



EPUAP-NPUAP-PPPIA CLINICAL PRACTICE GUIDELINE 2014

# Pressure injury prevention and treatment solutions

Considerations on support surfaces, safe patient handling  
and pressure injury prevention for clinicians

# Arjo pressure injury prevention and treatment solutions

## Prevention and treatment of pressure injuries: clinical practice guideline<sup>1</sup>

The launch of the 2014 guideline represents a truly international perspective on pressure injury management, reflecting multidisciplinary expertise, key opinion leader insight and cutting edge research from around the world.

As a leading global provider of solutions, designed to help you deliver harm free care for patients at risk from pressure injuries and other preventable complications of immobility, we would like to share with you how Arjo's unrivaled range of products and integrated solutions align to the new recommendations.

As the scope of the guideline is substantial, this document will focus on subject areas related to the management of pressure, tissue tolerance and immobility – areas closely aligned to our philosophy and expertise.

**...with people in mind**

"When selecting a support surface consider the individual's need for pressure redistribution."<sup>2</sup>

### Choice should be based on factors including:

- Level of immobility and inactivity
- Need for microclimate control and shear reduction
- Size and weight of the individual
- Risk for development of new pressure injuries
- Number, severity, and location of existing pressure injury/-ies.

## Therapeutic Support Surfaces

With more than 25 years of experience, Arjo has become a leading global authority on the design, development and clinical application of therapeutic support surfaces for the prevention and treatment of pressure-related injuries.

As a company, we aspire to deliver class leading clinical performance and technological innovation to assist healthcare facilities to reduce preventable harm. We recognise that each healthcare provider has its own unique blend of clinical and financial objectives to consider when addressing support

surface solutions as part of a pressure injury prevention and management strategy.

With an extensive choice of Active (Alternating Pressure) and Reactive (Continuous Low Pressure) approaches to pressure redistribution, along with powered microclimate control mattresses and cover options, Arjo can tailor flexible, user friendly and guideline-aligned solutions to help you meet a wide range of requirements.

## Active and reactive range

NIMBUST RANGE



THERAKAIR VISIO



FIRST STEP ALL IN ONE



AUTO LOGICT



## Reactive non-powered range

RIK FLUID OVERLAY



PRESSURE IQ EVOLVE



ATMOSAIRT RANGE



CONFORMX



ALPHA RESPONSE



ALPHA ACTIVE



FIRST STEP SELECT



ALPHA TRANCELL DELUXE



PENTAFLEX



SIMULFLEX



## Microclimate management

SKIN IQ



## Active (Alternating) Support Surfaces

"Use an active support surface (overlay or mattress) for individuals at higher risk of pressure injury development when frequent manual repositioning is not possible."<sup>3</sup>

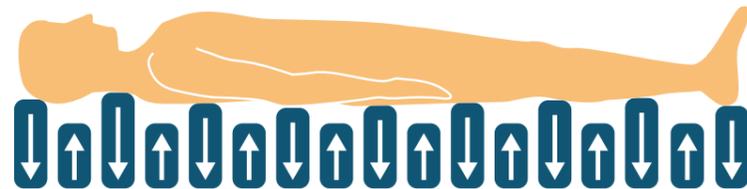
There are many situations where a patient might not be able to tolerate, or have access to, frequent repositioning.

Arjo Active Therapeutic Support Surfaces are designed to closely mimic the natural protective environment of regular spontaneous movement, by redistributing pressure several times each hour, even if the patient does not move<sup>4</sup>. A 1-in-2 cycle, where alternate cells inflate and deflate, balances the application and removal of pressure to give time for tissue reperfusion.

As a further level of tissue protection, products such as the Nimbus Professional and Nimbus 4 mattresses offer the unique facility to completely and permanently off-load pressure from high risk areas such as the heels, wounds and surgical sites through unique Wound Valve Technology.



Nimbus 4 with Wound Valve Technology



## Active support surfaces



## Reactive (Continuous Low Pressure) Support Surfaces

### Full Thickness Tissue Injury

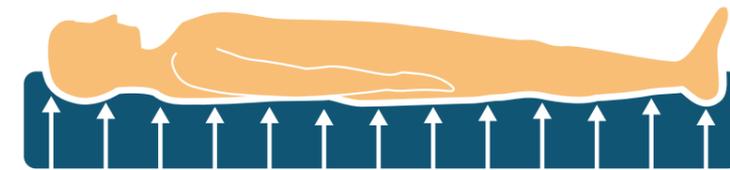
"Select a support surface that provides enhanced pressure redistribution, shear reduction, and microclimate control for individuals with:

- Category/Stage III, IV, and unstageable pressure injuries.
- Suspected deep tissue injury if pressure over the area cannot be relieved by repositioning."<sup>5</sup>

Reactive (Continuous Low Pressure) therapeutic surfaces typically reduce the contact pressure at the skin-mattress interface by increasing the surface area over which the individual is supported. Pressures will depend on the type of support surface and how it is adjusted. As the pressures do not change unless the individual makes a movement, these devices are termed 'reactive'. Reactive surfaces typically include foam, gel, air foam combination products, low air loss and air fluidised systems.

The range of Reactive Support Surfaces from Arjo aim to reduce the level of continuous pressure exerted against the skin by enabling the body to immerse into and be enveloped by the support surface<sup>7</sup>.

"Consider using (other) reactive surfaces for individuals assessed as being at risk for pressure injury development."<sup>6</sup>



## Reactive support surfaces



### Partial Thickness Tissue Injury

"Consider using a high specification reactive foam mattress or non-powered pressure distribution support surface for individuals with:

- Category/Stage I and II pressure injuries."

High specification foam pressure redistributing mattresses are indicated for the prevention of pressure injuries and treatment of superficial tissue injury<sup>8</sup>.

## Reactive foam support surfaces



With foam pressure redistribution mattresses often delivering the first line of defence against pressure injury development, it's important to feel confident in the capabilities of the solution you choose. For this reason, Arjo has a range of

high specification foam mattresses and hybrid air/foam pressure redistribution surfaces with unique Self-Adjusting Technology (SAT), designed for prevention and treatment of pressure injuries.

"Pressure reduces perfusion to injured tissues. Continued pressure on an existing pressure injury will delay healing and may cause additional deterioration."<sup>10</sup>

"Ensure that the heels are free of the surface of the bed."<sup>11</sup>

"Wherever possible, do not position an individual on an existing pressure injury."<sup>12</sup>

### Specialist Off-loading for Prevention and Healing



To prevent or heal a pressure injury you must first tackle the cause. Floatation can create the perfect environment for pressure injury management through continuous offloading of specific high risk areas<sup>13</sup>.

Products such as Nimbus 4 and Nimbus Professional, facilitate selective offloading of vulnerable tissue, such as heels and wound sites, by enabling permanent deflation of targeted cushions at the turn of a dial, using patented Wound Valve Technology.

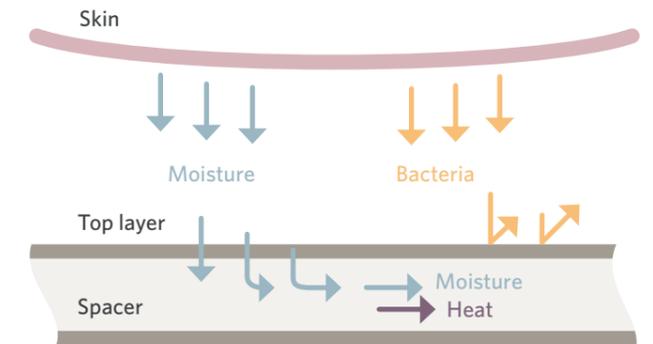


Heel Offloading

## Microclimate Management (tissue tolerance)

"Consider the need for additional features such as ability to control moisture and temperature when selecting a support surface."<sup>14</sup>

"Consider the need for moisture and temperature control when selecting a support surface cover."<sup>15</sup>



Microclimate Management has been identified as one of the emerging therapies, which can complement pressure redistribution for the prevention and treatment of pressure injuries. There is a growing appreciation of the role of this therapy option in improving tissue tolerance to aid pressure injury prevention and healing, particularly in the presence of excessive moisture and elevated temperature at the skin/surface interface<sup>16</sup>.

Any surface that is in contact with the skin has the potential to affect the microclimate. The overall effect is dependent on the nature of the support surface and the cover.

Skin IQ is an adjunctive therapeutic mattress cover, which adds microclimate control to a pressure redistributing surface<sup>17</sup> used with patients presenting with complex skin care issues, including full thickness tissue injury.

### SKIN IQ MICROCLIMATE MANAGEMENT SYSTEM



### THERAKAIR VISIO LOW AIR LOSS MATTRESS



## Seating

"Use a pressure redistributing seat cushion for individuals sitting in a chair whose mobility is reduced."<sup>18</sup>

"Use alternating pressure seating devices judiciously for individuals with existing pressure injuries."<sup>19</sup>

### Risk is a 24-hour problem

Arjo has a range of seat cushions to compliment the mattress range from home care to hospital.

Risk is particularly high when patients are sitting in a chair, given that the pressure exerted over the bony pelvis is naturally elevated<sup>20</sup>. Aside from limiting sit time, pressure-redistributing chair cushions are recommended for any patient with reduced mobility.



ATMOSAIR™ AIR-FILLED (REACTIVE) SEAT CUSHION



AURA LOGIC (ACTIVE) SEAT CUSHION



## Maxi Transfer Sheet

The dual purpose Maxi Transfer Sheet, is designed to replace the hospital bed sheet. Combining the benefits of a transfer sling for repositioning, and the functionality of bed linen, its soft, breathable fabric construction<sup>26</sup>, enables it to remain in place under the patient after use.



Maxi Transfer Sheet

## Standing and Raising Aids

For chair bound patients, regular relief of pressure is vital to help protect the skin against tissue damage. In addition to an appropriate pressure redistribution cushion, the use of a standing and raising aid such as Sara Plus or Sara Steady can facilitate standing to allow regular skin inspection and temporarily relieve the sustained high pressures normally encountered during sitting.



Sara Plus

Sara Steady

"Use manual handling aids to reduce friction and shear. Lift - don't drag - the individual when repositioning."<sup>22</sup>

"Use a lift or transfer sheet to minimize friction and/or shear when repositioning an individual, keeping bed linens smooth and unwrinkled."<sup>23</sup>

## Repositioning

Repositioning is undertaken to reduce the duration and magnitude of pressure over vulnerable areas of the body, and to contribute to the patient's comfort, hygiene and dignity.<sup>21</sup>

As a global leader in safe patient handling solutions, Arjo believe frequent repositioning can be made easier and safer for both patient and staff with use of appropriate safe patient handling aids. This may include the use of slide sheets and, where necessary, patient lifters and standing raising aids. The variety of sling solutions helps facilitate both patient repositioning in bed and transfers out of bed.

"Do not leave moving and handling equipment under the individual after use, unless the equipment is specifically designed for this purpose."<sup>24</sup>

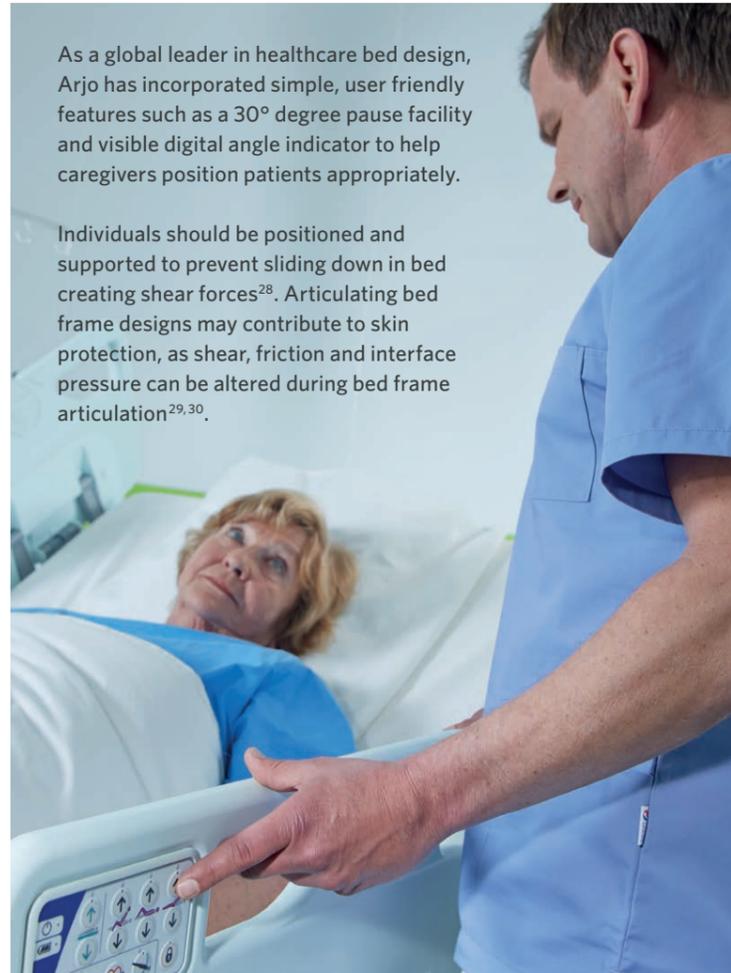
"Consider using silk-like fabrics rather than cotton or cotton-blend fabrics to reduce shear and friction."<sup>25</sup>

## Positioning in Bed

"Limit head-of-bed elevation to 30° for an individual on bed rest unless contraindicated by medical condition or feeding and digestive considerations."<sup>27</sup>

As a global leader in healthcare bed design, Arjo has incorporated simple, user friendly features such as a 30° degree pause facility and visible digital angle indicator to help caregivers position patients appropriately.

Individuals should be positioned and supported to prevent sliding down in bed creating shear forces<sup>28</sup>. Articulating bed frame designs may contribute to skin protection, as shear, friction and interface pressure can be altered during bed frame articulation<sup>29,30</sup>.



## Facility-wide Implementation



Pressure injuries occur because of a breakdown in the continuum of care. The following strategies are recommended to ensure preventive measures are successful<sup>31</sup>:

1. Regular evaluation of facility performance and monitoring of pressure injury rates as part of pressure injury prevention and treatment initiatives, together with providing timely feedback to stakeholders
2. Use quality indicators to monitor how best practice is being followed which influence pressure injury development
3. Use modern technology such as electronic systems to report and track pressure injury development

The Arjo Diligent Pressure Ulcer Prevention Program (PUPP) contains tools and processes to help implement best practice based on precepts recommended in these guidelines. If you wish to learn more, please contact your local representative or visit our website.

## Early Mobilisation

"Individuals on bed rest should progress to sitting and ambulation as rapidly as they can tolerate. Ambulation schedules may help offset the clinical deterioration often seen in patients subjected to prolonged bedrest."<sup>32</sup>

Bed rest not only places patients at an increased risk of pressure injuries and venous thromboembolism events, but also, reduces pulmonary function and significantly increases muscle loss and decreases muscle strength. Mobilisation early in the patient's care pathway is encouraged to help prevent many of these issues<sup>33</sup>.



Sara Combilizer Patient Positioning and Mobilisation Aid



Maxi Move Passive lifter



Sara Plus Active lifter

As a leader in therapeutic support surfaces and safe patient handling solutions, Arjo is committed to helping you address preventable harm in a cost effective manner across the care continuum.

**We help you achieve this...with people in mind**

To learn how Arjo may be able to assist you, please contact your local representative or visit: [www.arjo.com](http://www.arjo.com)

**Please note:** This document is not designed as a comprehensive overview of guideline recommendations. Always refer to the full guideline document or quick reference guide when planning care or making any clinical decisions. Products available for sale or rental may differ by country. Your local Arjo representative can provide further information.

References:

The references listed below by page number refer to statements appearing in the full version of the National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance. Prevention and Treatment of Pressure Ulcers: Clinical Practice Guideline. Emily Haesler (Ed.). Cambridge Media: Osborne Park, Western Australia; 2014<sup>1</sup>.

Page numbers for the Quick Reference Guide, where applicable, are in parenthesis:

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3: Page 108.....	(29)	21. Page 89	
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5. Page 111.....	(29)	23. Page 139.....	(37)
6. Page 108.....	(29)	24. Page 92.....	(24)
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15. Page 71.....	(18)	33. Page 97	
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19. Page 113.....	(30)		

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At Arjo, we are committed to improving the everyday lives of people affected by reduced mobility and age-related health challenges. With products and solutions that ensure ergonomic patient handling, personal hygiene, disinfection, diagnostics, and the effective prevention of pressure injury and venous thromboembolism, we help professionals across care environments to continually raise the standard of safe and dignified care. Everything we do, we do with people in mind.

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