

SLINGSHOT

BIONICS



Slingshot Fission™ AK Fitting Guide

Version 251008

Are You a Prosthetist Looking
to Grow Your Business?

Join our Clinical Network and Get New Patient Referrals



Amputees engage through our website and select that they want a local Prosthetist to fit the Slingshot Socket™.



Slingshot Bionics makes Referrals to our Network of Trained Prosthetists.



Fit the Referral with a Slingshot Socket and get more Referrals.

Medicare, VA,
Insurance
Approved



Click or Scan

+ L5783
Adjustable
Socket Code



READY TO ORDER A SLINGSHOT SOCKET™?

1. Choose Between AK or BK
2. Choose Your Configuration
3. Select your Colors
4. Place Your Order

orders@slingshotbionics.com

855-724-6642

[SlingshotBionics.com/shop/](https://slingshotbionics.com/shop/)



Medicare, VA, and Insurance Approved
+ **L5783** Adjustable Socket Code

Tools Needed

The Slingshot Socket™ comes with 2.5mm and 3mm Allen Wrenches and Loctite. The only additional tools needed to fit and finalize the Slingshot Socket™ is a 4mm Allen Wrench, a sharp pair of Scissors, a lighter, and a torque wrench. You may already own these, or you can purchase these locally or online.

Suggested online links:





Get Clinical Support

Our Clinical Support Team is available to help maximize your comfort. To schedule a phone or video call, scan the QR code or reach our team directly at:

[SlingshotBionics.com/contact/
support@Slingshotbionics.com](https://SlingshotBionics.com/contact/support@Slingshotbionics.com)
(855) 724-6642



Fitting Step 1

If using a gel or silicon liner, don the liner before beginning the fitting. If sock-fit only, pull a 5-ply sock over the limb before beginning the fitting.



Fitting Step 2

Ensure the Sporks are sized correctly, and that the limb fits between the Foundation and Sporks.



Fitting Step 3

Using a 2.5mm Allen wrench, adjust the Spork width to be $\frac{2}{3}$ the width of the limb.



Fitting Step 4

Adjust the Spine length to place the top of the Spine 5cm above the Trochanter, with desired extra space below end of limb.



Fitting Step 5

Attach the Exoskeleton to the knee and foot, with the correct overall length.



Fitting Step 6

Attach the Lateral Panel assembly onto the Spine.



Fitting Step 7

Attach the two Medial Panel assemblies onto the Sbones. Adjust the Flexible Sbones mounting position to place their top at the desired brim height.



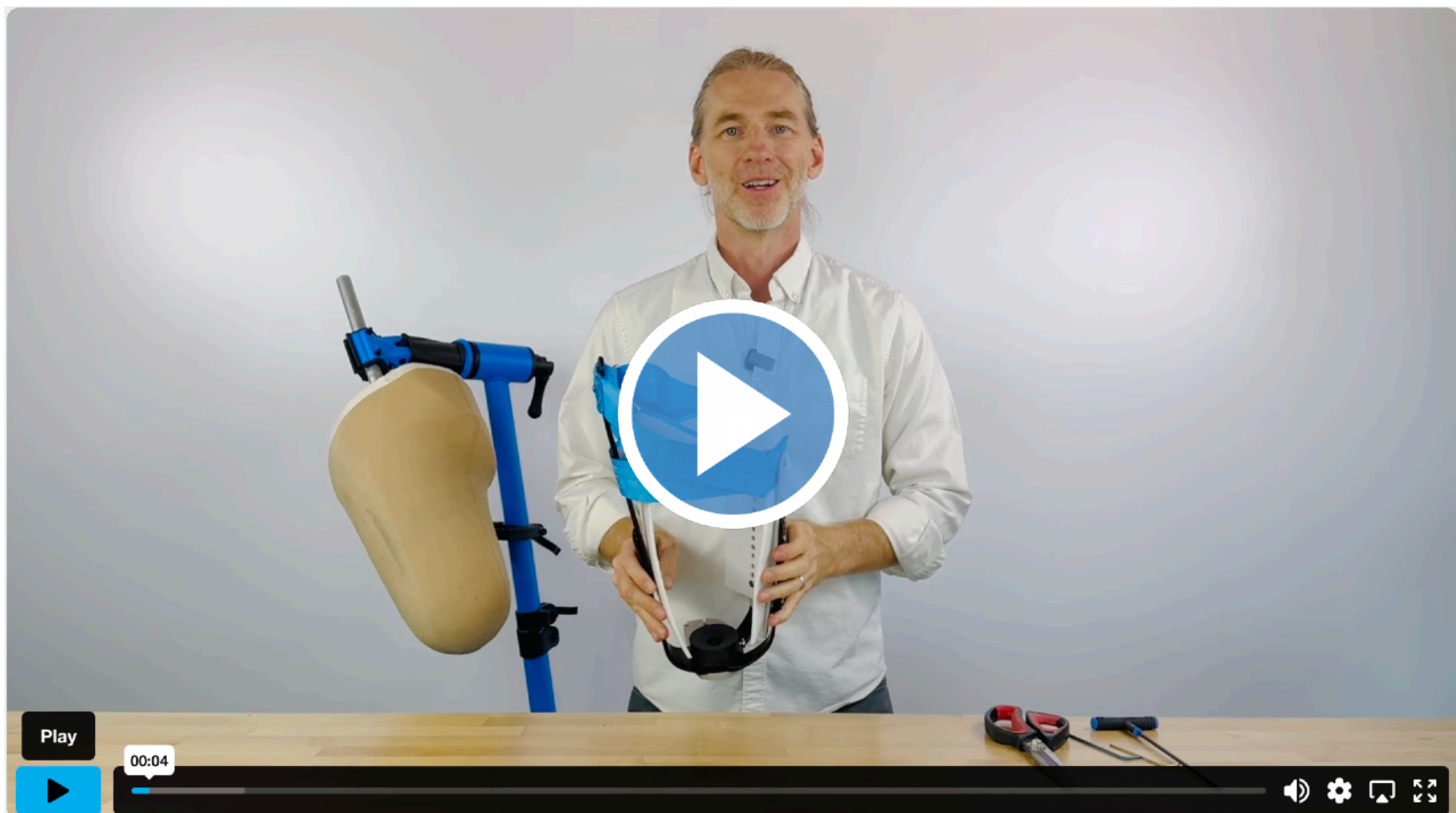
Fitting Step 8

Assemble the Brim Containment Strap by routing it through the Buckles on the Medial Panels and Lateral Panel.



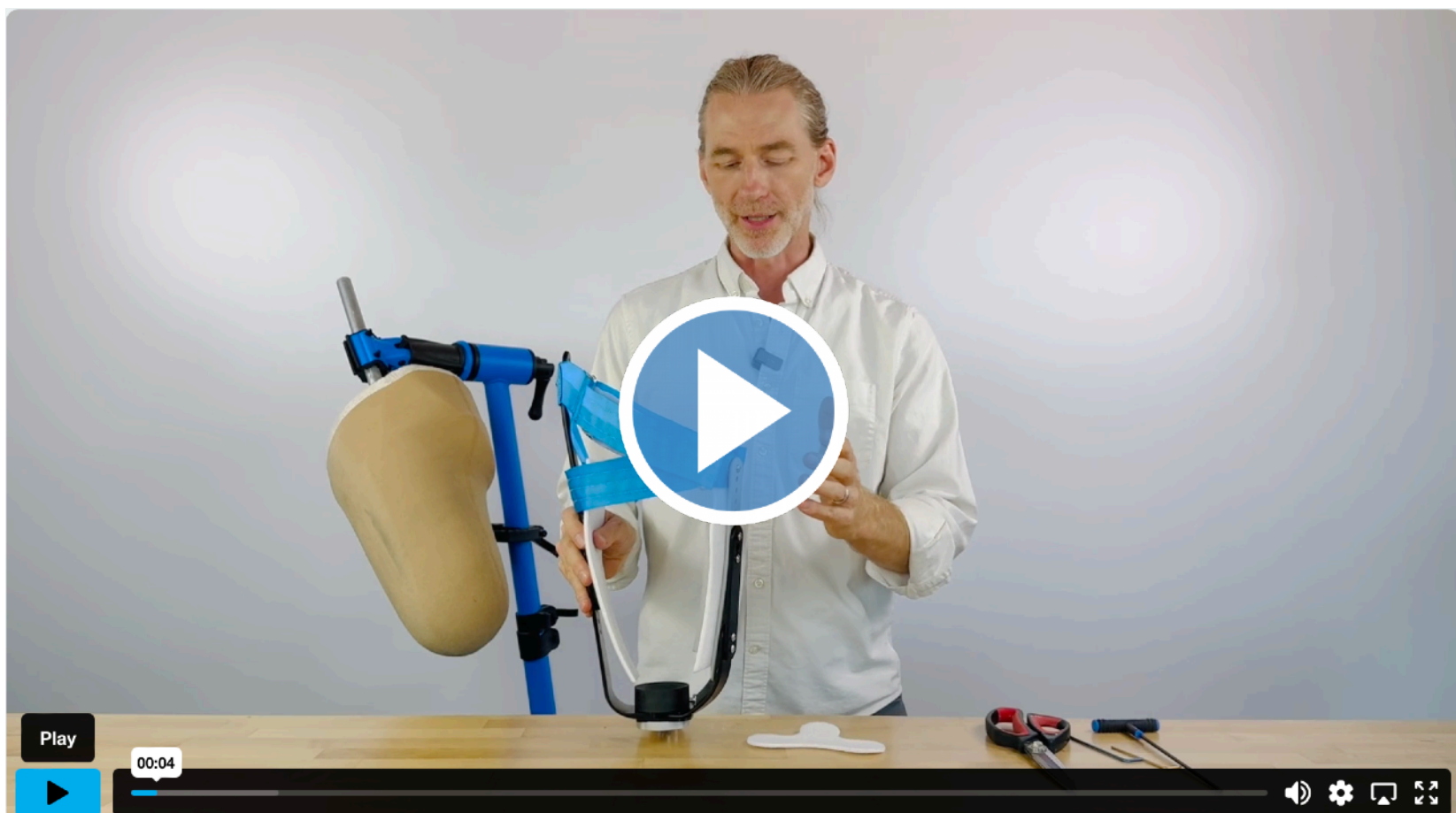
Fitting Step 9

With light weight-bearing, pull the Brim Containment Straps tight, starting with the posterior side.



Fitting Step 10

With light weight-bearing into the Brim, note how much “flair” is at the top of the Medial Panels, and temporarily attach a T-Panel section between the Medial Panels.



Fitting Step 11

With the socket off, peel back the Medial Panel's Brim Pads, and attach a T-Panel on the inside of the Medial Panels to establish the "flair" to the Brim. Add the Brim Pads.



Fitting Step 12

Cut the Medial and Lateral Panels to length, just above the end of the limb, and trim the bottom corners off of the Panels so that they better contour to the limb shape.



Fitting Step 13

Connect the two Medial Panels together where they overlap. If they are not overlapping, place a T-Panel between the Medial Panels to connect them.



Fitting Step 14

Create a tight circumferential ring around the end of the limb by connecting T-panels between the Lateral and Medial Panels.



Fitting Step 15

Add a Star Panel from the inside of the socket, to create distal end containment. This optional step is required if using a sock-fit, with no gel liner.



Fitting Step 16A

Assemble and integrate the Containment Straps. Weight-bear into the socket, and tighten the Containment Straps to support the limb.



Fitting Step 16B

Assemble and integrate the Containment Straps. Weight-bear into the socket, and dial the tightness of the Containment Straps to support the limb.



Fitting Step 17

Complete the final assembly steps, and align the socket using standard socket alignment principles.



Fitting Step 18

Add the optional Base Layer sock if desired.



Fitting Step 19

Apply Loctite to all screws to prevent backing out. The standard prosthetic components such as Pyramid Connector Screws typically require 15Nm of torque.



Additional Resources

Removing the Fabric Inner Sock-et™ for washing, step-by-step.



Additional Resources

Integrating AK Apex™ for suspension.



Additional Resources

How to assemble the Slingshot Fission™ Exoskeleton.



Additional Resources

Adding an Offset Plate.



Additional Resources

Modifying The Brim Curvature



Additional Resources





Continuing Education Credits

Click on the link below, or scan the QR code to access the quiz and receive CEU's!

<https://slingshotbionics.com/ak-continuing-education-quiz/>





PDAC L-Codes (AK Slingshot Fission™)

For Prosthetists and Clinics billing Medicare or Insurance for the Slingshot Socket™, the following coding has been PDAC approved for the Slingshot Socket™ Fission™:

L5321 ABOVE KNEE, MOLDED SOCKET, OPEN END, SACH FOOT, ENDOSKELETAL SYSTEM, SINGLE AXIS KNEE

L5590 PREPARATORY, ABOVE KNEE - KNEE DISARTICULATION ISCHIAL LEVEL SOCKET, NON-ALIGNABLE SYSTEM, PYLON NO COVER, SACH FOOT, LAMINATED SOCKET, MOLDED TO MODEL

L5701 REPLACEMENT, SOCKET, ABOVE KNEE/KNEE DISARTICULATION, INCLUDING ATTACHMENT PLATE, MOLDED TO PATIENT MODEL

L5649 ADDITION TO LOWER EXTREMITY, ISCHIAL CONTAINMENT/NARROW M-L SOCKET

L5650 ADDITIONS TO LOWER EXTREMITY, TOTAL CONTACT, ABOVE KNEE OR KNEE DISARTICULATION SOCKET

L5651 ADDITION TO LOWER EXTREMITY, ABOVE KNEE, FLEXIBLE INNER SOCKET, EXTERNAL FRAME

L5783 ADDITION TO LOWER EXTREMITY, USER ADJUSTABLE, MECHANICAL, RESIDUAL LIMB VOLUME MANAGEMENT SYSTEM

L5950 ADDITION, ENDOSKELETAL SYSTEM, ABOVE KNEE, ULTRA-LIGHT MATERIAL (TITANIUM, CARBON FIBER OR EQUAL)

When incorporating a Slingshot Fission's™ carbon fiber base, or a Slingshot Fusion™ laminated base, L5631 may be appropriate to use: **L5631 ADDITION TO LOWER EXTREMITY, ABOVE KNEE OR KNEE DISARTICULATION, ACRYLIC SOCKET.**

Additional unassigned codes, such as for **SUSPENSION OPTIONS** (i.e Pin system, suction/vacuum, etc), **TEST SOCKETS (L5624)**, and **ALIGNABLE SYSTEMS (L5920)**, may be used when such products are incorporated within the Slingshot Socket™ configuration. For example, if a pin system or suction suspension is used for suspension within the Slingshot Socket™, their associated codes would also be used. When a test socket is used during the fitting process, a test socket code may be used. When alignable components are used within the Slingshot Socket™ configuration, the alignable system codes may be used.



Read All Instructions Before Use

Complete Training Review:

The Slingshot Socket™ is designed to make the socket fitting process simple and not require the lengthy fitting and fabrication processes of conventional sockets. However, following the specific training steps is important to maximize the comfort and outcomes. Please thoroughly review all training videos and instructions before fitting or using the Slingshot Socket™. If there are any questions, please contact the Slingshot Bionics Clinical Support Team prior to use. Failure to follow the full and complete fitting, safety, and use instructions can lead to a poor fit, discomfort, or risk of fall or injuries.

Weight Rating:

The Slingshot Socket™ Fission™ aluminum Exoskeleton is weight rated for users who are 100kg (220 lbs) and with Function Levels of 1 to 3 (up to the ability to walk at varied speeds). For Function Level 4 users (i.e. athletes or those exceeding normal ambulation or whose activities may mechanically exceed normal daily use levels), or for those over 100kg, a carbon fiber Exoskeleton is required, which is rated for users up to 136kg (300 lbs), or a custom carbon fiber frame can be fabricated for Fusion™ or Sling™ configurations.

Loctite and Torque:

The Slingshot Socket™ does not come with Loctite pre-applied so that adjustments can be easily made during the fitting process. Before completing the fitting process, and before walking outside of the clinic or fitting setting, be sure to Loctite all Slingshot Socket™ screws and any other prosthetic component's screws that have been adjusted. If the Slingshot Socket's™ screws do not have Loctite applied, they will likely back-out over time, which may cause the user to fall. Loctite ensures these screws remain secure.

Prosthetic components such as pyramid adaptors, knees, and feet often require certain torque settings to their set screws - which for many is 15Nm of torque force. Use a torque wrench when tightening these screws and refer to the specific component manufacturer for recommended torque settings.

Self-Fitting and Aligning of the Slingshot Socket™:

The majority of the global amputee population does not have access to a Prosthetist or traditional fabrication methods, so we created a simple-to-fit, ultra-comfortable socket technology that enables amputees in the furthest reaches of the world to now have equal access to long-lasting comfortable prosthetics.

For those who do have access to a Prosthetist or a Slingshot Clinic, take advantage of their experience and clinical knowledge to maximize the success of the socket fitting. We can also help to connect with a local Prosthetist who is already trained and experienced in fitting the Slingshot Socket™.

For those in parts of the world without access to a Prosthetist and who want to control their own comfort, our technology empowers one to take comfort into their own hands, with the guidance of our training videos and amazing Slingshot™ Clinical Team via a Tele-Health video-call, to maximize the comfort of the Slingshot Socket™.

Keep in mind that each user's limb is unique and some may have unique fitting considerations that may ultimately require a practitioner's involvement. The Slingshot Bionics Clinical Support Team can also guide simple alignment instructions via a Tele-Health video call, although their ability to refine the alignment is limited unless in-person alignment is performed.

Unless you are fit directly through a Slingshot Bionics™ Clinic, Slingshot Bionics™ is not responsible or liable for the quality of the fit or alignment of your Slingshot Socket™. If choosing to fit and/or align your own Slingshot Socket™, you assume all risk and outcomes that come about from fitting and alignment the Slingshot Socket™. Such a fitting is wholly outside the direct control of Slingshot Bionics, even if Slingshot Bionics helps guide or direct the Tele-Health fitting or alignment of the socket. As such, you are also solely responsible for ensuring that you have sufficient balance, available and sufficient assistive devices such as a walker, and in-person assistance as needed.

The self-fitting and aligning of the Slingshot Socket™ should NOT be carried out by amputees who:

- A. Have not thoroughly reviewed and understood all Slingshot Socket™ training materials.
- B. Who do not have the cognitive ability to follow the Slingshot Socket™ training instructions, or the physical ability to use simple hand tools such as Allen wrenches and scissors.
- C. Who are not comfortable making alignment adjustments on their prosthesis.
- D. Who do not have sufficient balance or physical strength to perform their own fitting.
- E. Who have open sores or wounds on their limb, or who have not been given approval by their healthcare team (i.e. Doctors and/or Prosthetists) to be fit with a prosthesis.

If fitting your own socket is not of interest or it is contra-indicated for you to fit your own socket based on the reasons listed above, rely on a trained Prosthetist, as any local Prosthetist is able to fit and align the Slingshot Socket™ for you.



Limb Health:

We want to ensure that you and your limb are in healthy condition, and that there are no other medical conditions that would prevent your success.

As is true with any prosthesis (Slingshot Socket™ or conventional socket), it is best to not use it if there are open wounds or sores on your limb, without the direction and supervision of your medical professional team such as doctors and/or Prosthetists. Users with poor sensation (i.e. neuropathy) should closely monitor their limb condition, especially within the first few days of wearing any new socket.

If at any time after being fit, if you experience discomfort or fitting issues, immediately contact the Slingshot Bionics Clinical Support Team and/or your local Doctor or Prosthetist to help diagnose what is happening before continuing use.

Most socket fitting issues can be easily resolved with simple at-home socket adjustments, however discomfort can also be a result of non-socket-related issues, and therefore it is important to keep your medical professional team involved without delay.

Maintaining a Healthy Skin Environment:

The Slingshot Socket™ is a friendlier socket environment for your residual limb skin than most conventional rigid sockets. Even so, the skin within the socket (and more specifically within the gel or silicon liner) often endures heat, has trapped moisture, and undergoes considerably more forces and cycle loading than skin on other areas of your body. Therefore, it can be susceptible to various skin issues. The signs of possible skin issues include:

Redness:

It is normal for the residual limb to have areas of slight discoloration of pink tissue along weight-bearing areas within any socket. However, if this does not fade within 15 minutes after taking off the prosthesis, the pressures within the socket may be excessive and socket adjustments may be needed. If you have redness over bony areas that persist more than 15 minutes, or that are uncomfortable, limit your use of your prosthesis and contact your practitioner immediately, as adjustments may be needed.

Skin Breakdown:

If you notice any sores, blisters, or wounds on your residual limb, limit the use of your prosthesis, and contact your practitioner immediately.

Infection:

If skin breakdown is not treated quickly, it can become infected. Symptoms of infected tissue include: Redness, tender skin, fever, swelling of the limb, open sores, pus, a bad odor, and increased skin temperature. If you have any signs of infection, stop wearing the prosthesis and contact your practitioner or seek medical attention immediately.

Ingrown hairs:

As is sometimes experienced with wearing gel or silicon liners and by the pressures within a socket environment, limb hairs can become 'trapped' under the skin, causing folliculitis. They can become itchy, painful, and resemble a pimple. They are often associated with poor hygiene and/or excessive sweating or shaving hair on the residual limb. If they occur, ointments can be prescribed by your doctor.

Contact Dermatitis:

Soap residue left on the skin or the gel or silicon liner may cause the skin to present with a dry rash, bumps, excessive dryness, and/or itching. Thoroughly clean and rinse your gel or silicon liner daily.

Fungal Infections:

Fungal infections are similar to "athlete's foot" and appear as patchy rashes along the residual limb, which can be accompanied by an odor. This is caused by sweat, heat, and irritation inside the gel or silicon liner. If you get a fungal infection, contact your practitioner for new supplies, as your liner may be infected with the fungus. Continuing use of infected liners may slow healing and cause the infection to return.

Cleaning your Liner:

If using a gel or silicon liner within your Slingshot Socket™: Regularly disinfecting your socket environment is important for proper hygiene and to keep your residual limb skin in good condition.



How to clean your gel or silicon liner:

1. Turn your liner inside out.
2. Wash the gel-side of the liner with soap, and thoroughly rinse with water until no soap remains. You can also spray it with rubbing alcohol to provide additional disinfectant.
3. Dry the liner with a clean lint-free cloth.
4. Place the liner, fabric side out, onto its drying stand, so that the inside of the liner can fully air dry.
5. It can be helpful to rotate between two liners every other day.

How to clean your Slingshot Socket™:

The Slingshot Socket's fabric inner Sock-et™ can be removed from the frame for washing as needed. Wash only on delicate or cold cycles and ensure that it is within a mesh laundry bag. Dry only on cool or air-dry temperatures. Ensure that it is thoroughly dry before re-assembling.

Ensure that the safety tabs of the fabric inner Sock-et™ are reconnected and that it is assembled correctly before using. If you have any questions about taking off or putting the flexible inner Sock-et™ back onto the Slingshot Socket's frame, contact your prosthesis or review the training video.

Prosthetic Components:

In many cases pre-existing prosthetic components (such as prosthetic knees, feet, pylons, etc) can be used and transferred from a prior prosthesis to the Slingshot Socket™. However, such prior components may have undergone wear and tear, or may not be usable. If in doubt, consult with a Prosthetist or the Slingshot Clinic Team about your components condition.

If new components are needed, Slingshot Bionics, or your local Prosthetist, can provide components for your socket fitting, typically with an additional charge.

Height adjustments are typically possible with many pre-existing prosthetic components, however, in certain cases height adjustments may not be possible, or adapters may be needed.

The Slingshot Clinical Support Team can help assess what may be possible via a Tele-Health video call or from pictures or videos of your current socket. In some cases, height and alignment adjustments are relatively simple, and in other cases they may be more complex.

Wear and Tear:

While the Slingshot Socket™ is designed to withstand normal daily wear and tear, as with any product, wear and tear can occur over time. Wear and tear can lead to product failure if not addressed. If any structural Exoskeleton parts or Fabric Inner Sock-et™ parts are showing wear and tear, contact Slingshot Bionics to help assess points of concern. Most Slingshot Socket™ components can be easily replaced on your own if wear and tear occurs.

Thermal Wear and Tear:

Exposure to high temperatures can lead to defects and excessive wear and tear of the Sock-et™ materials. When washing, be sure to use cool washer and drier temperatures. Likewise, avoid leaving the Slingshot Socket™ in an excessively hot car or similar environments, where the temperature may exceed 50°C (120°F).

Risk of Falling:

Many Slingshot Socket™ users are less dependent on assistive devices thanks to the Slingshot Socket's™ exceptional biomechanical control of the limb, when fit correctly. However, each user has their own ability-level and balance capabilities. As with any socket, it is imperative that those who can benefit from or require assistive devices such as parallel bars, walkers, or canes, use them when using the Slingshot Socket™ to ensure safety and prevent risk of falling. If the socket feels unstable, or ill-fitting, contact the Slingshot Bionics Clinical Support Team to help determine the cause before further use.

Additional Resources and Information:

See also the Slingshot Bionics FAQ's for additional information, found at: <https://slingshotbionics.com/faq/>.