



Safer mattresses

Effective and proven pressure ulcer prevention & therapy

Pressure ulcers

... a serious health risk

Despite all the advances in medicine, pressure ulcers (also called pressure sores, bedsores, decubitus ulcer) remain a serious problem. They cause patients suffering and are a threat to their lives. For nurses, a patient suffering from pressure ulcers means a much greater work load and increased physical strain, while for the patient it usually means a longer time in hospital and complications. But pressure ulcers can be effectively fought and their incidence correlates directly with the quality of care and of the facility. Pressure ulcers are among some of the fundamental indicators of the quality of nursing care.



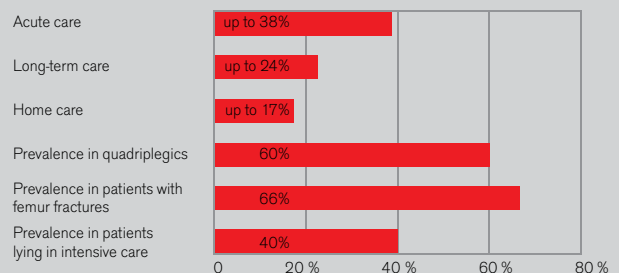
FACTS ABOUT PRESSURE ULCERS

A pressure ulcer is localised damage to the skin and / or underlying tissue skin damage. The cause of this is insufficient blood supply to tissue due to:

- increased pressure on the tissues,
- shearing and friction forces,
- contributing factors due to patient's health.

Pressure between the bony prominence and the support surface cuts off the blood circulation in the capillaries and causes the cells in the tissues to die.

THE INCIDENCE OF PRESSURE ULCERS IN THE USA



Every year, 2 1/2 million patients are treated for pressure ulcers in the USA.
Source: Skin Wound Care 2001, Agency for Health Care Policy and Research AHCPR

WHY ARE PRESSURE ULCERS DANGEROUS?

- Pressure ulcers are painful open wounds and provide a gateway for infection to enter to the weakened patient.
- The death rate in patients with pressure ulcers is several times higher than other, similarly aged patients who do not suffer from pressure ulcers.
- Care for patients with pressure ulcers is physically demanding and time consuming.
- Treatment of pressure ulcers is several times more expensive than prevention.

CAUSES OF DEATH IN THE USA PER YEAR

1. Lung cancer 156,000 victims
2. Accidents 120,000 victims
3. Diabetes 73,000 victims
- 4. Pressure ulcers as direct cause 60,000 victims**
5. Kidney failure 43,000 victims
7. Prostate cancer 28,000 victims

Source: Centers for Disease Control and Prevention, 2011

WHAT CAUSES PRESSURE ULCERS TO OCCUR?

INTERNAL FACTORS

- Reduced mobility
- Age
- State of health
- Nutritional status
- Incontinence
- Weight (body type)

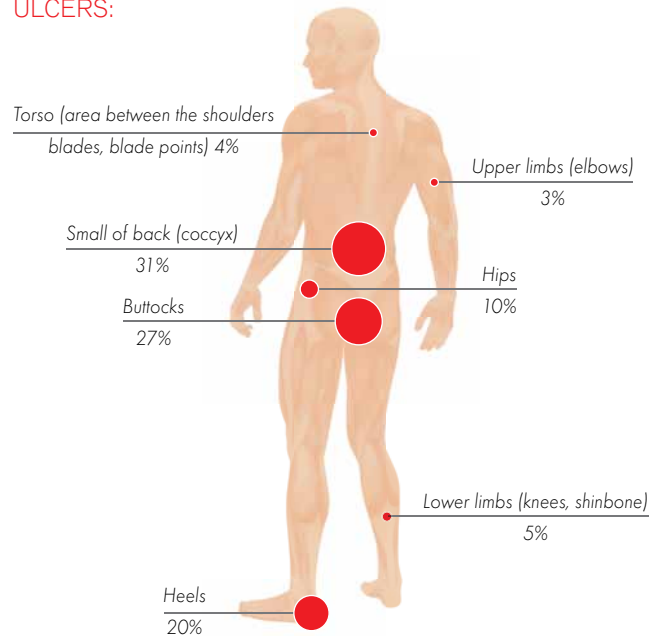
The high risk patients are primarily patients with heart diseases, high blood pressure, interruption of the blood supply, as well as those with neurological diseases or patients with diabetes mellitus. The highest risk are patients with the reduced mobility. Up to 80% of the paraplegic patients have the pressure ulcers.

EXTERNAL FACTORS

- Shear and friction forces
- Unrelieved Pressure
- External constraints to movement
- Poor hygiene

A small pressure acting over a long period is far more dangerous than short-term, intensive pressure. For high risk patients, pressure ulcers begin to form after just one hour of pressure.

MOST COMMON AREAS OF INCIDENCE OF PRESSURE ULCERS:



PRESSURE ULCERS = A PROBLEM FOR NURSING STAFF AND HOSPITAL MANAGEMENT

- Increased demands on healthcare staff
- Extended treatment
- Economic burden for the hospital
- Rising costs of treatment

70%
time savings

A CASE STUDY BY THE HSE (Health and Safety Executive) in the United Kingdom from 2004 examined the economic effect of equipping the Surrey and Sussex Healthcare NHS Trust with a capacity of 850 hospital beds. Taking advantage of rental of 500 modern beds, pressure ulcers prevention mattresses and other aids brought the following results:

- 70% time savings for assistance or repositioning patients = 16,741 days = EUR 2,138,160 per year
- Reduction of pressure ulcers from the original 11% to 3%

app. 10 mld. \$
per year only
in USA

IN EUROPE, A TOTAL OF 4% OF ALL HEALTHCARE FUNDS are expended on treatment of pressure ulcers.

Source: European Pressure Ulcer Advisory Panel EPUAP

THE ANNUAL COSTS OF PRESSURE ULCER TREATMENT IN THE USA ARE AS MUCH AS USD 9.1 – USD 11.6 MLN. Healthcare for one patient costs between USD 21,000 and USD 152,000.

Source: Agency for Healthcare Research and Quality

Prevention and treatment

... how to fight pressure ulcers

PRESSURE ULCERS AS AN INDICATOR OF QUALITY

The incidence of pressure ulcers is one of the ten most significant criteria by which hospitals evaluate the quality of nursing care. Hospitals are at risk of being sued for insufficient quality of care if pressure ulcers develop. And the solution?

- Education of healthcare staff on the issue of pressure ulcer prevention and treatment
- Active and passive pressure ulcer prevention & treatment support surfaces and other aids
- Electric adjustable hospital beds

THE PRINCIPLES OF PREVENTION AND TREATMENT OF PRESSURE ULCERS

1. Elimination or minimisation of external and internal factors causing pressure ulcers to arise.
2. Pressure ulcer evaluation – localisation, size, depth, stage of healing, surroundings, cause.
3. Providing conditions for treatment – removal of necrotic and fibrotic tissues (antiseptics, mechanical removal of necroses).
4. Focused support of the healing process.
5. Prevention of pressure on places prone to pressure ulcers. Use of special mattresses, covers and compensational aids.
6. Repositioning the patient at regular intervals as per individual need and the supply of an appropriate support surface (mattress and cushion).
7. Nutrition – nutritional supplements (trace elements, vitamins), adequate intake of liquids.

Dr. Jan Kottner,
Clinical Research Center
for Hair and Skin Science
(CRC), Germany

"No single best and universal aid for eliminating pressure ulcers exists. Studies and experience from clinical practice clearly shows that special soft and dynamic, i.e. active anti-pressure systems are much more effective than ordinary mattresses and beds. It should be a matter of course that high-risk patients should lie in such hospital beds. At the same time it is important to take into consideration not only the patient's risk profile, but also his or her individual needs, wishes and therapeutic goals."



LATERAL TILT



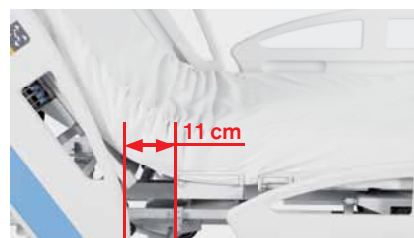
Positioning of the patient by tilting the bed can help reduce excessive pressure acting on places on the patient body with high risk of pressure ulcer development.

ERGOFRAME®



The shape of the ErgoFrame® surface acts preventatively against pressure ulcers by reducing shear and friction forces acting on the patient during a change in the position of the bed.

AUTOREGRESSION



An important aid in the fight against pressure ulcers is autoregression of the mattress platform. The positioning of the backrest extends the pelvic area by 11 cm.

LINET: 10 key points for safety

... active systems designed with safety in mind

1) Safe pressure

Zero pressure
and technology
of constant low
pressure

2) Quick CPR

Natural & ergonomic

3) Side formers

For patient stability
in bed & during
mobilisation

4) Transport mode

Support during
transport or power
loss

5) Automatic return

to dynamic mode
After use of Max
inflation mode

6) Infection control

Easy to clean

7) Cable

management system
No trip hazard

9) Ergonomic design

'Air connector
ergonomic design'
& Easy & Fast
single handed
operation

8) Alarms

Audio & visual

10) Simple controls

Intuitive and help
prevent incorrect
operation

LINET Active systems for everybody

... pressure ulcer prevention & therapy

VIRTUOSO

| Clinically effective specialist pressure area care solution |

The alternating mattress replacement has proven therapeutic and also preventive effects in the fight against pressure ulcers even for the highest risk patients.

- Zero pressure three cell technology = for best possible alternating pressure performance
- 7 ½-minute cycle replicates natural human body movement
- Dual active layer construction, Head & Heel zone options
- 4 working modes to meet all the patient's & nurses needs
- 10 key features for patient & carer safety
- Automatic fowler boost for increased patient support when sitting up in bed



PRECIOSO

| Flexible pressure area care solution for everyday nursing environments |

An alternating mattress replacement or overlay for fighting pressure ulcers effectively.

- Zero pressure Three cell technology for best possible alternating pressure performance
- 7 ½-minute cycle replicates natural human body movement
- 4 working modes to meet all the patient's & nurses needs
- Intuitive simple controls for easy to use, reduced training & increased safety
- 10 key features for patient & carer safety
- 24 hour care when using the fully compatible dynamic seat cushion

SYMBIOSO 200

| Integrated mattress system for Multicare |

Exceptionally quiet and effective mattress integrated into the Multicare intensive care bed.

- Open System architecture allows flexibility of support surface choice to meet patient needs
- Dual features of Constant Low Pressure and Microclimate Management are powerful tools in helping prevent tissue damage
- One touch electronic CPR for fast and simplified emergency procedures
- Sleep mode to aid patient rest & recovery







SYMBIOSO 100

| Integrated mattress for Multicare LE |

Fully integrated support surface for the Multicare LE intensive care bed.

- Open System architecture allows flexibility of support surface choice to meet patient needs
- Automatic Constant Low Pressure feature to provide a safe environment for your patient
- One touch electronic CPR for fast and simplified emergency procedures

Function	Virtuoso	Precioso	Symbioso 200	Symbioso 100
				
CPR + alarm system	✓	✓	✓	✓
fowler boost	✓	✗	✓	✓
battery back up	✓	✗	✗	✗
transport mode + max inflate	✓	✓	✓	✓
microclimate management	✗	✗	✓	✗
alternating pressure therapy	✓	✓	✗	✗
constant low pressure	✓	✓	✓	✓
extension	✗	✗	✓	✓
heel/head zoner	✓	✗	✗	✗
cable management system	✓	✓	✓	✓
dynamic cushion	✓	✓	✗	✗
integrated system	✗	✗	✓	✓

✓ YES ✗ NO

LINET = INOVATION AND UNIQUE DESIGN

	<p>LINET DEVELOPMENT</p> <p>UK based design team dedicated to providing LINET with its own unique range of market leading Therapeutic surface products. Each member of the Design team has been working on Pressure Area Care design for at least 18 years.</p>
	<p>EPUAP</p> <p>Since 2012, LINET is a member of the European Pressure Ulcer Advisory Panel, www.epuap.org. "We all have a single goal, and that is to find out what is the best way to prevent and treat pressure ulcers."</p>
	<p>EDUCATION</p> <p>The LINET Scholaris training centre offers a wide range of courses about anti pressure ulcer care for healthcare organisation and social care facility staff. LINET Scholaris trainers use modern tuition methods, including e-learning.</p>

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