# LINER AND SKIN CARE GUIDE







# ••Welcome and Congratulations!

If you are reading this, that means you have received an Iceross<sup>®</sup> Silicone Liner. This product is of the highest quality and is made by one of the leaders in the prosthetic industry. This guide will give you some insight into how you will benefit from your new liner. It also provides you with information on how to properly care for your liner and your residual limb to get optimal performance from your liner.

Iceross stands for **Ice**landic **R**oll-**O**n **S**ilicone **S**ocket. It was developed by Ossur Kristinsson, a prosthetist and prosthetic user himself, as an alternative suspension system to more conventional methods at the time. Many of the principles that Mr. Kristinsson used to design his original product are still applied to all Ossur liners today.

The Iceross liner functions as the interface between the skin and the inner socket wall to protect the residual limb and provide greater comfort for amputees while wearing their prosthesis. Iceross is available in a range of designs to suit different residual limb conditions as well as activity and impact levels.

Ossur is a company that produces products inspired by amputees, for amputees.

Welcome to the family.



Össur Kristinsson



Iceross<sup>®</sup> Synergy Liner With Wave Feature



### OSSUR HAS SOLUTIONS

Along with the pioneering concepts that Ossur Kristinsson created there have also been several improvements along the way that have made Iceross<sup>®</sup> Silicone liners the best in the industry.



### COMFORT

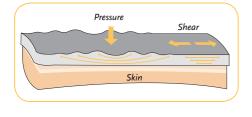
All Iceross Interface systems are made exclusively from medical grade silicone. The properties of silicone provide benefits such as cushioning for bony prominences/sensitive areas, high elasticity to enable total contact and ease of conformity to most residual limb shapes as well as high tear strength for increased durability.

### **SUSPENSION**

The Roll-On method ensures that the Iceross Liner grips the skin and thereby stabilizes the soft tissue of the limb. This assists in evenly distributing forces equally throughout the limb and keeps the movement of the prosthesis to a minimum.

### PROTECTION

Iceross liners are designed to improve blood circulation while controlling swelling. They also protect the skin and newly formed or sensitive scar tissue by reducing pressure peaks and absorbing shear forces.



### **ACTIVE SKIN CARE**

Special ingredients are used in some of Ossur's Iceross liners to promote skin health and reduce the occurrence of dermatological and mechanical irritation problems.

- Vaseline Helps maintain proper hydration and protects the skin by forming a protective layer on the surface
- Aloe-Vera Relieves itching and skin irritations as well as reducing friction and appearance of scar tissue

## DONNING & DOFFING ICEROSS<sup>®</sup> LINERS

Optimal function begins with proper use of your Iceross Liner



### STEP 1:

When donning the Iceross Liner, turn the liner inside out and grip on it as shown in the first illustration.

Note: Be very careful that the inside of the liner is clean, dry and free from any foreign objects that can cause skin irritation.



### STEP 3:

Roll the Iceross liner all the way up the limb, taking care not to damage it with fingernails. Do not tug or pull.



### STEP 2:

After exposing as much of the distal end of the liner as possible, position it against the residual limb and check that no air pockets are present.

Note: The best way to ensure that no air remains in the liner is to invert the liner so that it is flat – much like a saucer rather than a bowl – before placing it on the end of the limb.



### STEP 4:

Only when using a liner without textile cover (Iceross Original Liner), Iceross Clean and Simple lubricant spray can be used to facilitate donning. Spray the lubricant on the **OUTER** surface of the liner, invert the liner and roll on. Wipe off excess lubricant after rolling on.

Note: If talcum powder is used rather than the lceross Clean and Simple lubricant, be sure to lightly dust the OUTSIDE of the Liner only



## ICEROSS<sup>®</sup> LINER CARE

Proper care of your Iceross liner is important. Use the following steps when washing your liner every day after use:



### STEP 1:

Remove the liner, turn the liner inside out and wash it in warm water with a mild soap that is relatively PH neutral (PH=7) such as Iceross Clean and Simple soap. This product is hypoallergenic, specially PH balanced (PH=5.5), and 100% fragrance and dye-free.



### STEP 3:

After cleaning and thoroughly rinsing, the liner should be wiped dry on both sides with a lint-free towel.

### STEP 4:

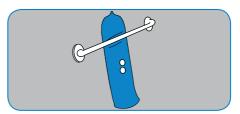
This is a good time to check for damage or wear. Any damage may weaken the effectiveness of the liner and should be reported to your prosthetist immediately. Misuse may result in potential loss of suspension.



### STEP 2:

Rinse thoroughly with warm water! This step is just as important as washing because residual soap on the inside of the liner can become a skin irritant.

Note: The liner can also be machine washed (40°C/ Hot) with a mild detergent. This is not recommended for daily use because it may cause premature wear to the fabric cover of the liner. Fabric softeners, bleaches, or other products and cleaning solutions may damage the liner and should NOT be used.



### STEP 5:

Your Iceross liner can be used directly after washing and does not need to dry over night. Always return the liner to its normal position with the distal attachment facing out as soon as possible after cleaning. You can hang the liner to keep it clean and allow it to air out. A towel rack can be useful for this.

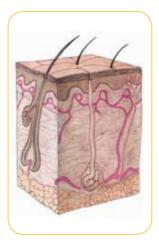
Note: Care must be taken not to expose the liner to glass, carbon fibers or other foreign particles. Such substances can become embedded in the silicone causing aggravation of the skin. The silicone in your lecross liner also contains natural moisturizers that actively heal and soothe the skin. For these reasons, the liner should not be left inside-out for extended periods or exposed to excessive heat or sunlight.

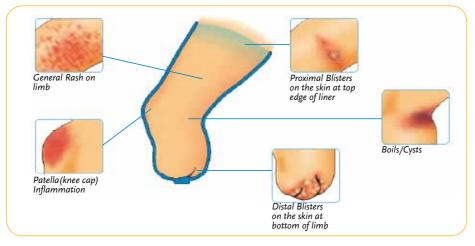
## FUNCTIONS OF THE SKIN!

The skin has several functions that oftentimes become difficult for a person wearing a prosthesis. All amputees can at times experience dermatological problems associated with liner use. Socket fit, biomechanics and wearing patterns are significant factors that influence such problems. The skin contained within any prosthetic socket is exposed to pressures and friction.

In addition, the socket affects the skin's ability to regulate temperature and affects sensation, often creating an environment where bacteria flourish.

Mechanical forces, temperature and humidity cause changes in the structure and composition of the skin. Repeated stimulation will cause a reaction from the skin as it attempts to protect itself from damage.





## POTENTIAL SKIN ISSUES

It is crucial for the health of the skin that these potentially damaging factors are controlled. Silicone liners offer many ways of maintaining healthy skin.



### SKIN CARE

You have taken care of your liner, now take care of your limb!! The first step to keeping your limb healthy is to wear a clean liner.



 Daily *cleaning* of the residual limb is also essential. We recommend use of a mild liquid soap, such as Iceross Clean and Simple soap. This product is specially pH balanced and 100% fragrance- and dye-free.



Iceross Clean and Simple Soap, Moisturizing Lotion and Lubricant Spray



- Proper *hydration* is also important for skin health. This helps to keep skin issues to a minimum.
  - A moisturizer such as Iceross Clean and Simple Moisturizing Lotion should regularly be applied at night to nourish and soften the skin. All Iceross lotions are pH balanced, 100% fragrance and dye-free and will not leave an oily residue.

Note: Do NOT apply lotion to the residual limb immediately prior to donning the liner. This will cause the liner to slip off of the limb.

- Be sure to drink water! Proper hydration for your body helps promote skin health as well.
- Combat excessive perspiration with the use of an antiperspirant such as Drycol or Certain Dri
- Treat skin problems seriously!!
  - For mild redness, apply a rash cream over night such as Egozite
  - For friction sores or "hot spots", apply Vaseline or equivalent before donning liner until the area heals
  - In the event of a bacterial infection discontinue use of the liner immediately and see a prosthetist or dermatologist.
  - If skin problems are persistent and/or result in open sores, consult with your prosthetist immediately.

Note: Many common household or bath products, including soaps, deodorants, perfumes, aerosol or alcohol sprays or abrasive cleaners may cause or contribute to skin irritation.

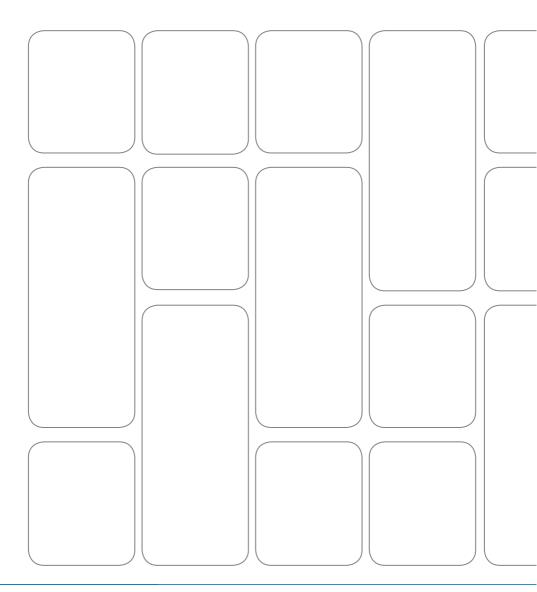
## **TROUBLE- SHOOTING GUIDE**

ISSUE	CAUSE	SOLUTION
General Rash on limb	<ul> <li>New liner during break- in period</li> <li>Overheated skin</li> <li>Bacterial/ Fungal</li> </ul>	<ul> <li>Wash liner and limb</li> <li>Apply a skin cream for rashes or lotion when not wearing the liner</li> <li>Apply Vaseline while wearing the liner</li> </ul>
Proximal Blisters on the skin at top edge of liner	<ul> <li>Shear forces between skin tissue and edge of liner</li> <li>Poorly trimmed edge of liner</li> </ul>	<ul> <li>Apply Vaseline to affected area to reduce friction</li> <li>If persistent - see prosthetist for adjustments to liner trim lines</li> </ul>
Distal Blisters on the skin at bottom of limb	<ul> <li>Air pocket from improper donning of liner</li> <li>Liner is possibly too big</li> </ul>	<ul> <li>Apply Vaseline to affected area</li> <li>Re- don the liner making sure to expel all of the air</li> <li>If persistent - consult with prosthetist about liner sizing</li> </ul>
Patella(knee cap) Inflammation	• Liner tension over the knee when the knee is bent	<ul> <li>Apply Vaseline to reduce friction</li> <li>Don the liner with knee in bent position</li> <li>Consult your prosthetist about liners with solutions such as the "Wave Feature" by Ossur</li> </ul>
Boils/Cysts	<ul> <li>High pressure spots in socket</li> <li>Ingrown hair follicles</li> </ul>	<ul> <li>Wash liner and limb</li> <li>Limit prosthesis use</li> <li>Consult with prosthetist about relieving pressure points in socket</li> <li>Possibly consult with a dermatologist</li> <li>Extreme cases - consider hair removal process</li> </ul>
Itching when the liner is removed	• Mineral/Salt build up from perspiration	<ul> <li>Wash liner and limb thoroughly</li> <li>Use anti-itch cream or lotion when not wearing liner</li> </ul>
Excessive Perspiration	<ul> <li>Adapting to a new liner</li> <li>Hot environments (summertime)</li> <li>Hyperhidrosis syndrome</li> </ul>	<ul> <li>Apply an anti-perspirant such as Drycol or Certain Dri to limb overnight</li> <li>Do not wash off anti-perspirant before donning liner</li> </ul>



# OSSUR ICEROSS<sup>®</sup> LINER AND SKIN CARE GUIDE

PROSTHETIST NAME:	
ADDRESS:	
ADDRESS	·
PROSTHETIST PHONE NUMBER:	
E-MAIL:	
NOTES	
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	Life Without Limitations



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