Early Mobilization with LINET



Improve Early Mobility in your unit

Utilizing LINET advanced features

The advanced features of the LINET frame are easily integrated into an Early Mobilization Program.







Mobi-Lift®

Lateral Tilt

360°

Reverse Trendelenburg

LINET'S ROLE within a mobility program

Integrating the advanced features of the LINET bed frame into the Intensive and Critical Care Environment can help simplify an Early Mobilization program. All these features are standard to the LINET bed frame, which can improve utilization and compliance.



ALT therapy

30° STOP



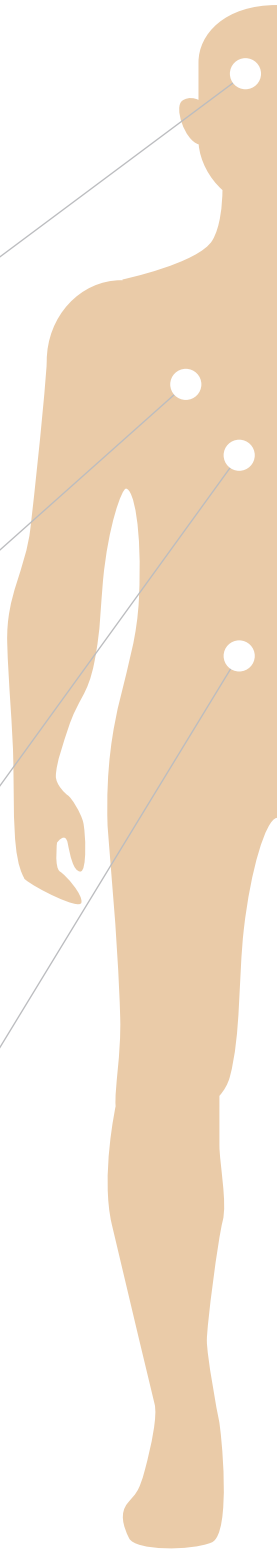
care
around you

Orthopnoeic Chair



Immobility impacts the whole patient

An early mobilization program is intended to have a positive impact on all body systems.



Neurological

— Depression, anxiety, delirium, ICU psychosis. Delirium occurs in up to 80% of ICU patients.[1]

Cardiovascular

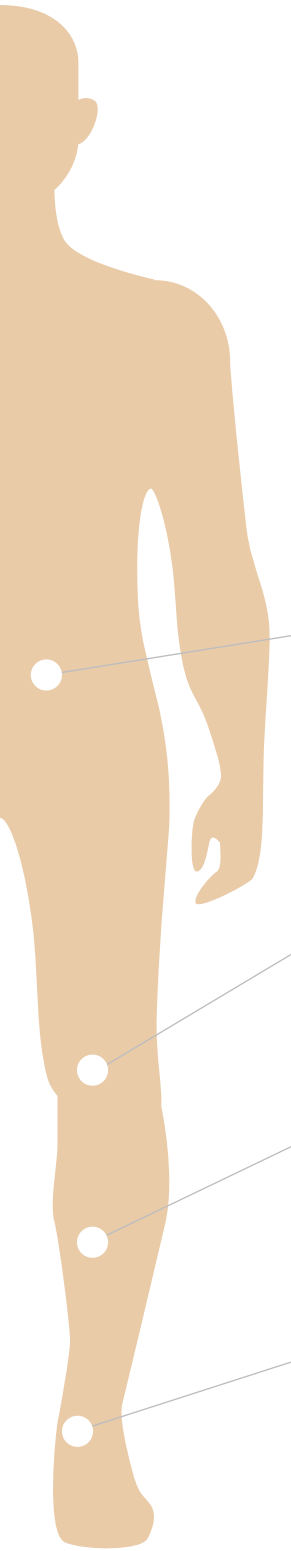
— Immobilization can cause multiple cardiac complications including atrophy and hemodynamic instability[2]

Respiratory/pulmonary

— Pneumonia, atelectasis, VAP, pulmonary emboli, ARDS.[3]

Gastrointestinal

— Altered patterns of elimination, incontinence, constipation, fecal impaction.[4]



Structured early mobilization especially for an intensive care patient is performed with the aim to:

— Improve respiratory function
— Reduce adverse effects of immobility
— Increase levels of consciousness
— Increase functional independence
— Improve cardiovascular fitness
— Increase psychological well-being
— Reduce the risk of delirium

Renal

— Stasis, nephritis, catheter-associated urinary tract infections.[4]



Metabolic

— Acid-Base Balance, Metabolic Syndrom.[5]



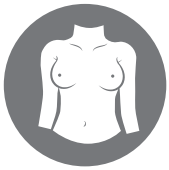
Musculoskeletal

— Muscle Atrophy is seen in 25-90% of patients with prolonged hospitalization.[6]



Skin

— Pressure ulcers. Lack of mobility increases the risk of the development of a pressure injury.[7]



Advanced mobility program

Level 1 → Level 2 → Level 3 → Level 4



- Turning Q2hrs (assisted)
- Consider Using Automatic lateral therapy (ALT)
- Micro-Shifting if patient is too unstable for ALT
- STOP 30°
- STOP 45°



- Turning Q2hrs (assisted)
- Chair position
- Reverse Trendelenburg with footboard reversed for weight bearing
- ALT
- STOP 30°
- STOP 45°



- Turning Q2hrs (self/assisted)
- Chair position
- Dangling out of bed
- STOP 30°
- STOP 45°

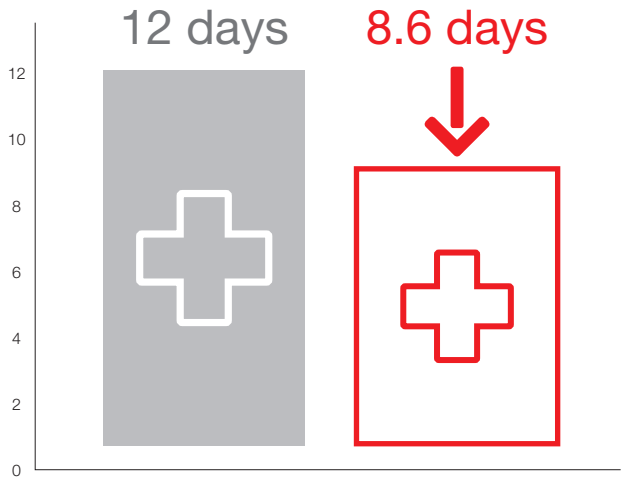


- STOP 30°
- Turning Q2hrs (self/assisted)
- Sitting out of the bed (in an adequate mobilization chair)
- Walking with or without assistance
- STOP 30°
- STOP 45°

EARLY MOBILIZATION program
CAN REDUCE the incidence
of delerium by up to 50%![8]

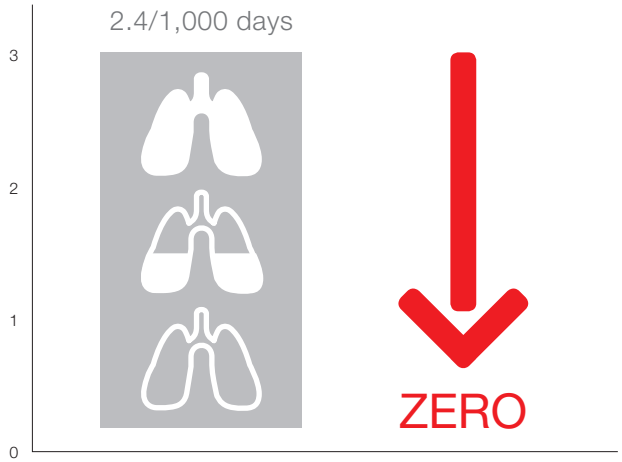
Results of using a mobility program

Length of hospital stay



Length of hospital stay significantly decreased from 12 to 8.6 days.[9]

Ventilator Associated Pneumonia (VAP)



Ventilator Associated Pneumonia significantly decreased from a rate of 2.14 per 1,000 days to zero.[9]

Hospital-associated infections (HAI)[9]



EARLY MOBILITY in the ICU could minimize LOSS of FUNCTIONAL abilities and possibly SHORTEN hospital stay by 28%[9]

Level 1

Many ICU patients suffer from orthostatic hypotension. This hemodynamic instability may cause a delay or omission in turning, repositioning, and other interventions to advance patient mobility and may contribute to the formation of pressure ulcers and higher risk of VAP. Micro-shifting technology and Automatic Lateral Therapy can assist in reducing these complications.



The frame-based Lateral Tilt is a unique LINET feature which can help accelerate recovery of critical care patients.



Micro-shifting makes it possible to tilt the patient one degree at a time.



Automatic Lateral Therapy (ALT) is a platform-based Lateral Tilt which can be individually programmed and is recommended for patients unable to tolerate manual turning. ALT can be used in cases of higher risk of VAP which are unable to train the patient's body to tolerate side to side movement.



30° stop maintains optimal head of bed (HOB) angle in compliance with pressure injury prevention and Ventilator Associated Pneumonia prevention.

Decrease VAP by using ALT!* [10]

** VAP – Ventilator-Associated Pneumonia; ALT – Automatic Lateral Therapy*

Level 2

Immobile ICU patients can experience trunk or core weakness, reducing their ability to support themselves in an upright position. The full chair and reverse Trendelenburg positions help with muscle strengthening exercises as well as hemodynamic and orthostatic training.



In the reverse Trendelenburg, the patient is able to do weight-bearing exercises that are necessary for the patient to be able to stand up or walk.



The first physiotherapy session is aimed at stability and leg support of the patient in the reverse Trendelenburg position.



45° stop is helpful for patients with respiratory distress.



Orthopnoeic Chair is the full chair position used for hemodynamic and muscle training. One-button function on LINET beds.

IMPROVE $S\bar{v}O_2$* by 22%
by utilizing a LATERAL TURN[11]

The response of mixed venous oxygen saturation ($S\bar{v}O_2$)

Level 3

Sitting on the side of the bed is an important part of the mobilization process. It can help to assess muscle strength and hemodynamic stability before ambulating patients.



The patient may feel much more comfortable in the sitting position. This position provides relief during respiratory problems and is very pleasant for the patient when reading, eating or watching television.



Nursing staff can easily assist the patient to move to a position that is optimal for standing with the one-touch Mobilization button. Raising the bed to its optimum height and activating the Lateral Tilt provides further assistance.



While sitting on the edge of the bed, in addition to touching the floor with his/her feet, the patient has two fixed points – the siderail and Mobi-Lift®. The Mobi-Lift® sets the bed to an ideal position and the ergonomic siderails create a stable support.



The “nose over the toes” position assists the patient to stand up. Sitting on the side of the bed is an important part of the process.

Decrease the patient’s injury risk during ACTIVE MOBILIZATION by using the Lateral Tilt and Mobi-Lift® [12]

Level 4

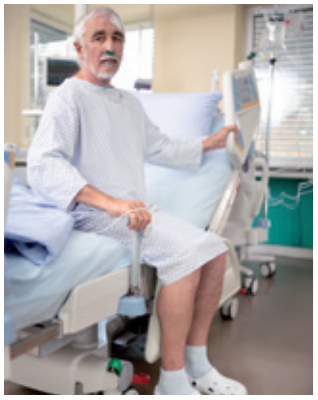
On average, there is a 2-3% daily loss of muscle mass over the first 10 days[13]. The Mobi-Lift® and Lateral Tilt provide safe and effective support in mobilization. This may help to prevent an adverse event such as orthostatic hypotension or patient falls.



By pressing one button the patient achieves an ideal position for standing. The nurse tilts the bed so the patient can reach the floor.



The unique Mobi-Lift® handle can set the bed to an ideal height for standing to reduce the physical strain on the patient.





The Mobi-Lift® together with the siderails are unique LINET features which could improve the safety of the entire Early Mobilization Program in your intensive care department.



Therefore, moving the patient to the Sella chair or other bed becomes a much simpler process.

THE LATERAL TILT and Mobi-Lift® can REDUCE the effort of bed exiting by 50%![12]

Physiotherapy

Physiotherapy can begin very early, depending on the individual condition of the patient. The bed can be an effective aid in physiotherapy due to its many advanced functions.

Improve the musculoskeletal functions of your patients with the LINET ICU Physiotherapy program!



The unique frame-based turn allows earlier bed mobility training for those patients who are too weak or have too much pain to work from a full Supine position. When the frame is turned, it allows the patient's core and lower extremities to be worked either with or against gravity.



When the frame turns, the patient's weight is shifted to one side which can allow for increased input to the affected side of a CVA patient. This can assist with neglect of the affected side as the patient's head will be encouraged to turn toward the affected side.



When the patient's weight is shifted to one side, the shoulder joint and hip joint on the opposite side will have less weight. These joints are opened up and allowed to have an increased range of motion and stabilization for performing PNF patterns or active assisted range of motion.



The Vascular position allows the patient to begin early weight-bearing exercises. With the patient in the Bridge position they can push into the bed performing a modified leg press. The patient can begin to work on bridging and core strengthening.



Total knee replacement patients can perform active assistive heel slides with a friction reducer under the heel. This position allows for gravity to assist with bending the knee which can be less painful. This is also a nice position to assist with swelling of the lower extremities.



The therapist can use this position when performing stretching or an active assisted range of motions to allow them to be in a better position ergonomically.



The LINET Multicare footboard will hold 330 pounds allowing the patient to be weight bearing when in the reverse Trendelenburg position. This allows the patient to begin pre-ambulation exercises by isometrically working their quad and gastroc muscles as well as getting dorsiflexion in the feet.



A foam balance pad can also be placed between the footboard and the patient's feet to allow the intrinsic muscles to be activated. When the patient is in a more upright position it is easier for them to use their core muscles, thus making this position good to start early core exercises.



Lower extremity exercises include hip abduction/adduction, heel raises, toe raises, marching, and squats. Putting a CVA patient in this position allows the patient to weight bear on the affected side, thus increasing symmetry, proprioception and improving body alignment.



The Cardiac chair position can be used to assess the patient's trunk control in a safe environment prior to getting the patient sitting on the edge of the bed.



Core strengthening exercises can be performed as well as upper and lower extremity exercises. Weight bearing into the foot board can be used for prestance and perambulation exercises.

Safety and comfort for patients

GETTING OUT OF BED CAN HURT!

Patient mobilization is a demanding and often long-term process. Although mobilizaton is essential for the faster recovery of the patient, it is associated with many risks, particularly patient falls.

Obstacles to mobility

- Pain/discomfort
- Hemodynamic instability
- Lack of resources/staff
- Sedation
- Patient population (bariatric)
- Time
- Safety
- Equipment

Safe Mobilization with LINET

In order to reduce the number of risk factors, attention must be paid to the choice of appropriate equipment and training. The LINET program includes the bed equipped with proprietary functions in addition to training for moving and handling techniques for mobilization and reducing risks.



Cardiac Chair



Lateral Tilt



Siderails



Mobi-Lift®

IT IS NEVER OK TO ALLOW THE PATIENT TO JUST “LAY THERE”
Regular repositioning every two hours is a standard of care which is often not met.[14]

Pressure ulcers risks

— During an 8-hour time frame, less than 3% of critically ill patients are turned in accordance with the standard Q2 turning schedule.[14]

— Close to 50% of patients have no change in body position in 8 hours.[15]

Safety with LINET



ALT therapy



Virtuoso



OptiCare

Safer, easier and faster for nurses

IT SHOULDN'T HURT TO BE A NURSE

Mobilization is a physically challenging process which, in current practice, also brings considerable risks to healthcare staff.



The FACTS

- Nurses have one of the highest incidences of work-related back injuries of all occupations.[13]
- Back injuries and other musculoskeletal disorders related to patient handling are the leading and most costly occupational health problem for nurses.[13]
- 40,000 annual back injuries among nurses (often related to transferring and repositioning).
- Nursing workforce is aging faster than the general workforce (avg. age = 47 years).[13]
- As many as 20% of nurses leave direct patient care due to risks associated with their work.

EASY MOBILIZATION WITH LINET

LINET's solution makes routine nursing activities safer, easier, and faster for enhanced nursing efficiency.





Lateral Tilt

— Unique platform-based-turn.

— Gentle, gravity assisted turn reduces strain to caregiver while tilting.

— Hands-free foot controls for ease of use and for infection control in ICU.

— Open architecture mattress platform – turn is possible with any surface support – passive or active.

Mobi-Lift®

— Built-in sit-to-stand device.

— Allows active participation from patient during mobilization.

— Significantly reduces pain during transition from sitting to standing at bedside – puts the patient in control.

— Ideal for surgical & orthopedic patients (including knee and hip) for early and active mobilization.

EMPLOY a multidisciplinary team to make your EARLY MOBILIZATION more EFFECTIVE, SAFE and FEASIBLE

LINET intensive care solution

LINET's 360° intensive care solutions incorporate a full compliment of products, including bed frames, mattress, furniture and accessories that help enhance patient care.









Mattresses

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Early Mobilization with LINET

Patient

- Regular repositioning
- Reduced pressure injury risk
- Improved fall prevention
- Improved outcomes
- Effective physiotherapy
- Mental well-being



Staff

- Less work-load for staff
- Less injuries
- Easier patient positioning
- Effective care



Management

- Shorter hospital stay
- Less work-related injuries
- Cost-saving
- Effective care



360° care
around you

wissner-bosserhoff

LINET®

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