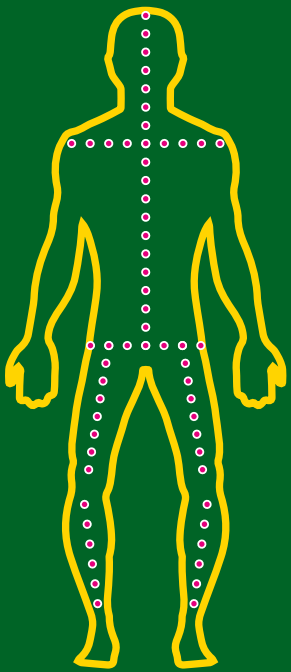
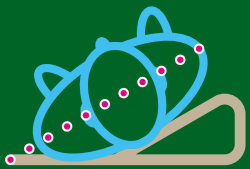
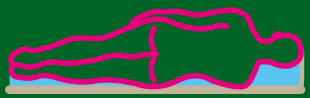
optimal positioning







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PRESSURE DISTRIBUTION BY OPTIMAL POSITIONING

The National Clinical Guideline for the Prevention of Pressure Ulcers recommends the following for position changes and positioning:

- Frequency of positioning is assessed by observation of skin condition; nutritional status of the patient/resident; whether the patient/resident has poor circulation; whether the patient/resident has impaired sense of touch; and the patient/resident's ability to perform posture change. The more risk factors, the more frequently a change of position is needed
- The frequency of position changes can be modified if changes in the skin are observed - if pressure is observed, the frequency increases, and conversely if pressure is no longer observed, the frequency of position changes may be reduced
- It is recommended to use 30 degree side positioning and the positioning should have the largest possible supporting surface, with the positioning material supporting the whole body surface
- Position changes can be made with frequent micromobilisation. For example, the movement pattern provided by the Turn All tilt system with a slow movement from 30 degrees lateral position on alternating right and left sides
- Involving the patient/resident in risk and communicating prevention knowledge to them should be done as early as possible and at all stages of a prevention programme and when developing pressure ulcer prevention actions
- Factors such as sleep disturbance, pain, patient/resident preferences, and the overall treatment goal are of significant importance in the choice of positioning method and the choice of frequency of position changes.

REPOSITIONIMG AND MOBILISATION

PREPARATION AND REASSESSMENT OF PRESSURE INJURY PREVENTION ACTIONS

Making a plan for repositioning and mobilisation requires interdisciplinary collaboration between health professionals. It is particularly important to involve physiotherapists, who have a wealth of knowledge about repositioning and mobilisation.

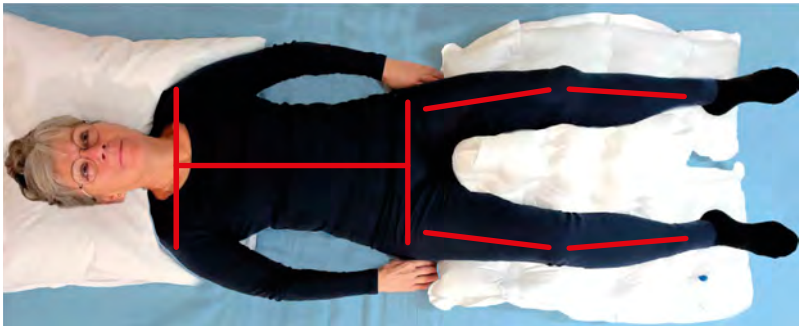
Pressure injury prevention interventions should be based on the level of functioning of the individual citizen/patient and it is important that the level of functioning is maintained, or improved if possible, through mobilisation and training and the use of appropriate assistive devices.

If the patient/citizen is bedridden and unable to turn over, a plan for the frequency of position changes should be prepared. This plan should be based on the risk and skin assessments carried out.

Guidance on this can be found under the ‘Action checklist’, ‘Care Bundle’ and ‘Interventions’ tabs.

How long the patient/citizen can lie in the same position is individual and depends on both level of functioning, degree of pressure injury risk, skin condition and the quality of the chosen underlying material.

HALV CHARLIE POSITIONING METHOD



Positioning of upper body:

The upper body must be symmetrical and straight

- The spine must be without torsion
- The shoulders must be straight and opposite each other
- Pelvis and shoulders must be parallel.

Positioning of lower body:

The 'Halv Charlie' positioning method is used to achieve a stable position with a neutral positioning pattern, where the hip and knee joints are in a resting position. The legs should be slightly bent and at a slightly outward angle. It is important that a stable position is achieved so that the person remains comfortable in bed.

- The positioning cushion is placed under the legs and between the knees
- Check that the hips and knees are slightly bent and that the user's legs are at a slightly outward angle.
  Move the legs until this is achieved
- Make a slight knee bend and a slight raising of the headboard for optimal positioning.

The 'Halv Charlie' positioning method can be easily achieved with Levabo's pressure-relieving positioning cushion of the same name. The cushion also provides pressure relief for the knees, ankles and heels. The design of the positioning cushion provides support on both the inside and outside of the knees, ensuring a stable and comfortable position. Because the cushion is air based, it adapts to the person's lying position without losing its shape.

Halv Charlie

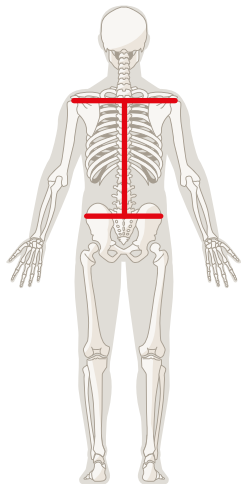
POSITIONING IN NEUTRAL POSITION

When a person is placed in the neutral position (LiN), the starting point is the natural upright position of the body, where the joints are neither bent nor overstretched.
LiN can be performed in either a sitting or lying position.

The basic principles of the positioning method is that there should be symmetry between the right and left halves of the body and that the position of the different parts of the body in relation to each other should be taken into account.

Neutral posture involves;

- The face faces forward
- The spine is without torsion, but with a natural curvature
- The shoulders are aligned
- Shoulders and hips are parallel
- Nose, knees and toes points in the same direction.



LiN aims to provide a stable and comfortable resting position that helps prevent pressure injury and contractures in people who are bedridden and/or have reduced mobility. In particular, people with paralysis, restless muscle movements and spatial disorder will benefit from LiN.

When lying in LiN, the whole body must be supported by the positioning material. For example, positioning cushions, packs or duvets and pillows that are firm enough to ensure a stable positioning, possibly folded. Because the whole body is supported by the bedding material, a good pressure distribution is achieved because the pressure is distributed over a larger area.

To positioning in a neutral position, use the Halv Charlie positioning cushion under and between the legs and a Universal Long positioning cushion under each arm. In addition, you should choose a cushion that is large and flexible enough to provide a stable position for the head and neck. Alternatively, you can use two head cushions placed offset to form a V.

30 DEGREE SIDE POSITION

The Danish National Clinical Guideline for the Prevention of Pressure Ulcers recommends that:

- Side position should always be carried out at 30 degrees because it avoids direct support surface pressure for the body's bony prominances as the pressure is distributed over a larger area
- The side position should have the largest possible support surface, with the positioning material supporting the whole body surface
- Repositioning can be made with frequent micromobilisation. This allows factors such as pain and sleep disturbance to be taken into account
- Frequency of positioning is assessed by observation of skin condition; nutritional status of the patient/citizen; whether the patient/citizen has poor circulation; whether the patient/resident has impaired sense of touch; and the patient/citizen's ability to change position by themselves. The more risk factors, the more frequently repositioning is needed.

A side position, such as the Turn All tilt system provides, of 30 degrees alternating between right and left side, meets these recommendations and provides automatic repositioning at an interval of 30, 60 or 90 minutes.

ADVANTAGES OF AUTOMATIC POSITION CHANGE

For the user:

- Relieves compression of tissue and restores blood flow
- Fewer disturbances at night lead to better health and well-being
- People who are sensitive to sensory stimuli, have sensitive skin or are in pain will have a more gentle repositioning
- Reduces the risk of shear

For health professionals:

- Better physical working environment with less manual repositioning
- Frees up resources
- Reassurance that repositioning regimes are being followed, even when busy

30 degree
side position

OPTIMAL POSITIONING IN TURN ALL

Turn All is a tilting system that automatically changes position to 30 degrees lateral position with a slight lift of 5 degrees on the opposite side, so the user lies safely and comfortably in the middle of the bed.

Guide:

1. Make sure that the user is sufficiently high up in bed. It is also important to ensure that the user lies in the middle of the bed so that there is equal space on each side of the body
2. Make a slight lift under the knees and raise the headboard slightly
3. The All Up Halv Charlie positioning cushion is placed under and between the user's knees. Check that the hips and knees are slightly bent and that the user's legs are at a slightly outward angle. Move the legs until this is achieved. The cushion provides a stable and neutral lying position and the ankles are separated

4. Check that the user's heels are completely free of the mattress. If not, pump more air into the cushion until this is achieved.

5. Check that there are no spaces on the underside of the user that are not in contact with the positioning cushion. Straighten the cushion so that it lies well under the user

6. If the user needs lifting of the arms or extra support along the body, place an All Up Multi Small or a folded All Up Universal under each arm. The arms, with cushions underneath, can be placed either along the body or on the user's stomach for additional arm support.

7. Turn on the Turn All tilt system.

ACTION-CHECKLIST

ACTIONS TO PREVENT PRESSURE INJURIES

1. **Pressure injury risk must be assessed at first contact. Risk and skin assessment should be done within the first two hours after first contact.**

2. **The risk of pressure injury must be reassessed:**
   - **a.** On discharge from or admission to hospital
   - **b.** During and after acute illness
   - **c.** Changes in nutritional status
   - **d.** If there are changes in level of functioning.

3. **Persons at risk of developing pressure injuries are assessed as needed and plans are developed for:**
   - **a.** Use of pressure-relieving and pressure-distributing materials
   - **b.** Repositioning and mobilisation
   - **c.** Nutrition (screening and plan).

4. **Actions for people at risk of developing pressure injuries:**

Skin

- Is the skin checked for pressure injuries or pressure marks on the entire body?
- Is the skin damp, perhaps due to incontinence or sweating?
- Is the skin too dry?
- Does the person express pain?

Supports/Aids

- Are the aids correctly adjusted to the person?
- Is the positioning cushion, mattress or other support being used correctly and as intended?
- Is there a need for re-evaluation of aids?

Repositioning/mobilisation

- Assess the frequency of position changes. Frequency should be increased if changes in the skin is observed
- Is the person mobilised in the best possible way?
- Is the person being positioned correctly?

Nutrition

- Is the person eating and drinking as planned?

Engage

- Engage/involve and inform citizen/patient and relatives in relation to assessment and in developing pressure injury prevention actions.

Action checklist

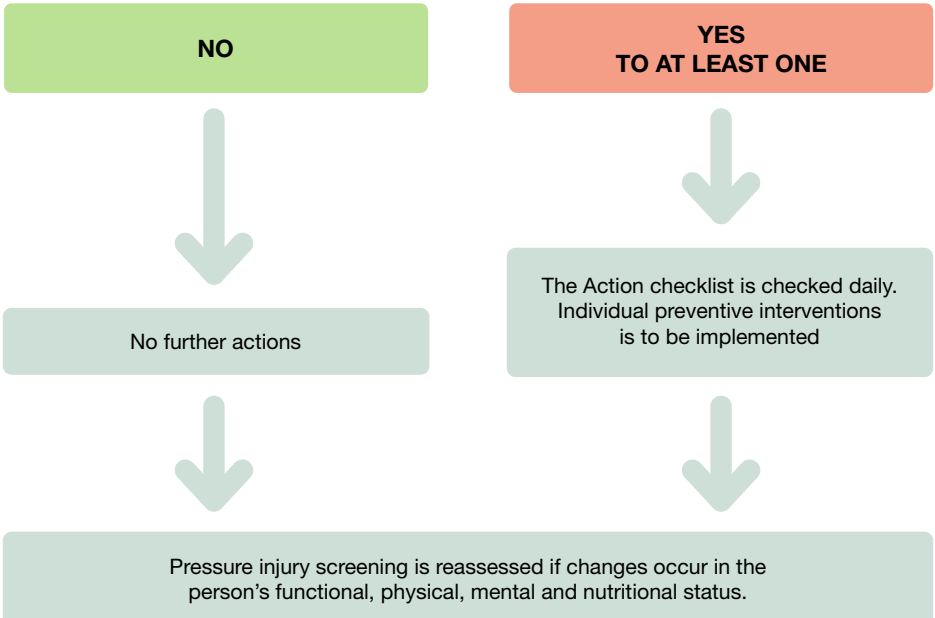
PRESSURE INJURY SCREENING BASED ON CARE BUNDLE

There is evidence that assessing several parameters together, such as skin observation, assessment of aids, position changes, and assessment of diet and fluid intake, can improve pressure injury prevention and treatment. Just as is done with the Action Checklist.
A bundled assessment of multiple evidence-based interventions is called a care bundle. When interventions are performed together, they result in better prevention and treatment than stand-alone interventions or actions. Therefore, all interventions in a care bundle should be considered. Along with the use of care bundles for pressure injury prevention and treatment, a new pressure injury screening tool has been developed that is easier to use in practice and is more action-oriented than previous risk assessment tools.

Does the person have reduced mobility and is unable to change position on their own?
Does the person have one or more risk factors:

- Pressure injury, pressure marks or previous/healed pressure injury?
- Diabetes, poor oxygen saturation or reduced blood flow?
- Reduced sense of touch, including neuropathy?
- Damp skin, e.g. due to incontinence or sweating?
- Poor nutritional status?
- Use of medical equipment, such as catheters or oxygen mask?

Do you consider, based on clinical judgement, that the person is at risk of developing pressure injuries?


NO
YES
TO AT LEAST ONE
No further actions
The Action checklist is checked daily.
Individual preventive interventions
is to be implemented
Pressure injury screening is reassessed if changes occur in the
person's functional, physical, mental and nutritional status.

Care Bundle

EXAMPLES OF INTERVENTIONS

BASED ON THE ACTION CHECKLIST

- Change clothes, diaper and linen frequently
- Move medical equipment, e.g. urinary catheter
- Daily assessment of skin changes:
  - Observe skin around bony prominences, where the risk of developing pressure injuries is greatest
  - Observe changes in the condition of the skin
  - Implement skin care adapted to the individual skin condition
- The aim is to keep the skin soft, as this helps to protect the skin from external stresses such as pressure
- On macerated skin, use skin care products that act as a barrier to moisture - e.g. barrier creams or barrier films
- On dry skin, use skin care products that add moisture - e.g. moisturisers, lotions or ointments.

- Choose the right mattress (see more about choosing a mattress on the next page)
- Provide relief for areas of the body that you have assessed as being particularly vulnerable. For example, heels or the sacrum
- Contact the pressure injury nurse, physiotherapist or occupational therapist if you need help initiating pressure-relieving interventions.

- Frequency of repositioning is assessed by observation of skin condition; nutritional status; whether there is poor circulation; whether there is impaired sense of touch; and ability to perform position change by oneself. The more risk factors, the more frequent the need for posture change
- The frequency of repositioning can be modified if changes in the skin are observed - if pressure is observed, the frequency increases, and conversely if pressure is no longer observed, the frequency of position changes may be reduced
- As a general rule, repositioning should be made at least every two hours
- If there is a risk of shear, a turning sheet or sliding sheet should be used.

- Undertake nutrition screening and start monitoring diet and fluid intake if necessary. Patients/citizens who already have a pressure injury should; have an individual diet plan; have initiated diet/fluid monitoring; be weighed once a week to monitor changes in body weight; have the diet plan reviewed if it cannot be adhered to or if undesirable changes in body weight continue to occur.

- Inform the patient/citizen about pressure injury risk and involve them as early as possible in the development of pressure injury prevention actions, and continuously throughout the process to achieve good compliance
- Factors such as sleep disturbance, pain, patient/citizen preferences, and the overall treatment goal are of significant importance in selecting the method of positioning and choosing the frequency of repositioning
- Inform that it is important for the patient/citizen to move as much as possible and to let you know if pain or a burning sensation is felt on the skin
- Please also hand out the information material you have available on pressure injury to the patient/citizen and relatives.

CHOICE OF MATTRESS WITH TURN ALL

BASED ON THE ACTION CHECKLIST

Out of bed / occasionally out of bed **without** risk factors*	Out of bed / occasionally out of bed **with** risk factors*	Bedridden in need of some help **without** risk factors*	Bedridden in need of some help **with** risk factors*	Bedridden in need of full assistance **without** risk factors*	Bedridden in need of full assistance **with** risk factors*
Foam mattress (typically with only one foam core and only sliced on top)	Pressure-relieving foam mattress (sliced on both underside and top and preferably two foam cores)	Pressure-relieving foam mattress (sliced on both underside and top and preferably two foam cores)	Pressure-relieving foam mattress (sliced on both underside and top and preferably two foam cores)		
Use sliding sheet	Use sliding sheet	Automatic turning mattress / tilting system	Automatic turning mattress / tilting system		
	Relieve pressure prone areas with positioning cushion	Use sliding sheet	Use sliding sheet		
			Relieve pressure prone areas with positioning cushion		
			If the user does not have pain, isdelirious or at risk of developing spontaneous fractures, an alternating pressure mattress (alternating air cells) can be used A combination mattress (foam mattress with embedded transverse air cells WITHOUT pump) can also be used		

Risk factors as described in PRESSURE INJURY SCREENING from CARE BUNDLE*

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Choice of mattress

EXAMPLES OF USE OF CUSHIONS

heel up® - 12 variants

Heel Up Fix Medium heel lifter for pressure relief of the heel in bedridden patients. The wide strap ensures that the heel lifter stays in place. Pressure relief of heel, achilles and malleoli. It supports the forefoot and prevents drop foot.

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all up® - 28 variants

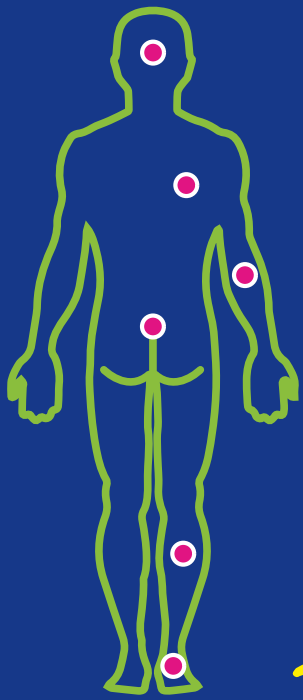
The All Up Multi Small positioning cushion is multifunctional and ensures an efficient and even pressure distribution. Can be used under legs, between the knees, behind the back and under the arms.

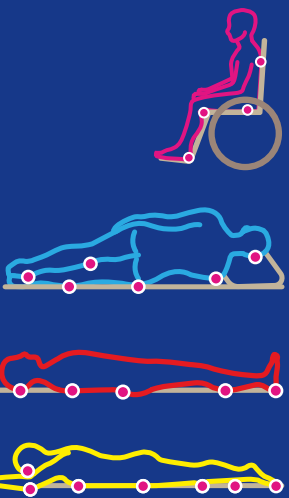
---

seat all® - 12 variants

Seat All Tailbone seat cushion provides complete relief of the coccyx and anus (tailbone and rectal opening) e.g. in case of discomfort related to radiotherapy, tailbone pain, rectal prolapse or haemorrhoids. Pressure relief of the ischial spine and the sacrum. Fits a standard size wheelchair (42 x 42 cm)

stop
pressure injuries





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WHAT ARE PRESSURE ULCERS

Pressure ulcers are the result of sustained pressure or shear of the skin and the underlying tissue - typically places on the body where the bones lie close to the skin and where there is only little fat.

Pressure occurs when a person's weight is pressed down against the surface. Regardless of whether the person is lying, sitting or standing, the pressure is transferred to the person's underlying tissue, and the tissue is pressed together between the surface and bone. Muscle tissue cannot withstand as much pressure as the skin. Therefore, the damage will occur close to the bone and can often only be seen on the skin 1-2 weeks after it has been exposed to pressure.

With shear, a twist occurs which damages tissue and blood vessels. This means that less pressure is needed to reduce the blood supply to the injured area. Therefore, pressure damage will occur more quickly on tissue that is exposed to shear.

Pressure occurs when there is no change in position or external pressure from e.g. medical equipment such as oxygen masks and urinary catheters.

Shear occurs when the body is moved without being lifted without being free from the surface. This can happen, for example, when a person sits with the headboard raised and slides down in the bed.

Pressure is reduced when it is distributed over a larger area. This can be achieved with good foam mattresses, frequent changes of position and pillows and mattresses with stationary air. Levabo offers this, and our range of pressure-relieving products can help you prevent and treat pressure ulcers effectively and gently.

WHO IS AT RISK OF DEVELOPING PRESSURE INJURIES

The risk of developing pressure injuries increases with age and with reduced level of functioning.

Especially people who are sick and bedridden are at risk of developing pressure injuries. But people with neurological or spinal disorders are also at risk because they are often confined to a wheelchair.

There are over 200 different risk factors for developing pressure injuries. It is rare that one single risk factor alone will result in a pressure injury. But the combination of various risk factors, together with an external pressure is determinative of whether a pressure injury develops.

In general, it is important to be aware of skin changes and the development of pressure injuries in people who have chronic diseases, such as diabetes and heart disease; people who have comorbidities and people with a reduced level of functioning and/or poor general health.

PEOPLE WHO ARE AT HIGH RISK:

- People with reduced level of functioning
- People who are overweight
- People who are underweight
- Acutely and critically ill
- Elderly
- Bedridden
- People with spinal cord injury
- People with reduced circulation
- People who are palliative
- Children (especially due to medical equipment)

Risk factors

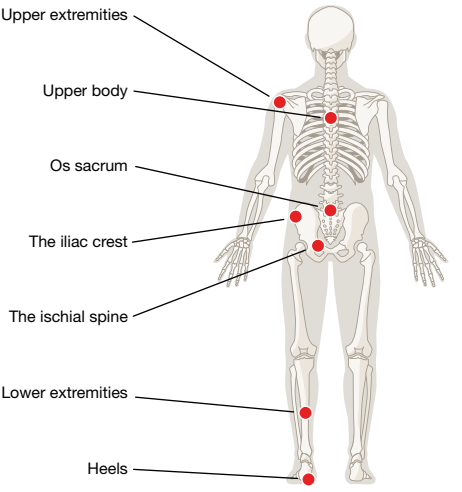
PLACES ON THE BODY MOST PRONE TO PRESSURE

Os sacrum is the most common place to develop pressure injuries, followed by the spine nodes and heels.

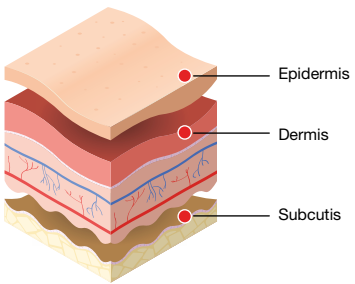
People who are overweight often get pressure injuries on their heels due to the increased weight of the legs.

People who are underweight often get pressure injuries on os sacrum due to lack of subcutaneous fat.

Pressure injuries can typically occur on the upper extremities at the elbows and shoulders; on the back by the spine and shoulder blades; at the iliac crest, coccyx, on the buttocks around the ischial spine; on lower extremities at the knees, hamstrings, calves and ankles; on toes; on the back of the head, ears and nose.



THE STRUCTURE OF THE SKIN



The first signs of pressure damage can be observed in the skin. In order to assess changes in the appearance of the skin and to be able to categorize pressure injuries, it is essential to know the structure of the skin.
The skin consists of three layers; epidermis, dermis and subcutis.
The epidermis consists primarily of cells called the stratified squamous epithelium. The outermost of these are horned to act as a protective barrier between the body and the outside world. For example, it protects the epidermis against the penetration of microorganisms.
The dermis consists primarily of connective tissue, a gel-like substance. But also consists of elastic fibers that give the skin elasticity; collagen fibers that give the skin strength; many small blood vessels (arterioles and venules); hair follicles; sweat glands; sebaceous glands and nerve endings.
The subcutis consists of loose connective tissue and cells that can store fat. The layer of fat under the skin is crucial for protecting the body from external influences and damage. The thickness of the subcutaneous tissue varies according to anatomical location and from person to person. Approx. 60% of the body's fat depot is found in the subcutaneous tissue.

Places prone to pressure

SUPINE POSITION

1. BACK OF THE HEAD

All Up Head

2. SHOULDER BLADES, SPINE, ELBOWS

All Up Universal
All Up Universal Long
All Up Wing
All Up Multi Small
All Up Multi Large
All Up Multi Wedge
All Up Elbow & Heel
Turn All automatic tiltsystem

3. OS SACRUM, THE ILIAC CREST

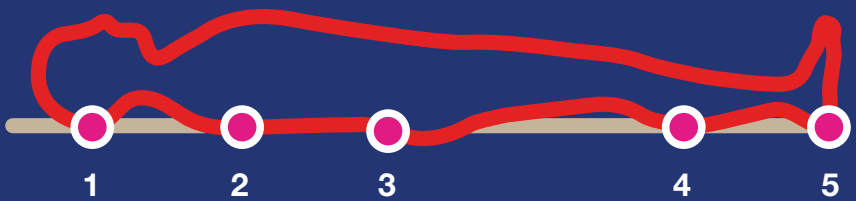
All Up Universal
All Up Universal Long
All Up Wing
Turn All automatic tiltsystem

4. CALF + PLACEMENT OF LEGS ABOVE THE HEART

All Up Universal
All Up Universal Long
All Up Wing
All Up Multi Max

5. HEELS, FOOTSOLES

Heel Up Fix - Medium, Long eller Max
All Up Multi Large
All Up Multi Universal
All Up Multi Universal Long
All Up Wing
All Up Footsole
All Up Halv Charlie



Supine position

SIDE POSITION

1. EAR, JAW

All Up Head

2. SHOULDER, ELBOWS

All Up Multi Small
All Up Universal
All Up Universal Long
All Up Wing

3. THE ILIAC CREST + 30 DEG SIDE POSITION

All Up Multi Small
All Up Universal
All Up Universal Long
All Up Wing
All Up Wedge 30˚
Turn All automatisk kipsystem

4. KNEE

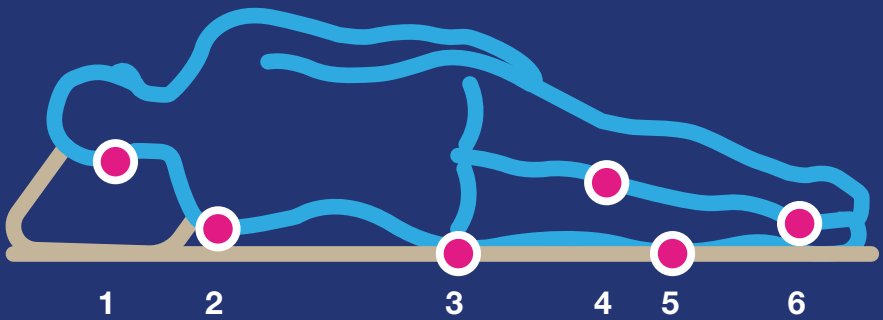
All Up Multi Small
All Up Universal
All Up Universal Long
All Up Halv Charlie

5. LOWER EXTREMITIES

All Up Universal
All Up Universal Long
All Up Wing
All Up Halv Charlie

6. MALLEOLUS

All Up Multi Small
All Up Multi Universal
All Up Universal Long
Heel Up Fix - Medium, Long eller Max
All Up Halv Charlie



Side position

PRONE POSITION

1. FOREHOEAD, CHIN

All Up Head
All Up Head Intubate DUO

2. ELBOWS

All Up Multi Small
All Up Universal
All Up Universal Long
All Up Wing

3. FRONT TORSO

All Up Universal
All Up Universal Long
All Up Multi Large
All Up Wing
All Up Belly

4. HIPS

All Up Universal
All Up Universal Long
All Up Multi Large
All Up Wing

5. KNEE

All Up Universal
All Up Universal Long
All Up Multi Large
All Up Wing

6. LOWER LEG, CALF

All Up Universal
All Up Universal Long
All Up Multi Large
All Up Wing

7. FEET, TOES

All Up Multi Small
All Up Multi Medium
All Up Multi Large
All Up Universal
All Up Universal Long
All Up Multi Large
All Up Wing

Prone position

SEATED POSITION

1. SHOULDER BLADES, SPINE

All Up Universal
All Up Universal Long
All Up Multi Large

2. THE ILIAC CREST, THE ISCHIAL SPINE

Seat All Seat
Seat All Seat Large
Seat All Seat Max
Seat All Seat Tailbone
Seat All Seat Donut
Seat All Seat Twin
Seat All Seat Flexi

3. ELBOWS

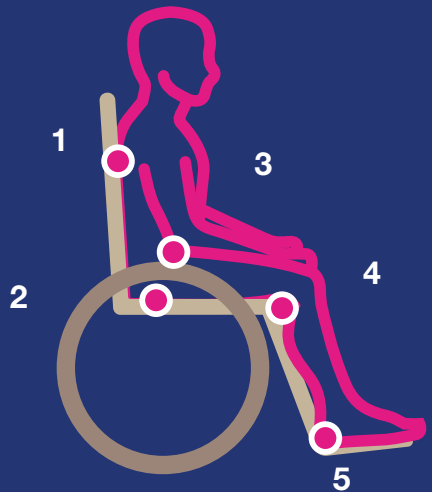
All Up Armrest
All Up Elbow
All Up Elbow Medium
All Up Elbow & Heel
All Up Lap
All Up Lap Max

4. BACK OF KNEE

Seat All Seat
Seat All Seat Large
Seat All Seat Max
All Up Multi Small

5. HEELS

Heel Up Short
All Up Elbow & Heel
All Up Multi Small

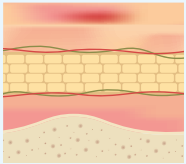


Seated

PRESSURE INJURY CLASSIFICATION

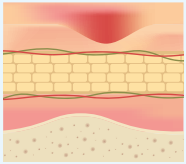
Category 1: Intact skin with redness

Intact skin with redness that does not change color when you press a finger on the area (lack of capillary response). Painful. Most often placed over prominent bones. It can be difficult to observe redness in people with brown and black skin. Here, it must be observed whether there are areas on the skin around prominent bones that have a different color than the rest of the surrounding skin.



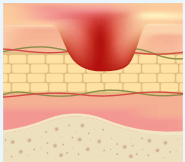
Category 2: Partial skin loss

Partial skin loss presenting as a superficial wound with a red base without dead tissue. Can also appear as an intact or ruptured blister. Painful. May be confused with incontinence-related dermatitis and maceration. It must be a shiny or dry, superficial wound without dead tissue or hematoma to be classified as a category 2 pressure injury.



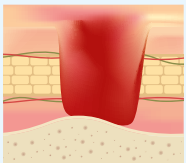
Category 3: Full skin loss

Complete loss of skin layers. Subcutaneous fat may be visible, but bones, tendons or muscles are not exposed. Necrosis (dead tissue) can be seen, but this does not hide the depth of the pressure injury. Painful. There may be undermining and fistulas. The depth of category 3 pressure injuries varies by anatomical location.



Category 4: Deep tissue damage

Loss of all layers of tissue with visible bone, tendons or muscles. Necrosis (dead tissue), fibrin (seen as a gel-like coating) and slough (yellow or white coating of dead cells, generally wet with a soft texture) may be present. Risk of infection in the bones (osteomyelitis or osteitis). The depth varies according to anatomical location. In places with little subcutaneous fat, e.g. the bridge of the nose, ears and ankles, category 4 pressure injuries can be superficial. Elsewhere on the body, category 4 pressure injuries are typically deep and often with undermining and fistulas.



ADDITIONAL PRESSURE INJURY CLASSIFICATIONS

In addition to the four categories of pressure injuries, two other categories have been added which are relevant when a pressure injury is observed and cannot be classified as category 1, 2, 3 or 4.

Suspected deep tissue damage

An area of skin with tissue damage due to pressure or shear can be observed. It is suspected to develop into a deep pressure injury but has not yet done so. The skin at the pressure injury is typically discolored purple or reddish brown and may show hemorrhagic (blood-filled) blisters. Hematoma also indicates deep tissue damage. It may be painful and edematous (swollen). It can be either warmer or cooler than the surrounding tissue.

Unclassifiable pressure injury

Complete loss of skin layers is observed and the actual depth of the wound is not visible due to slough (yellow, light brown, grey, green or brown) and/or scab (light brown, brown, black) at the base of the wound. It is not possible to determine whether the wound is category 3 or 4 until enough slough and/or scab has been removed to expose the base of the wound.

Before a pressure ulcer appears, there will be indications that it is developing, also called pressure marks. In addition, shear can contribute to a faster development of pressure ulcers.

Pressure marks

Intact skin with redness that changes color or pales when you press a finger on the area (capillary response). Most often over a prominent bone. It can be difficult to observe redness in people with brown and black skin. Here, it must be observed whether there are areas on the skin around prominent bones that have a different color than the surrounding skin.

Shear

Shear is a strain produced by pressure when the skin and the underlying tissue are laterally shifted in relation to each other. This causes damage to the tissue and blood vessels. This means that less pressure is needed to reduce the blood supply to the damaged area. Therefore, pressure damage will occur more quickly on tissue that are exposed to shear. Shear occurs when the body is moved without being lifted free from the surface. This can happen, for example, when a person sits with the headboard raised and slides down towards the foot of the bed.

Additional clasifications

BRADEN SCALE

POINT SCORE FOR RISK ASSESSMENT OF PRESSURE Injuries

Sensory perception Ability to respond meaningfully to pressure-related discomfort	**Completely limited = 1** No response to pain stimuli due to impaired level of consciousness OR limited ability to feel pain	**Very limited = 2** Responds only to painful stimuli. Can only communicate discomfort with complaints or agitation	**Somewhat limited = 3** Responds to verbal commands. Can't always communicate discomfort. Has impaired sensory perception	**No impairment = 4** Responds to verbal commands. Can feel and express pain or discomfort
Moisture The extent to which the skin is exposed to moisture	**Constant moisture = 1** The skin is almost constantly moist due to e.g. sweat or urine	**A lot of moisture = 2** The skin is often, but not always, moist. Linen must be changed at least once per shift	**Occasional moisture = 3** The skin is sometimes moist. Linen must be changed at least once a day	**Rare moisture = 4** The skin is usually dry. Linen must only be changed routinely
Activity Degree of physical activity	**Bedridden = 1** Bedridden	**Mostly sitting = 2** Cannot bear own weight and must be assisted to a chair or wheelchair	**Walks occasionally = 3** Walks very short distances, with or without assistance. Is mostly in bed or chair	**Walks frequently = 4** Walks independently and is up and about at least once every two hours during the day

Mobility Ability to change and control position	**Completely immobile = 1** Does not change position at all without assistance	**Very limited = 2** Sometimes changes position slightly. Essentially unable to change position without assistance	**Slightly limited = 3** Changes position frequently, but only slightly, without assistance	**No restriction = 4** Essentially changes position without assistance
Nutrition Typical nutritional pattern	**Very bad = 1** Never eats a full meal OR is fasting or fed only by IV for more than five days	**Probably not sufficient = 2** Rarely eats a full meal. Decreased fluid and protein intake	**Adequate = 3** Typically eats at all meals. Supplemented with e.g. nutritional drinks or feeding tube	**Excellent = 4** Eats most of every meal. Never skips a meal. Does not require nutritional supplements
Friction and shear	**Problem = 1** Requires assistance with movement. Lifting without friction against the sheet is impossible. Often slides down in bed and chair	**Potential problem = 2** Moves a little, possibly with help. Lifts with some degree of friction against the sheet. Occasionally slides down in bed and chair	**No observable problem = 3** Moves without assistance. Can lift from the sheet independently. Maintains a good position in bed or chair	

In each category a score between 1-4 is obtained (1-3 in the last). Score from each category (sensory perception, moisture, activity, mobility, nutrition and friction and shear) are added together.

The total score is the pressure injury risk.

5-9 points = Extra high risk
10-12 points = High risk
13-14 points = Medium risk
15-18 points = Low risk
19-23 points = No risk

Risk assessment

LEVABO®
medical

Levabo ApS
Sverigesvej 20A
8660 Skanderborg
Tel.: +45 31 70 40 25
Fax: +45 86 10 00 28
Mail: info@levabo.dk
www.levabo.com