



### **BACKGROUND**

"Bedfast patients are at very high risk of developing pressure ulcers on the feet and ankles. A shallow injury or pressure ulcer can become a deep stage IV ulceration very quickly. The heels and ankles are at greatest risk of ulceration". - Barbara Acello. One reason is that heels have a small surface area (Pressure = Force/Area) and are therefore a prime site for pressure ulcer development.

It was determined by Andrews, J and Thompson - Bishop J, Mottola C. that pressure reducing mattresses are more effective than standard hospital mattresses for decreasing interface pressure on the sacrum and trocanter but do not effectively reduce pressure on the heels.

### Risk Factors

Primary risk factors include: pressure, friction, shear, moisture and/or heat build up. When a combination of the above factors are present, pressure ulceration could start forming in as little as 6 hours. Those persons with extended surgery, especially hip surgery, immobile residents, persons with vascular problems and hyperactive bed ridden residents are at a higher risk. It is well documented that production of a pressure ulcer is dependent on a time pressure relationship with higher pressure being tolerated if pressure is alternated or is applied for a shorter period of time.

Another documented contribution to heel ulcers is friction between the heels and bed sheets which could also lead to shear forces penetrating the lower dermis. Friction and shear is particularly prevalent with immobile, agitated residents.

### Frequency of Occurrence

The census bureau estimates that there are approximately 72 million or 20% of the population, people 65 years or older who are more susceptable to heel ulcers. It has been determined that up to 17% of chronic long term care and 20% of short stay residents in skilled nursing facilities suffer skin ulcers. Hospitals have a higher incidence rate for pressure ulcers than long term care facilities with between 57% - 60% of ulcers occurring in the hospital compared to roughly 23% in long-term care facilities. Fewer than 20% of pressure ulcers occur outside healthcare facilities, with the prevalence rate in homecare patients ranging from 9-20%. Heel ulcers account for roughly 36% of all pressure wounds.

Click here to view detailed product descriptions and prices. Call 800-397-5899 to order today!

# RISK ASSOCIATED with HEEL PRESSURE ULCERS

Approximately 8% of all deaths in nursing homes are attributed to pressure ulcers according to the "Journal of Chronic Disease". The cost of treating individual pressure ulcers can be between \$500 and \$50,000. Lawsuits related to the condition remain the second most common claim, notes the Mayo Foundation for Education and Research.

Starting in Oct 2008 the centers for Medicare and Medicaid Services (CMS) will no longer reimburse providers at a higher rate for care of pressure ulcers that develop while a patient is in the acute care hospital.

### RECOMMENDED INTERVENTION

It is to be noted that "Soft Boots" provide pressure reduction and redistribution to varying degrees and sometimes may suffice in comparison to heel suspension boots. Skil-Care Corporation has been developing heel boots for over 30 years and offers many solutions to the problem. When developing the products, the following parameters were considered:

- 1. Friction and Shear (use of soft, low shear fabrics)
- 2. Cooling Advantage (availability of gel pads)
- 3. Heel Suspension (off-loading)
- 4. Ease of Application (convenient strapping)
- 5. Comfort (soft padding, fabrics and non-abrasive strapping)
- 6. Life Cycle Cost (initial cost, lauderability, durability)
- 7. Consideration of Foot Drop

Since cost is a major consideration it isn't necessary to incorporate all of those listed parameters in every device. In the following pages you will find Skil-Care products separated by the most significant features. All of the Skil-Care offerings provide low friction and shear and many of the products have overlaping features.

Please refer to the icons below to facilitate the selection of the right boot.

#### Icon Legend















### **Economy**



### Econo Sheepskin Heel Protector

- · Light weight and economical heel protector
- · White Synthetic sheepskin is low shear and allows for air circulation
- Stays soft even after repeated launderings

ReOrder # Description		Size	U/M
503005 Econo Sheepskin Heel Protector		Universal	12/Cs
503006	Econo Sheepskin Heel Protector	Universal	36/Cs

Meets flammability requirements of CAL 117







### **Triple-Ply** Heel Protector

Provides three layers of sheepskin under sensitive heels

- · Maintains resiliency for constant pressure relief
- Side vent holes promote air flow and reduce moisture build-up
- · Velcro® closures assure a snug, comfortable fit
- · Completely launderable

ReOrder #	eOrder # Description		U/M
503010	Triple-Ply Heel Protector	Universal	Pair
503020	Triple-Ply Heel Protector	Universal	36 Pair/Cs

Skil-Care





Meets flammability requirements of CAL 117



#### Econo Foam Heel Protector

Oversized design keeps protector in place

- Made from pressure-relieving polyfoam
- Secure Velcro® closure guarantees easy application
- Available in standard or convoluted polyfoam



Model 503080

ReOrder #	Description	ReOrder #	Description	Size	U/M
503070	Foam Protector - Standard	503080	Foam Protector - Convoluted	Universal	Pair
503077	Foam Protector - Standard	503087	Foam Protector - Convoluted	Universal	Dz/Pair/ Cs

### **Economy**

### Cozy Cloth Foam Heel Cushion

Extra-thick foam padding reduces pressure

- Covered with a soft launderable Cozy Cloth fabric
- · Velcro® closure for easy application and secure positioning
- Reusable and completely launderable

ReOrder#	Description	Size	U/M
503040	Cozy Cloth Foam Heel Cushion	Universal	Pair









#### **Heel/Elbow** Protector

Affordably and effectively protects sensitive heels and elbows

- · Prevents pressure sores, friction burns, and abrasions
- · Soft polyfoam pad is specially contoured to comfortably cover resident's heels, elbows, or knees
- · Seamless inside to prevent abrasion
- Oversized stockinet sleeve keeps pad securely positioned without constricting arm or ankle
- Provides a protective covering for bandages, dressings, and IVs

ReOrder#	Description	ReOrder #	Description	ReOrder#	Description	U/M
503203	Small	503204	Medium	503205	Large	Pair
503213	Small	503214	Medium	503215	Large	36 Pair/Cs









### Stay-On Heel Protector

Special design makes it difficult to kick off

- · Secure slide-lock buckle closure
- · Two layers of plush synthetic sheepskin for superior pressure relief
- · Stays soft and resilient even after repeated laundering

ReOrder #	Description	Size	U/M
503050	Stay-On Heel Protector	Universal	Pair
503060	Stay-On Heel Protector	Universal	DZ-Pair/Cs

Meets flammability requirements of CAL 117







### Pressure Redistribution



### Foam Pressure Relieving Heel Protector

- Two convenient models: Smooth and Convoluted foam
- Off-loads the heel for decubitus ulcer protection
- Heel insert covered with low friction fabric for reduction of sweating and friction burns
- Two soft, comfortable cozy cloth tie straps
- Includes auxiliary foam pad for extending the length or height
- · Multiple ventilation holes for cooling affect

	ReOrder#	Description	Size	U/M
503400 503450		Foam Heel Protector - Smooth	Universal	Ea.
		Foam Heel Protector - Convoluted	Universal	Ea.







Protects against pressure sores

- Filled with resilient spun fiber
- · Extra padding with seamless construction under heel
- Covered with a soft launderable Cozy Cloth fabric
- Cover wicks away moisture to eliminate skin-damaging perspiration
- Launderable

		Description	Size	U/M
	503030	Ultra-Soft Heel Cushion	Universal	Pair





Provides pressure-relief under heel, ankle, and lower calf





- New longer length for upper-calf skin protection
- · Made from plush synthetic sheepskin
- Large vent holes promote air circulation to reduce perspiration and moisture build-up
- Secures with Velcro® closures
- Completely launderable

ReOrder #	Description	Size	U/M
503160	Soft Boot	Universal	Pair

Meets flammability requirements of CAL 117



### Pressure Redistribution & Cooling

#### **Gel-Foam** Heel Cushion

Combines gel and foam for maximum pressure relief

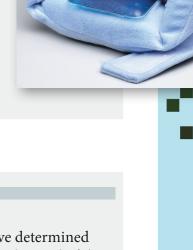
- · Water-based gel insert relieves pressure and cools leg area
- · Ample foam padding adds extra cushioning
- · Covered with a soft Cozy Cloth fabric
- Launderable and reusable (with removal of gel pack)
- Cover wicks away moisture to eliminate skin-damaging perspiration
- Extra-wide Velcro<sup>®</sup> strap secures heel cushion

ReOrder #	Description	Size	U/M
503025	Gel-Foam Heel Cushion	Universal	Pair
503088	Replacement Gel Pack	3.25"W x 6.5"D	Ea.









### ADVANTAGES of COOLING

The advantages of gel's cooling effect is highlighted by studies that have determined that a one degree celcius buildup of body temperature increases the metabolic demand of the tissue by 10% which in turn contributes to an increase in the propensity to develop pressure sores. Correspondingly, the gel pad lowers the temperature at the interface by conduction.

The gel pad also distributes the forces (redistribution) to lower the pressure at this interface.



### Overview III

Note: (Cutaway not on actual

503098

product)

This category includes some of the most effective features in reducing the occurance of heel pressure ulcers, namely heel off-loading. This point was emphasized by the National Pressure Ulcer Advisory Panel in their publication "Prevention and Treatment of Pressure Ulcers: Quick Reference Guide."

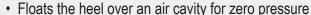
As stated in the guide:

- Ensure that the heels are free of the surface of the bed.
- Use a foam cushion under the full length of the calves to elevate heels.

For category, stage 3 or 4 and unstageable pressure ulcers, place the leg in a device that elevates the heel from the bed surface, completely off-loading the pressure ulcers.



Off-loads the heel over an air cavity to eliminate pressure



- Provides air circulation to aid healing of existing ulcers
- · Water-based gel insert lowers pressure beneath ankle
- · Covered with a soft launderable Cozy Cloth fabric
- Anti-foot-drop construction controls dorsal flexion
- Launderable and reusable (with removable gel pack)











### Heel-Off Loading

#### Heel-Float ||

The ultimate product in comfort, heel off-loading, and cost saving

- Off-loads the heel to eliminate pressure
- · Low shear covering to reduce friction and pressure sores
- Anti-foot drop construction controls dorsal flexion
- Two versatile straps that offer multiple positions

ReOrder#	Description	Size	U/M
503134	Heel-Float II - Small	3" W	Ea.
503135	Heel-Float II - Medium	4" W	Ea.
503136	Heel-Float II - Large	5" W	Ea.
503098	Bilateral Anti-Rotation Gripper - Foam	Universal	Ea.











#### **Heel-Float** Air Boot

Zero pressure on the heel

- · Off-loads the heel with hi-rise air pocket
- · Provides maximum air circulation for healing or prevention of heel or leg ulcers
- · Anti-foot drop construction controls dorsal flexion
- Comfortable inner lining for reduction of shear forces.

ReOrder#	Description	Size U	
503510	Heel-Float Air Boot	Universal	Ea.
751580	Optional Hand Pump	Universal	Ea.











#### Heels-Off

Suspends heels off the bed for total heel pressure relief

- · Off-loads both heels
- · Prevents formation of pressure sores
- · Aids in healing existing ulcers
- Elevates legs to relax spine
- Wipe- Clean Low-Shear II cover protects against skin-damaging friction
- · Optional gel adds superior comfort and cooling

ReOrder#	Description	Size	U/M
503151	Heels-Off - Small/Medium	13"L x 24"W x 5.5"H	Ea.
503150	Heels-Off - Medium/Large	16"L x 24"W x 7"H	Ea.
503166	Heels-Off w/Gel Pad - Small/Medium	13"L x 24"W x 5.5"H	Ea.
503165	Heels-Off w/Gel Pad - Medium/Large	16"L x 24"W x 7"H	Ea.
503167	Heels-Off w/Gel Pad - Bariatric	16"L x 26"W x 7"H	Ea.
503199	Heels-Off Replacement Cover	Medium/Large	Ea.









### Heel-Off Loading - Foot Drop



#### Foot/Heel Elevator

Eliminates heel pressure

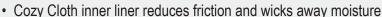
- Provides necessary air circulation for accelerated tissue granulation and healing of existing pressure sores
- · Resilient polyfoam covered with perspiration-absorbing fabric
- No need for a separate inner liner

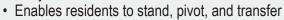
ReOrder #	Description	Size	U/M
503100	Foot/Heel Elevator	4"W	Ea.
503101	Foot/Heel Elevator w/Sheepskin Padding	4"W	Ea.
503140	Foot/Heel Elevator	6"W	Ea.
503141	Foot/Heel Elevator w/Sheepskin Padding	6"W	Ea.

503101 has a sheepskin inner lining

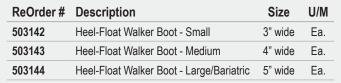








- · Water-based gel insert lowers pressure beneath ankle
- Detachable tread pad for infection control
- Floats heel for total pressure relief
- · Launderable when you remove gel insert and detachable tread
- Wipe-clean nylon outer cover



ReOrder#	Description	Size	U/M
503095	Replacement Gel Pack for Heel Float Series	Small	Ea.
503097	Replacement Gel Pack for Heel Float Series	Medium	Ea.
503099	Replacement Gel Pack for Heel Float Series	Large	Ea.











### Heel-Off Loading - Foot Drop

### Adjustable Heel-Float

- · Floats the heel over an air cavity for zero pressure
- · Water-based gel insert lowers pressure beneath ankle
- · Adjustable belt to accommodate plantar flexion
- · Cozy Cloth lining reduces skin shear and wicks away moisture
- Launderable when you remove gel insert and plastic stabilizer
- Wipe-clean nylon outer cover

ReOrder#	Description	Size	U/M	
503152	Heel-Float Adjust Small	3" wide	Ea.	
503153	Heel-Float Adjust Medium	4" wide	Ea.	
503154	Heel-Float Adjust Large/Bariatric	5" wide	Ea.	
ReOrder#	Description		Size	U/M
ReOrder # 503095	Description  Replacement Gel Pack for Heel Floa	t Series	<b>Size</b> Small	U/M Ea.
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### Heel-Float Adjustable Walker Boot

- · Floats the heel over an air cavity for zero pressure
- · Water-based gel insert lowers pressure beneath ankle
- · Permits resident to stand, pivot, and transfer
- Adjustable belt to accommodate foot drop.
- Detachable tread pad for infection control
- Cozy Cloth liner reduces friction and wicks away moisture
- · Launderable when you remove gel insert and detachable tread
- · Wipe-clean nylon outer cover

ReOrder#	Description	Size	U/M
503147	Heel-Float - Small	3" wide	Ea.
503148	Heel-Float - Medium	4" wide	Ea.
503149	Heel-Float - Large/Bariatric	5" wide	Ea.

ReOrder#	Description	Size	U/M
503095	Replacement Gel Pack for Heel Float Series	Small	Ea.
503097	Replacement Gel Pack for Heel Float Series	Medium	Ea.
503099	Replacement Gel Pack for Heel Float Series	Large	Ea.





\*Photo shows boot with tread being removed









### Heel-Off Loading - Foot Drop Protection



### Wipe-Clean Heel-Float

Zero pressure on heel

- · Low-Shear II cover reduces skin-damaging friction and wipes clean for easy care
- · Suspends heel over air cavity to eliminate pressure
- · Water-based gel insert lowers pressure beneath ankle
- Wipe-clean and reusable
- Prevents plantar flexion

ReOrder #	Description	Size	U/M
503047	Heel-Float Wipe-Clean - Small	3" wide	Ea.
503048	Heel-Float Wipe-Clean - Medium	4" wide	Ea.
503049	Heel-Float Wipe-Clean - Large/Bariatric	5" wide	Ea.

ReOrder#	Description	Size	U/M
503095	Replacement Gel Pack for Heel Float Series	Small	Ea.
503097	Replacement Gel Pack for Heel Float Series	Medium	Ea.
503099	Replacement Gel Pack for Heel Float Series	Large	Ea.











Zero pressure on heel, bunion, and malleoli

- Cutouts that eliminate pressure on lateral and medial malleoli
- Foot band that secures below bunions
- · Water-based gel insert lowers pressure beneath ankle
- Provides maximum air circulation for healing existing sores
- · Covered with a soft launderable Cozy Cloth fabric
- · Extended foot support keeps blanket and sheet off toes



ReOrder#	Description	Size	U/M
503095	Replacement Gel Pack for Heel Float Series	Small	Ea.
503097	Replacement Gel Pack for Heel Float Series	Medium	Ea.
503099	Replacement Gel Pack for Heel Float Series	Large	Ea.















### Heel-Off Loading - Foot Drop Protection

### Super Soft Heel Protector

This superior heel protector combines off-loading of the heel in addition to providing comfort and control of foot drop

- Universally sized heel protector designed for treatment and prevention of heel pressure sores
- · Open heel design effectively eliminates heel pressure by suspending the heel in the air and also promotes faster healing
- · Covered with a soft launderable Cozy Cloth fabric
- Extended height prevents sheets and blankets from contacting the toes
- Reduces risk of plantar flexion (foot drop) Easy to apply with adjustable straps for custom fit
- · Launderable, reusable, and guaranteed for six months
- DVT compatible

ReOrder #	Description	Size	U/M
503410	Super Soft Heel Protector	Universal	Ea.
503420	Super Soft Heel Protector w/Bilateral Anti-Rotation Gripper	Universal	Ea.
503430	Bilateral Anti-Rotation Gripper	Universal	Ea.









Protector w/Bilateral Anti-Rotation Gripper

### **Foot Drop** Boot

- Supportive plastic inner liner controls plantar flexion (foot drop)
- · Heel is suspended above a cavity for maximum pressure relief
- · Synthetic sheepskin liner provides comfort, prevents bruising and minimizes shear force
- Model 503174 is available with extended toe and anti-rotation bar

ReOrder#	Description	Heel to Toe Height	U/M
503170	Foot Drop Boot - Small	9.5"H	Ea.
503171	Foot Drop Boot - Medium	11"H	Ea.
503172	Foot Drop Boot - Large	12.5"H	Ea.
503174	Foot Drop Boot w/Extended Toe and Lateral Support- Medium	11"H	Ea.
503180	Replacement Cover	Small	Ea.
503181	Replacement Cover	Medium	Ea.
503182	Replacement Cover	Large	Ea.









Model 503174





Visit is us at www.skil-care.com for all your nursing home and hospital needs

### Tri-Function Heel-Off Loader

### Overview III

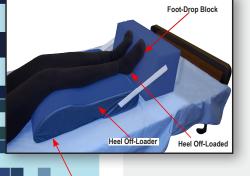
Pressure ulcers associated with geriatric residents usually appear over bony prominences and those individuals who are chair or bed bound or more susceptible. In many situations a simple heel boot that off-loads the heel would be an acceptable intervention. Examples of these boots would be the Skil-Care Heel-Float. The Tri-Function Heel Off-loader was design for individuals with poor circulation at the extremities and it has become to painful to place any covering device over the foot. This product consists of two components that can be used separately. The heel off-loader simultaneously off-loads the heel while allowing the knees to flex at a comfortable 5°-10°. This relaxes the hips and relieves pressure from the back. This item comes in two sizes to accommodate residents of different stature.

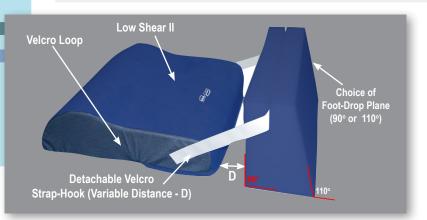


- Suspends heels off the bed
- Places the knee in a 5° to 10° flexion position
- Elevates legs to relax the spine
- Distributes the weight of the leg along the calf
- Two position foot drop block
- Reduces the risk of pressure ulcer development
- Detachable straps that adjust for any leg length
- Low-Shear II cover reduces skin-damaging friction and wipes clean for easy care

ReOrder #	Description	Size	U/M
503188	Tri-Function Heel Off-Loader System - Short	Person < 5'3" Tall	ST
503186	Heels-Off loader	Long	Ea.
503185	Tri-Function Heel Off-Loader System - Long	Person ≥ 5'4" Tall	ST
503189	Heels-Off loader	Short	Ea.
503187	Foot Drop Block for 501385 & 503188	7"L x 20"W x 12'H	Ea.

\*Note: The set consist of one (1) heel off-loader and one (1) foot drop control block



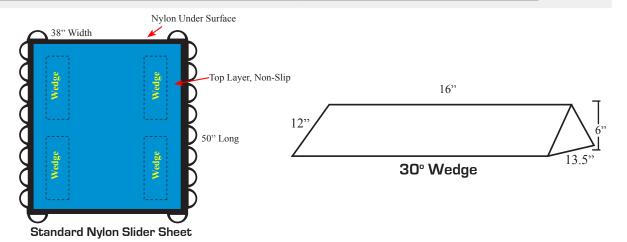


# Bed Pressure Relieving and Weight Distribution Systems

# 30° Bed System w/Slider Sheet and Two Wedges (Non-Velcro)

- 30° wedge for optimum coccyx off-loading position
- · No slip fabric, wipe-clean bolster
- Slider sheets connect with bolsters to stabilize them
- · Slider sheet has continuous handles for easy transfer/positioning
- LSII bolster covers are easily wiped clean

	· · · · · · · · · · · · · · · · · · ·		
ReOrder#	Description	Size	U/M
556150	30° Bed System w/Slider Sheet and Two 16" Wedges	16" Wedge, 38"W x 50"L slider sheet	Set
556151	16"L 30 Degree Wedges Only	16"L x 12"D x 7"H	Pair
556152	Slider Sheet Only	50"L x 38"W	Ea.



# PREVENTION & TREATMENT OF PRESSURE ULCERS NATIONAL PRESSURE ULCER ADVISORY PANEL

Determine Repositioning Frequency with Consideration to the Individual

- Tissue Tolerance
- Level of activity & mobility
- · General medical condition
- Skin Condition
- Comfort
- Teach individuals to do pressure relief lifts or other pressure relieving manoeuvres.
- · Avoid positioning the individual on bony prominences with existing non-blanchable erythema
- Avoid subjecting the skin to pressure and shear forces
- Use manual handling aids to reduce friction and shear lift, don't drag the individual while repositioning.

#### Repositioning Individuals in Bed

Use the 30° tilted side-lying position (alternately right side, back, left side) or the prone position if the individual can tolerate this and his/her medical condition allows.

Encourage individuals who can reposition themselves to sleep in a  $30^{\circ}$  to  $40^{\circ}$  side lying position or flat in bed if not contraindicated.

Limit head of bed elevation to 30° for an individual on bed rest unless contraindicated by medical condition or feeding and digestive consideration.

The National Pressure Ulcer Advisory Panel is the most prestigious assemblage of experts on the subject of pressure ulcers. The committee members represent the majority of countries in the western world. This committee publishes a guide titled "Prevention and Treatment of Pressure Ulcers: Quick Reference Guide " and included below are quotes from this guide that are relevant to the subject of heel ulcer prevention and treatment.

#### **Skin and Tissue Assessment**

Protect the skin from exposure to excessive moisture with a barrier product in order to reduce the risk of pressure damage. Moisture may increase the risk of pressure ulceration.

#### **Emerging Therapies for Prevention of Pressure Ulcers**

Consider the need for additional features such as the ability to control moisture and temperature when selecting a support surface.

Do not apply heating devices directly on skin surfaces or pressure ulcers. Heat increases the metabolic rate, induces sweating and decreases the tolerance of the tissue for pressure.

#### **Determine Repositioning Frequency with Consideration to the Individual**

Avoid subjecting the skin to pressure and shear forces.

#### Repositioning to Prevent and Treat Heel Pressure Ulcers

Ensure that the heels are free of the surface of the bed

The knee should be in slight (5° to 10°) flexion

For category, stage 3 or 4 and unstageable pressure ulcers, place the leg in a device that elevates the heel from the bed surface, completely off-loading the pressure ulcer, consider a device that also prevents foot drop.

#### Assessment

Inspect the skin under and around medical devices at least twice daily for signs of a pressure related injury.

#### **Individuals in the Operating Room**

Use heel suspension devices that elevate and off-load the heel completely in such a way as to distribute the weight of the leg along the calf without placing pressure on the achelles tendon.