

CliniCare 100 HF

Hybrid mattress



Active and passive system in one

CliniCare 100 HF

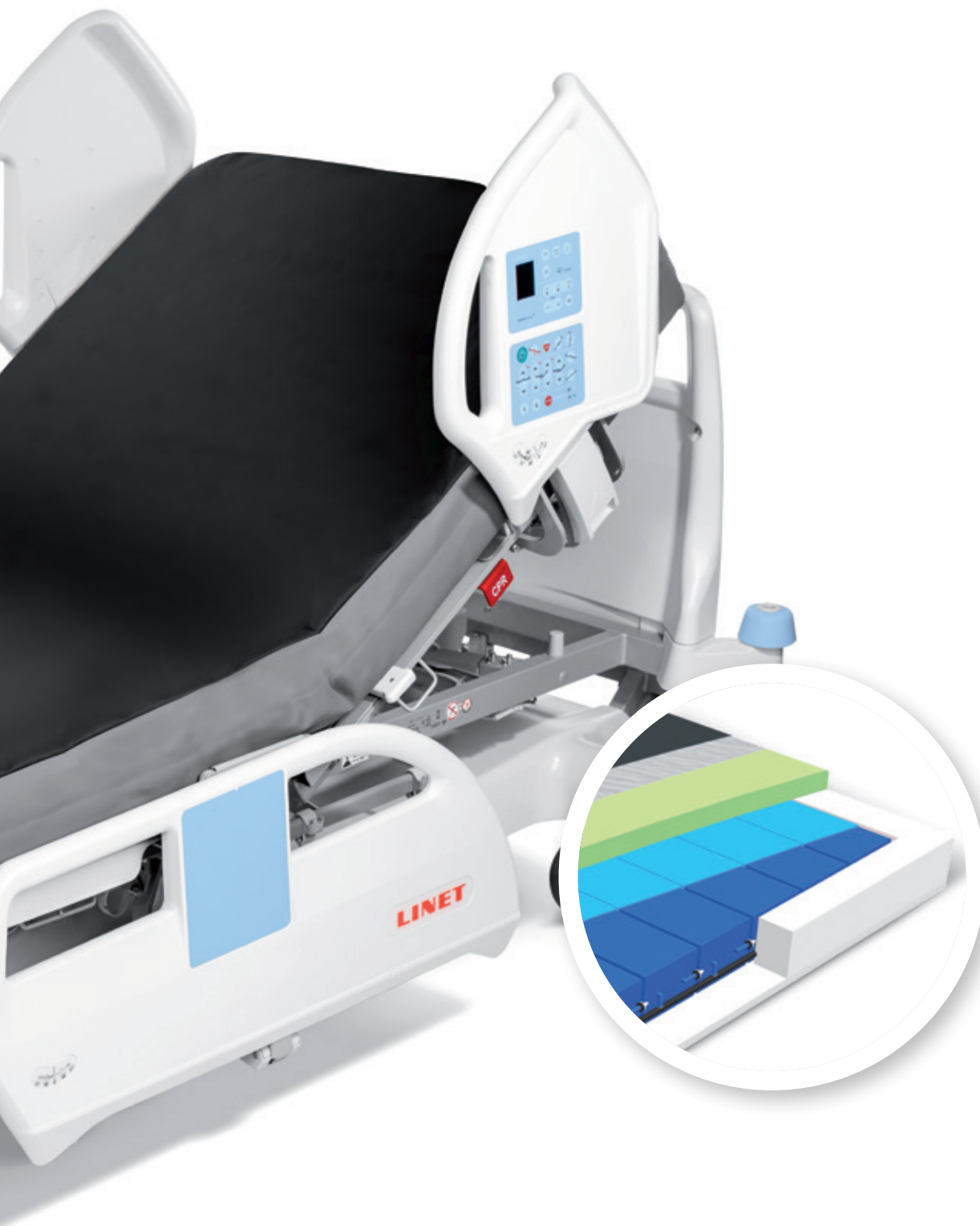
Active and passive system in one

The CliniCare 100 HF hybrid mattress is comfortable and highly efficient for the prevention of pressure injuries. It uses a combination of an active (air) system and a passive (foam) mattress to provide many benefits across the spectrum of hospital care.

PASSIVE SYSTEM



ACTIVE SYSTEM



The treatment of pressure injuries is 6x more expensive than prevention.*

CliniCare 100 HF

Effective pressure injury prevention

LINET's solution for ICUs, standard departments, long-term units and palliative care.

The implemented technology provides a number of benefits to prevent pressure injuries.



Intensive care



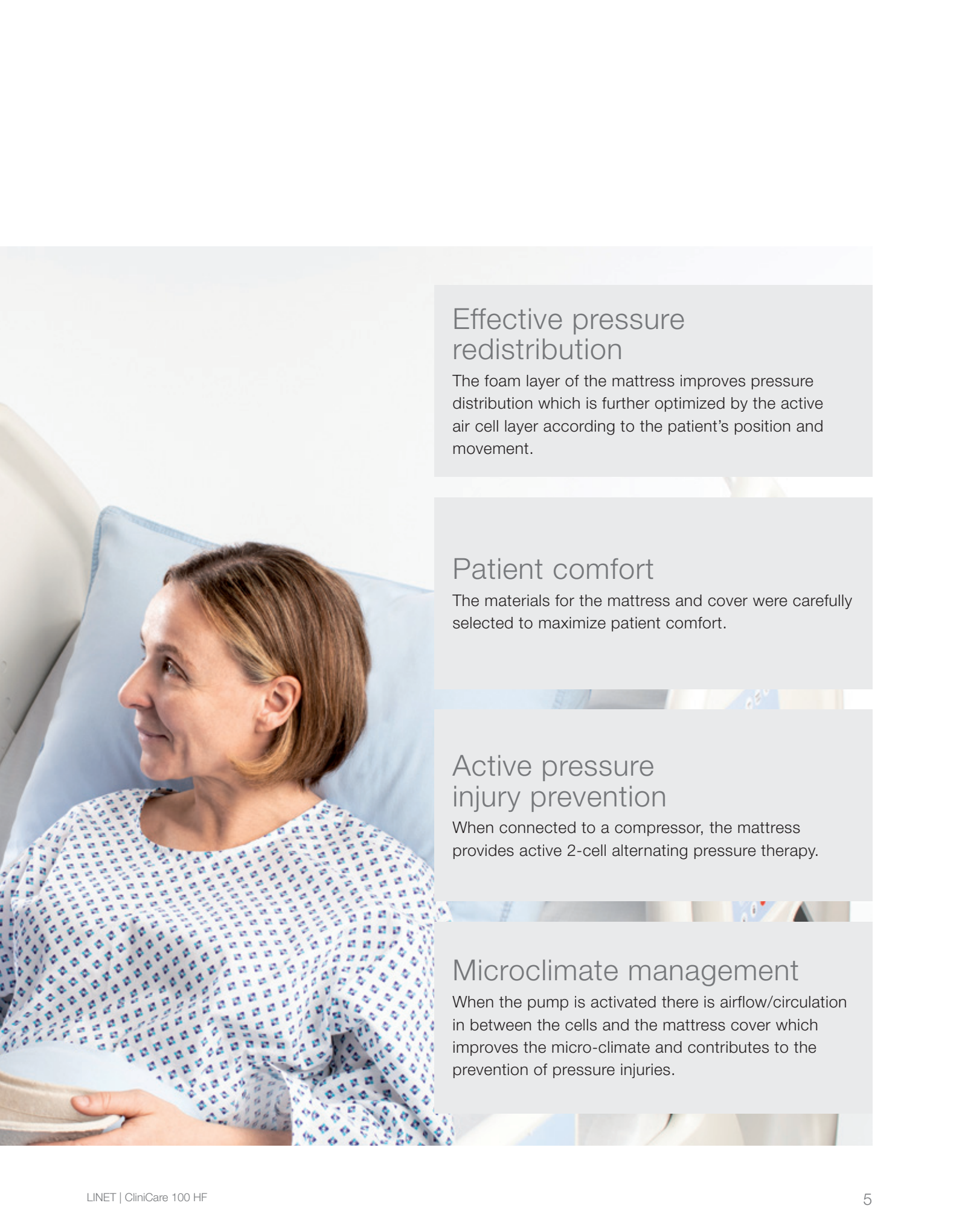
Acute care



Long-term care

Up to 95% of pressure injury cases can be avoided with proper prevention.*





Effective pressure redistribution

The foam layer of the mattress improves pressure distribution which is further optimized by the active air cell layer according to the patient's position and movement.

Patient comfort

The materials for the mattress and cover were carefully selected to maximize patient comfort.

Active pressure injury prevention

When connected to a compressor, the mattress provides active 2-cell alternating pressure therapy.

Microclimate management

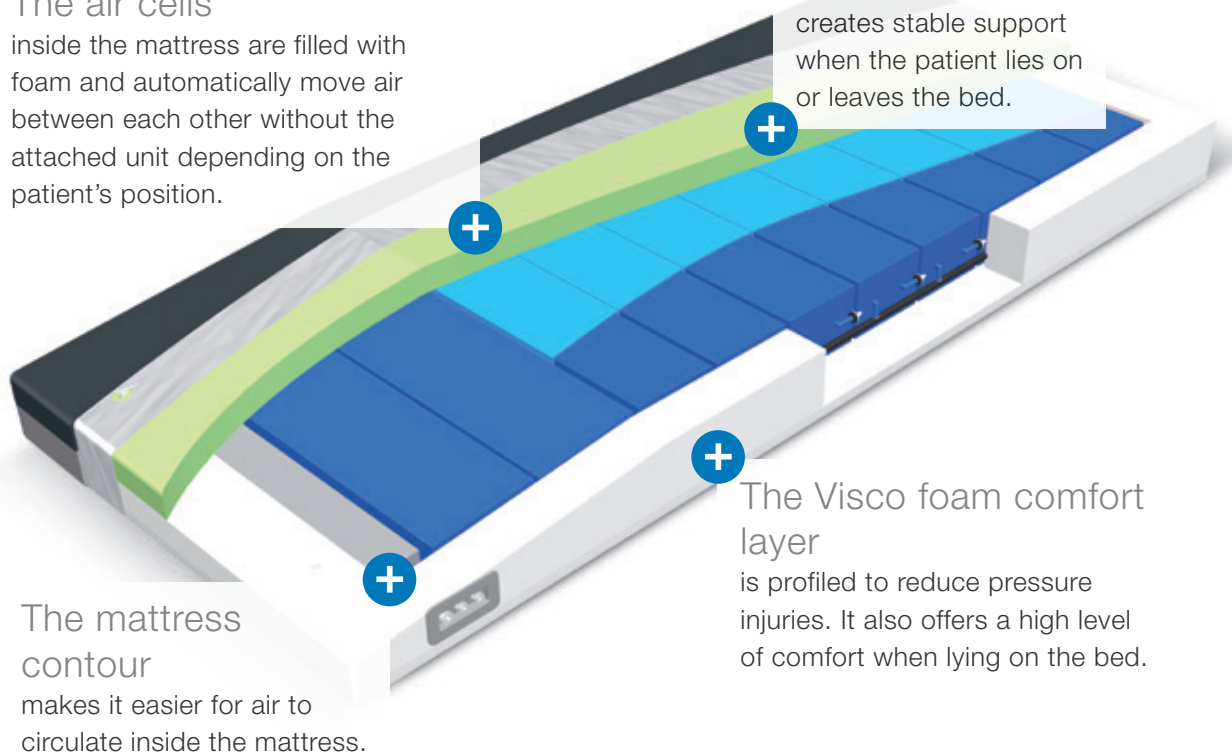
When the pump is activated there is airflow/circulation in between the cells and the mattress cover which improves the micro-climate and contributes to the prevention of pressure injuries.

Effective pressure redistribution

The CliniCare 100 HF provides pressure redistribution in non-powered mode by allowing air to move from cell to cell as a reaction to the patient's body movements and weight.

The air cells inside the mattress are filled with foam and automatically move air between each other without the attached unit depending on the patient's position.

The edge of the mattress creates stable support when the patient lies on or leaves the bed.



The mattress contour makes it easier for air to circulate inside the mattress.

The Visco foam comfort layer is profiled to reduce pressure injuries. It also offers a high level of comfort when lying on the bed.

CLINICAL



The mainstay of pressure injury prevention practice is the provision of pressure redistribution support surfaces (mattresses, cushions) and patient repositioning to minimize both the intensity and duration of pressure exposure on vulnerable skin sites that are not adapted to sustained and/or excessive loading.⁽¹⁾

Patient comfort

A viscoelastic foam layer adapts to the body to provide comfort and proper support without exerting pressure on exposed areas.

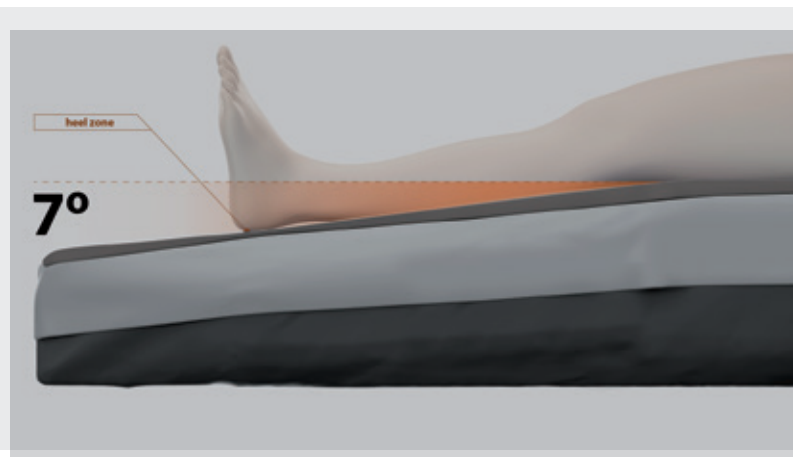


Viscoelastic foam is a type of porous polymer material that conforms in proportion to the applied weight. The air enters and exits the foam cells slowly which allows the material to respond slower than a standard elastic foam (memory foam).



PASSIVE SYSTEM

Pressure offload for heels. The mattress has a 7° slope that helps to reduce pressure in the vulnerable heel area, which is considered to be a very delicate zone for pressure injury development.



Pressure injury prevention

When a patient's condition requires active therapy, the mattress can be connected to a compressor for alternating pressure therapy in a 2-cell cycle to enhance and optimize pressure redistribution and pressure injury prevention.

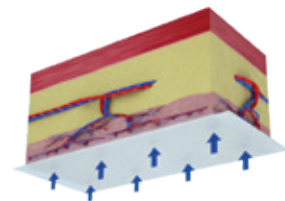
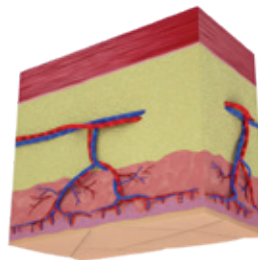


The SCU control unit inflates and deflates the air mattress to maintain the set pressure regardless of the patient's weight distribution and position.



CLINICAL

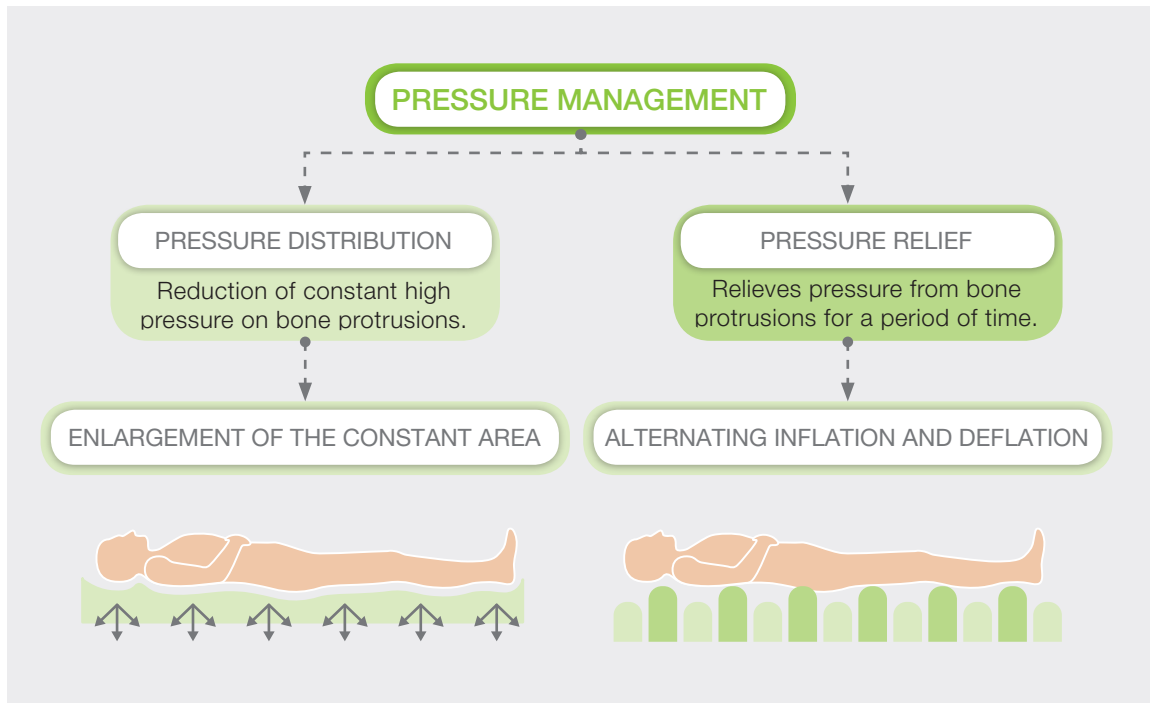
By reducing the pressure load, the likelihood of vascular flow is increased and the supply of nutrients and oxygen to the tissues is unhindered. Fully open vessels allow up to 16 times higher blood flow than partially open (50%) vessels.⁽²⁾



Vessels are compressed up to 50%.

Alternation of inflating and deflating cells (two-cell system)

By alternating the inflation and deflation of the cells, the pressure on the tissue is kept as low as possible for as long as possible.



Microclimate Management

In the context of pressure injuries, microclimate usually refers to skin temperature and moisture conditions at the skin support surface interface.

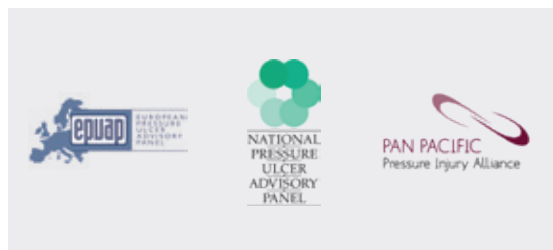
How do humidity and skin moisture relate to the risk of pressure injuries?

Increased skin moisture, especially when due to incontinence, has long been recognized as an important risk factor for pressure injury development.⁽³⁾

Clark reported that the humidity just above the sacral skin of elderly hospital patients who subsequently develop pressure injuries was higher than the humidity of the patients who did not.⁽⁴⁾

Any surface that has contact with the skin has the potential to alter the microclimate, including contact between textiles and skin. Thus, the bed climate has an important function in preventing pressure injuries.⁽⁵⁾

Quick Reference Guide



Beds and mattresses against pressure injuries

In addition to the selection of a high-performance anti-decubitus mattress, it is also the choice and use of specific bed features that supports the overall management of care. For example, some LINET beds are equipped with lateral tilt or Ergoframe®.

Considering the need to position a patient as a part of the therapeutic procedure in order to prevent and treat pressure injuries undoubtedly represents a physical and time-consuming task for nurses.

Lateral tilt

is a highly valued function for patients that are immobile, require daily care, or are bedridden long term.

- Improves the effectiveness of positioning
- Helps in prevention of pressure injuries
- Significantly reduces physical exertion of nurses

DEMANDING NURSING-CARE



It is no secret that health and nursing-care is statistically one of the most high risk professions. Besides infection and stress, health and nursing care workers are affected to a great extent by musculoskeletal apparatus disorders – they suffer back injuries, spinal blockage and deformity, i.e. long-term and difficult to treat illnesses often with lasting effects. Studies have shown that the most common outcome of this profession is back pain, which represents 65% of all stated problems. One of the main reasons is frequent manipulation of patients on the bed.



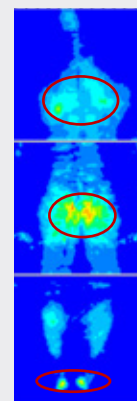
In 2013, up to **11,430** were injured




Ergoframe®

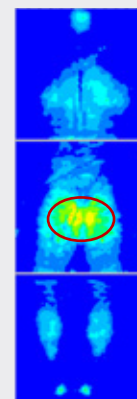
When Ergoframe® is engaged, the back and legrest of the bed platform move away from each other, creating an additional extra space under the patient's pelvis. The pressure applied on the buttocks is better redistributed and the risk of pressure injury development is reduced. In addition to this, elevating the back and leg rests at the same time minimizes undesired sliding motions towards the foot end and the unavoidable friction forces that contribute to pressure injury development.

Standard bed



 Most-affected areas by extensive pressure and shearing forces.

Bed with Ergoframe®



nurses
by patient handling*

CliniCare 100 HF

Patient

- Therapy according to individual needs of the patient
- Maximum pressure relief on tissues
- Optimal patient comfort



- Effective prevention of pressure injuries
- Helps in the daily care of risky patients
- Saves the hospital staff time



Staff

Management

- Increases the quality of medical care
- Minimizes risk to patients
- Hospitals save money
- Effective prevention shortens a patient's stay in the hospital



References

- (1) European Pressure Ulcer Advisory Panel (EPUAP) and National Pressure Ulcer Advisory Panel (NPUAP), Prevention and treatment of pressure ulcers: quick reference guide. Emily Haesler (ed) Perth, Australia, Cambridge Media; 2014
NICE Pressure ulcers: prevention and management.2014 www.nice.org.uk/guidance/cq179. Accessed 8 Dec 2016.
- (2) Mgr. Jan Mikula, Bc. Nina Müllerová; Prevence dekubitů (Pressure injuries prevention); Grada Publishing, a.s., 2008
- (3) Spector WD, Fortinsky RH. Pressure ulcer prevalence in Ohio nursing homes: clinical and facility correlates. J Aging Health 1998; 10(1):62-80.
Berquist S, Frantz R. Pressure ulcers in community-based older adults receiving home health care. Prevalence, incidence, and associated risk factors. Adv Wound Care 1999;12(7):339-51. Schoonhoven, L, Grobbee DE, Donders ART, et al. Prediction of pressure ulcer development in hospitalized patients: a tool for risk assessment. Qual Saf Health Care 2006; 15(1): 65-70
- (4) Clark M. The aetiology of superficial sacral pressure sores. In: Leaper D, Cherry G, Dealey C, Lawrence J, Turner T, editors. Proceedings of the 6th European Conference on Advances in Wound Management. Amsterdam: McMillan Press; 1996. p. 167-70.
- (5) Zhong W, Xing MMQ, Pan N, Maibach HI. Textiles and human skin, microclimate, cutaneous reactions: an overview. Cutan Ocul Toxicol 2006;25:23-39.
Nicholson GP, Scales JT, Clark RP, Calcina -Golf ML. A method for determining the heat transfer and water vapour permeability of patient support systems. Med Eng Phys 1999;21:701-12.
Zhong W, Ahmad A, Xing MM, Yamada P, Hamel C. Impact of textiles on formation and prevention of skin lesions and bedsores. Cutan Ocul Toxicol 2008;27:21-8.
Okamoto K, Kudoh Y, Yokoya T, Okudaira N. A survey of bedroom and bed climate of the elderly in a nursing home. Appl Human Sci 1998;17:115-20

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