Silicone Myomo Patch (Not Shown)



The figure-8 harness pictured is for a left-side MyoPro2+. A right-side harness would be horizontally flipped.

Harness Set-up

- 1) Have the client don the sound-side loop so that the red-fabric underside of the puck is facing the client's back. Connect the anterior suspension strap to the medial clip on the anterior humeral shell of the MyoPro 2+. Similarly, attach the posterior suspension strap to the lateral clip of the posterior humeral shell. This configuration of attachment clips will produce mild shoulder external rotation while offloading the arm and is the most common configuration and a good place to start.
- 2) You want to establish the sound-side loop tension first, as every other adjustment will be relative to that foundation. Keep the puck midline, or slightly favoring the sound side, as you adjust the tension of the anterior and posterior adjustment buckles. The puck should not be able to cross midline towards the affected side when you gently pull the puck laterally towards it. The saddle should rest against the deltopectoral groove and axilla, with the mid-saddle cutout nestling where the pectoral muscles cross the axilla.
- 3) Begin pulling slack out of the posterior, then anterior suspension straps, focusing on keeping the puck from getting pulled superior to C7. Once excess strapping has been removed, hold the affected arm in the desired amount of external rotation. Consider that the closer the posterior suspension strap is to the glenohumeral joint then the less it will restrict mobility but using the external rotation clip may be necessary to produce external rotation that sufficiently prevents the client from contacting their midline through elbow flexion.

Use the same clips anterior and posterior if you're trying to avoid rotation forces at the shoulder. E.g., use both lateral or medial clips.

4) Offload the weight of the affected side and pull tension on the anterior suspension strap. Provide enough tension so that any shoulder subluxation remains reduced through suspension of the harness alone.

5) Fine-tune the tension at each buckle to optimize arm-position and comfort. Once the harness is sufficiently adjusted, trim each strap- leaving about 5" of excess at each terminus for future adjustments, except for the anterior adjustment buckle. Leave around 8"-12" of excess strap at the anterior adjustment buckle so the client may make tension adjustments to facilitate donning, doffing, and comfort.

6) Use double-sided Velcro hook to secure the cut strap ends against the harness. Also secure the final position of the puck by applying the branded silicone Myomo Patch with micro hook over the cross point of the straps on the puck to prevent sliding. Mark strap lengths using a silver or white marker to indicate clinician-recommended settings.