STRONG FOUNDATIONS

An Introduction to Assistive Technology

AN AIDACARE CPD TRAINING EVENT

apt AIDACARE PROFESSIONAL TRAINING

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FORMAT

1. **Welcome**
2. **Who and where we are – Aidacare Company Overview**
3. **Rotation Stations**
   - Pressure Care
   - Profiling Beds / Alternating Air Mattresses
   - **Morning Tea**
   - Manual Handling
   - Manual Mobility / Electric Lift Recline Chairs
4. **Questions and Key Take Aways**

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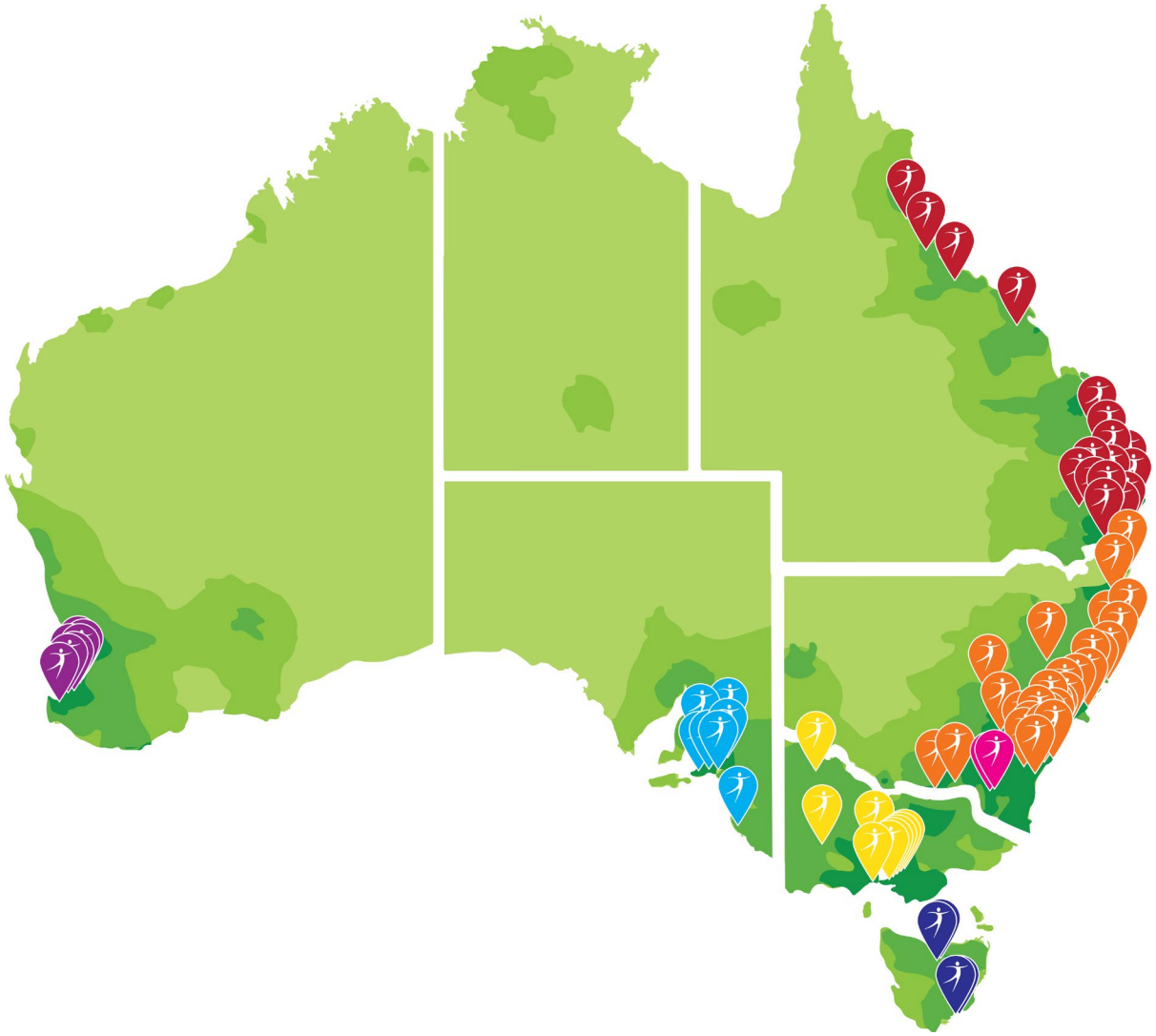
Company Overview

- Aidacare is one of Australia's largest Healthcare Equipment and Service providers
- A proudly Australian family-owned business employing over 1100 staff nationally
- With over 90 branch locations across 7 states & territories
- Since 1987, for over 30 years, our business has been assisting Australians in the Hospital; Residential Aged-Care; Home & Community Care; and Rehabilitation sectors



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How we can help you - DIVISIONS OF THE BUSINESS

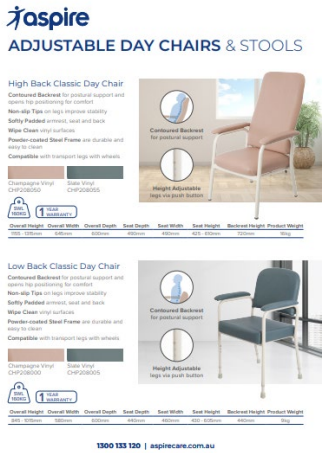
Community
- Showrooms
- Community and home trials
- Online store
- Rental
- Home Modifications

Contracts
- NDIS
- State Funding Bodies
- SWEP; MASS; Enable
- DVA
- Geat2Go

Specialist
- Complex
  - Custom wheelchairs
  - Postural seating and 24hr positioning
  - Paediatric Equipment
- Aged Care
- Hospital & Acute Care
- Projects - Furniture and Fit Outs
- Funeral Equipment

Other
- In house
  - Product Development
  - Clinical/Training Team
- Relationships
  - BUPA

The aspire Brand



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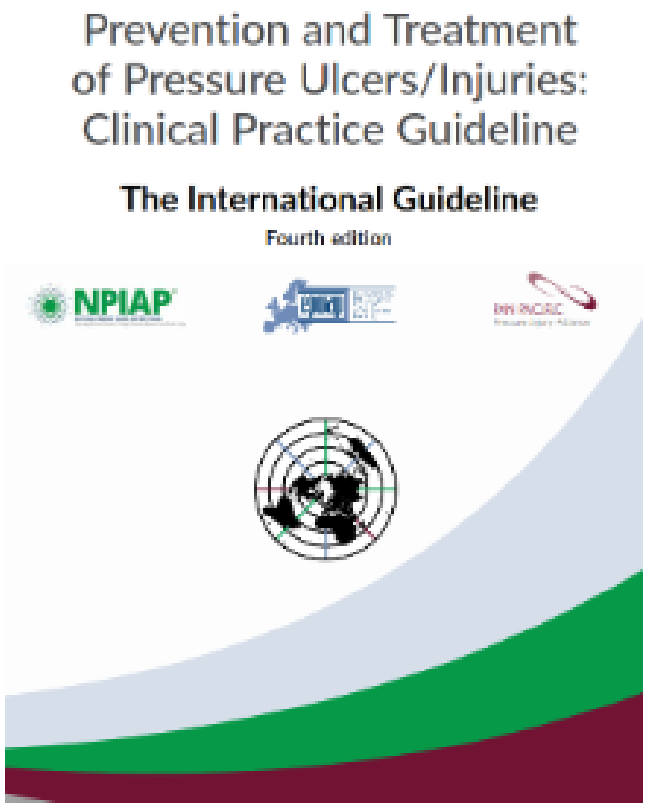
PRESSURE CARE

Clinical Practice Guidelines



Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline has been produced since 2009 by the

- European Pressure Ulcer Advisory Panel,
- National Pressure Injury Advisory Panel
- Pan Pacific Pressure Injury Alliance

The fourth edition was released in February 2025

Australia fall under the Guidance of the **Pan Pacific Pressure Injury Alliance** and they support PI prevention and treatment across our region.

PAN PACIFIC
Pressure Injury Alliance

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What is a Pressure Injury?

A pressure injury is defined as:

“localized damage to the skin and/or underlying tissue, as a result of pressure or pressure in combination with shear. Pressure injuries usually occur over a bony prominence but may also be related to a medical device or other objects.”

(Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline: Fourth Edition. 2025: Definition and Etiology,p.1)

While the terms pressure ulcer/pressure sore are still used, the term “pressure injury (PI)” is now preferred as this indicates that a PI is considered to be preventable.

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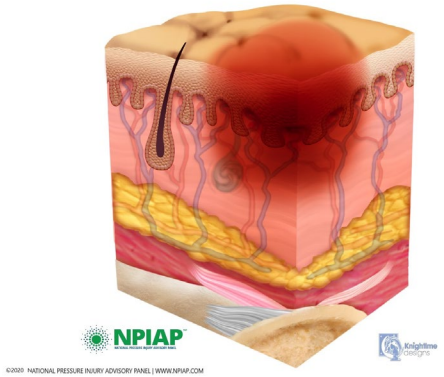
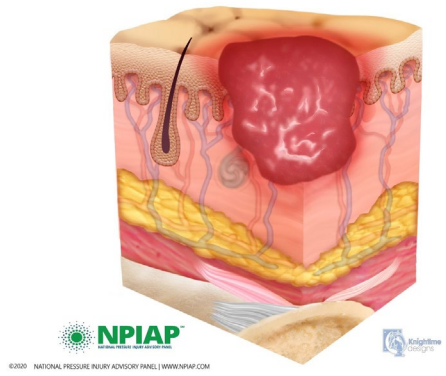
Pressure Injury Classification

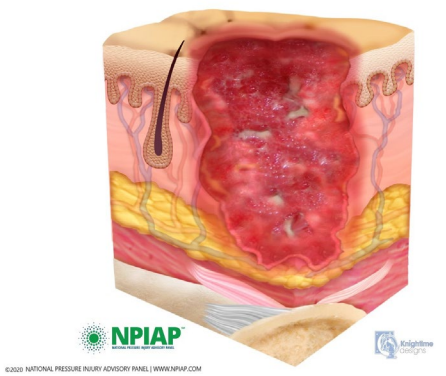
Stage 1 Pressure Injury – Lightly Pigmented



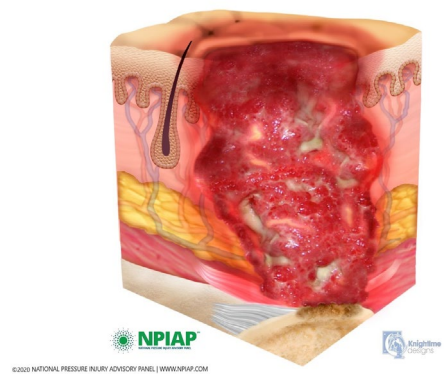
Stage 2 Pressure Injury



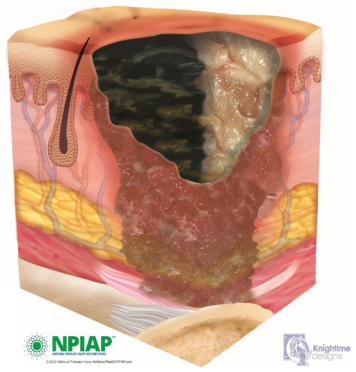
Stage 3 Pressure Injury



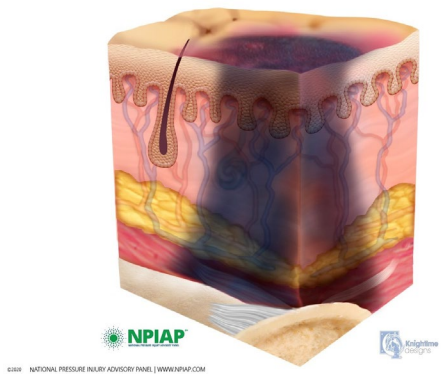
Stage 4 Pressure Injury



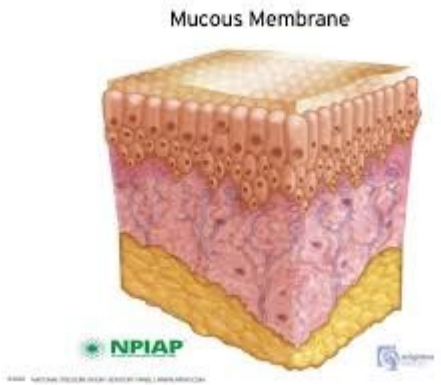
Unstageable



Deep Tissue Pressure Injury



Mucous Membrane



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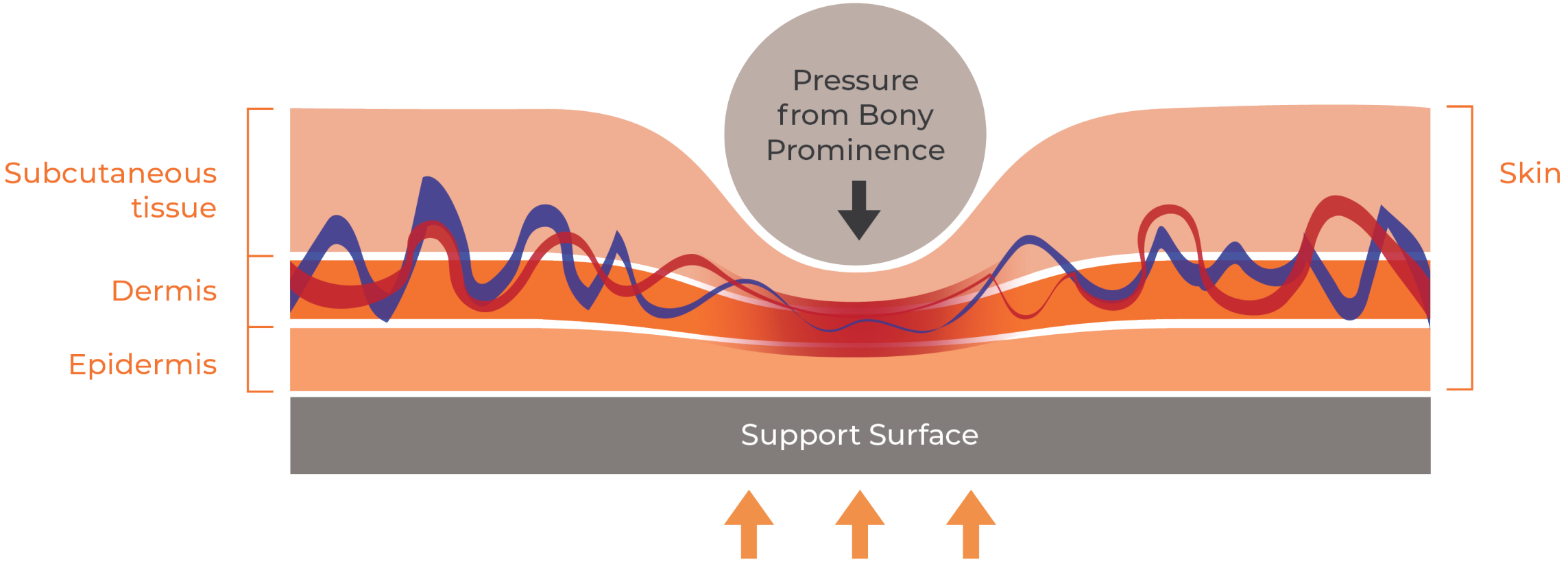
Causation– Localised ischemia

"Sustained tissue loading reduces the blood flow and tissue perfusion, leading to a shortage of required oxygen and nutrient supply. This causes an accumulation of waste products, eventually leading to cell death"

(Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline: Fourth Edition. 2025: Definition and Etiology,p.2)



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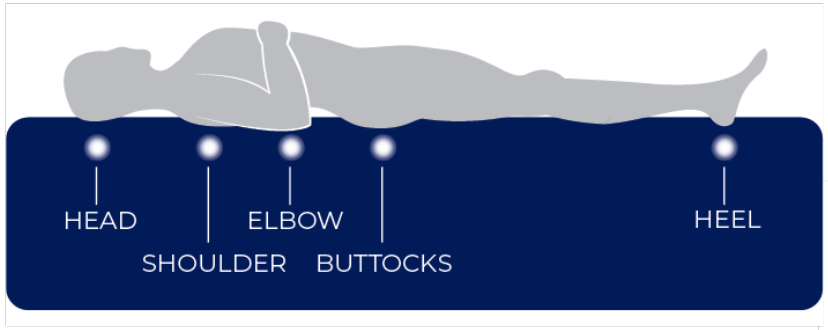
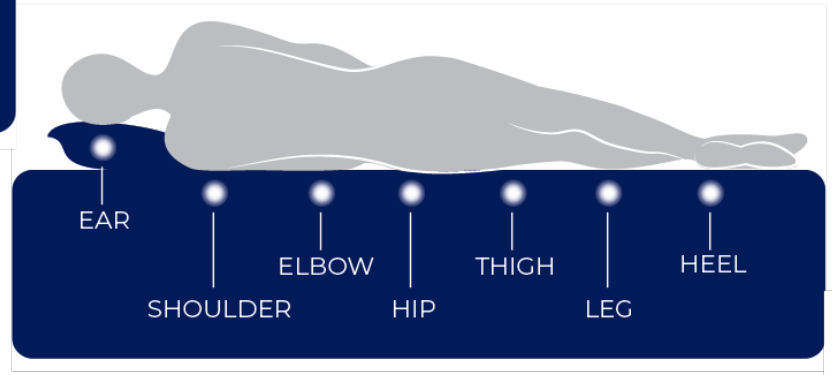
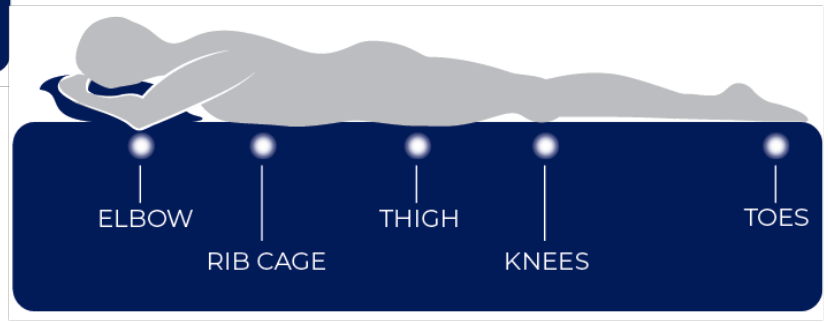
Location of high-risk areas - lying



Supine Lying



Side
Lying



Prone
Lying

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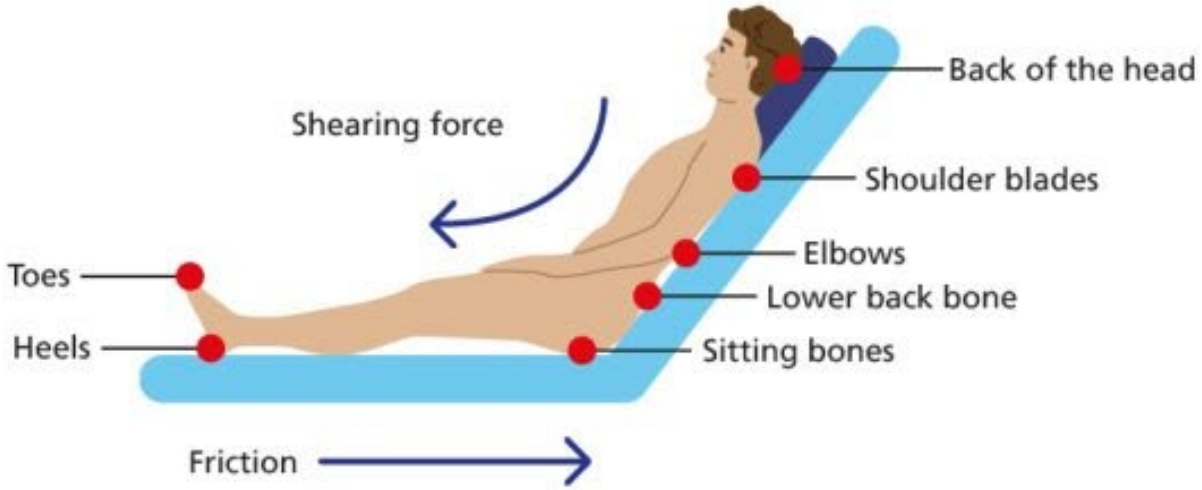
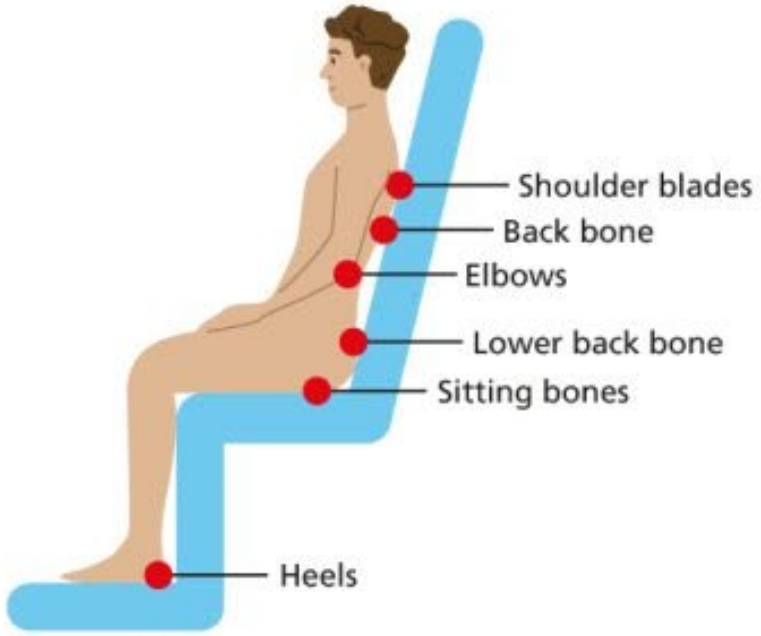
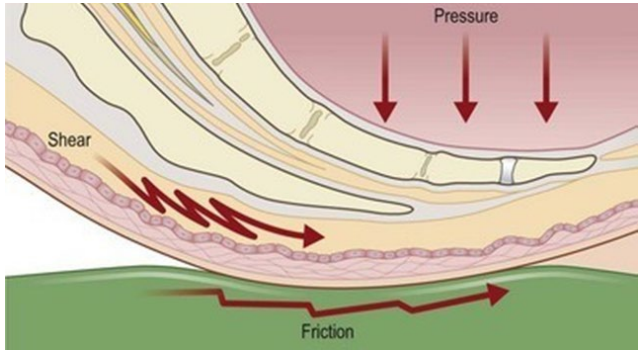
Location of high-risk - sitting



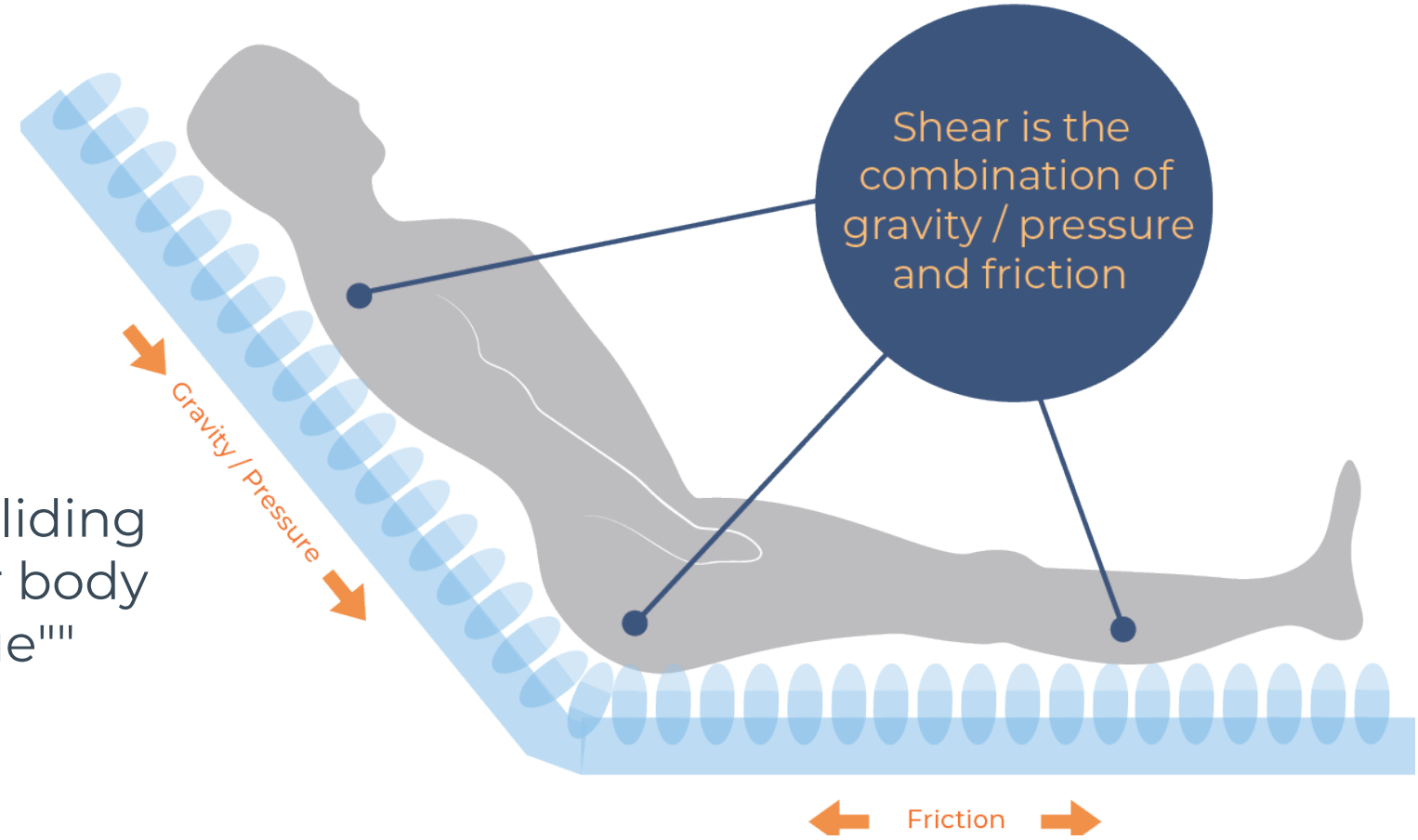


Risk Factors - Shear and Friction

SHEAR “internal strain & stress parallel to the tissue.”
(NPIAP, 2019, p. 16, 21).



FRICTION Rubbing or sliding of a material or another body part parallel to the tissue""
(NPIAP, 2019, p. 16, 21).



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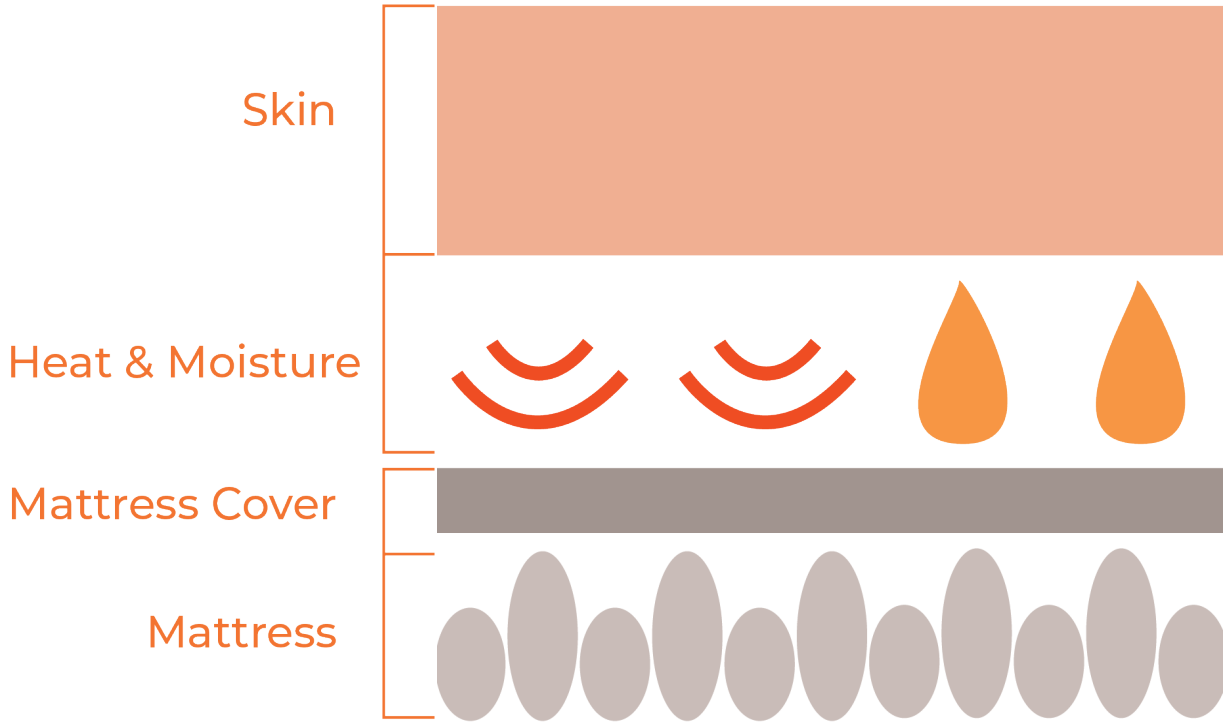
Risk Factors - Microclimate



MICROCLIMATE

"Temperature, humidity, & airflow effect the skin's tolerance of pressure, shear, &/or friction."

(NPIAP, 2019, p.20,22).

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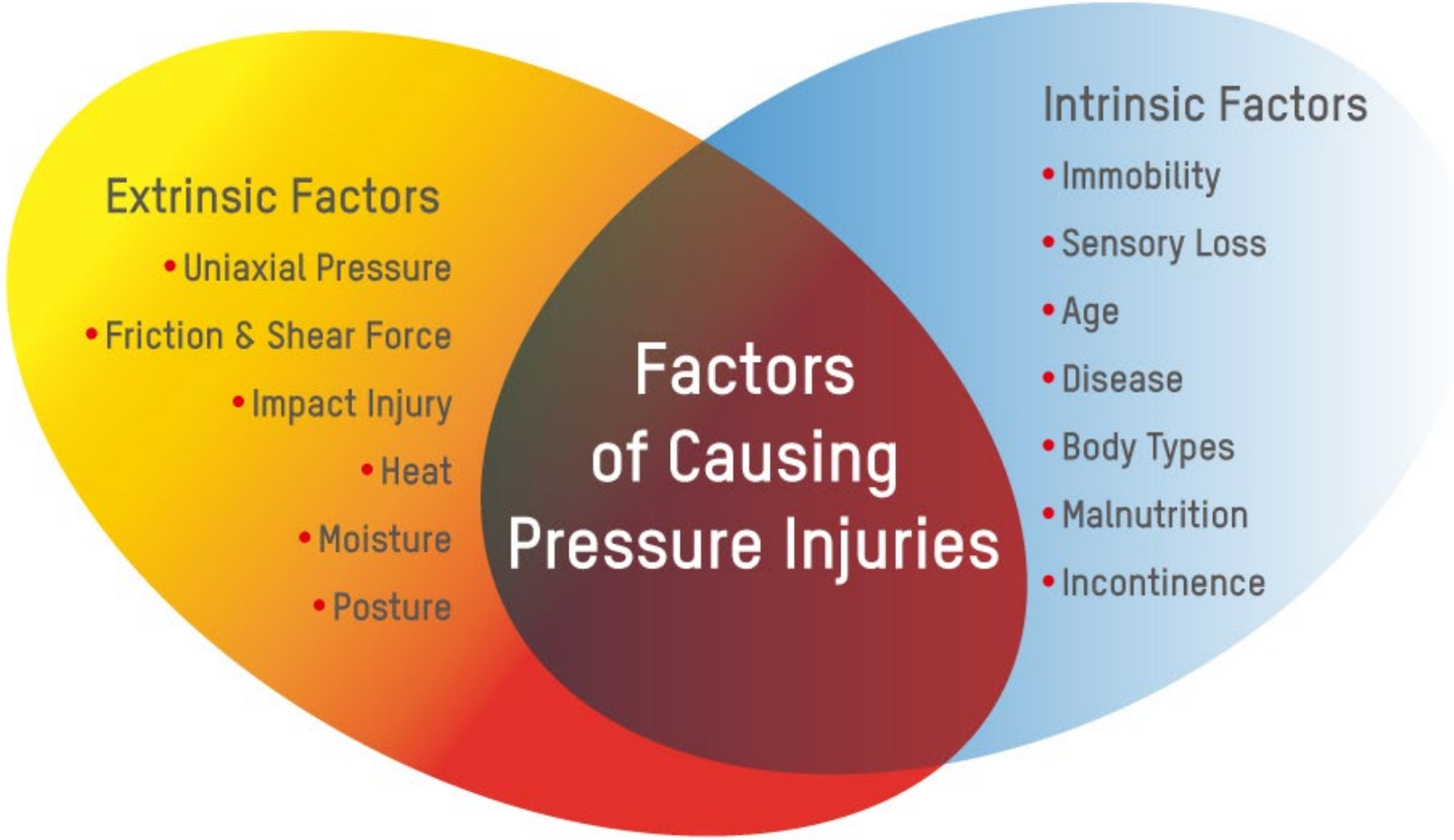
Risk Factors - Overview



(Pressure ulcer prevention: pressure, shear, friction and microclimate in context. A consensus document. London: Wounds International.2010)

Identifying the risk

Common risk assessments in Health Care settings;

- **Waterlow**
- **Braden Scale**
- **Norton Scale**

These scales should not be used in isolation. As well as the score, the individual and the “bigger picture” should be considered when establishing risk level and equipment recommendations.

The Norton Scale

NOTE: Scores of 14 or less rate the patient as "at risk"

	Physical Condition	Mental Condition	Activity	Mobility	Incontinence	Total Score
	Good 4 Fair 3 Poor 2 Bad 1	Alert 4 Apathetic 3 Confused 2 Stupor 1	Ambulant 4 Walk/help 3 Chairbound 2 Bedridden 1	Full 4 Slightly Limited 3 Very Limited 2 Immobile 1	Not 4 Occasional 3 Usually-urine 2 Doubly 1	
Name: Date:						
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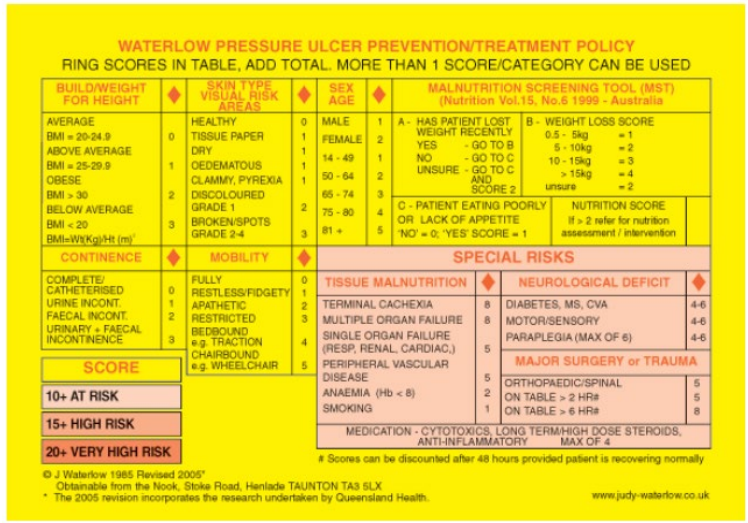

WATERLOW PRESSURE ULCER PREVENTION/TREATMENT POLICY

RING SCORES IN TABLE, ADD TOTAL. MORE THAN 1 SCORE/CATEGORY CAN BE USED

BUILD/WEIGHT FOR HEIGHT		SKIN TYPE VISUAL RISK AREAS		SEX AGE	
AVERAGE		HEALTHY	0	MALE	1
BMI = 20-24.9	0	TISSUE PAPER	1	FEMALE	2
ABOVE AVERAGE		DRY	1	14 - 49	1
BMI = 25-29.9	1	OEDEMATOUS	1	50 - 64	2
OBESE		CLAMMY, PYREXIA	1	65 - 74	3
BMI > 30	2	DISCOLOURED GRADE 1	2	75 - 80	4
BELOW AVERAGE		BROKEN/SPOTS GRADE 2-4	3	81 +	5
BMI < 20	3				
BMI=Wt(Kg)/Ht (m)^2					

MALNUTRITION SCREENING TOOL (MST) (Nutrition Vol.15, No.6 1999 - Australia)

A - HAS PATIENT LOST WEIGHT RECENTLY
YES - GO TO B
NO - GO TO C
UNSURE - GO TO C AND SCORE 2

B - WEIGHT LOSS SCORE
0.5 - 5kg = 1
5 - 10kg = 2
10 - 15kg = 3
> 15kg = 4
unsure = 2

C - PATIENT EATING POORLY OR LACK OF APPETITE 'NO' = 0; 'YES' SCORE = 1

NUTRITION SCORE
If > 2 refer for nutrition assessment / intervention

CONTINENCE		MOBILITY	
COMPLETE/ CATHETERISED	0	FULLY	0
URINE INCONT.	1	RESTLESS/FIDGETY	1
FAECAL INCONT.	2	APATHETIC	2
URINARY + FAECAL INCONTINENCE	3	RESTRICTED	3
		BEDBOUND e.g. TRACTION	4
		CHAIRBOUND e.g. WHEELCHAIR	5

SPECIAL RISKS

TISSUE MALNUTRITION		NEUROLOGICAL DEFICIT	
TERMINAL CACHEXIA	8	DIABETES, MS, CVA	4-6
MULTIPLE ORGAN FAILURE	8	MOTOR/SENSORY	4-6
SINGLE ORGAN FAILURE (RESP, RENAL, CARDIAC,)	5	PARAPLEGIA (MAX OF 6)	4-6
PERIPHERAL VASCULAR DISEASE	5	MAJOR SURGERY or TRAUMA	
ANAEMIA (Hb < 8)	2	ORTHOPAEDIC/SPINAL	5
SMOKING	1	ON TABLE > 2 HR#	5
		ON TABLE > 6 HR#	8

MEDICATION - CYTOTOXICS, LONG TERM/HIGH DOSE STEROIDS, ANTI-INFLAMMATORY MAX OF 4

SCORE
10+ AT RISK
15+ HIGH RISK
20+ VERY HIGH RISK

Scores can be discounted after 48 hours provided patient is recovering normally

Obtainable from the Nook, Stoke Road, Henlade TAUNTON TA3 5LX
* The 2005 revision incorporates the research undertaken by Queensland Health.
www.judy-waterlow.co.uk

Braden Risk Assessment Tool

Affix patient identification label in this box

Date of Assessment

CATEGORY	DESCRIPTOR	SCORE	SCORE	SCORE
Sensory Perception Ability to respond meaningfully to pressure related discomfort	**Completely Limited:** Unresponsive (does not moan, flinch or grasp) to painful stimuli due to diminished level of consciousness or sedation. **OR,** limited ability to feel pain over most of body surface.	1	1	1
	Very Limited: Responds to only painful stimuli. Cannot communicate discomfort except by moaning or restlessness; **OR** has sensory impairment that limits the ability to feel pain or discomfort over half of body.	2	2	2
	Slightly Limited: Responds to verbal commands, but cannot always communicate discomfort or need to be turned; **OR,** has sensory impairment that limits the ability to feel pain or discomfort in one or two extremities.	3	3	3
	No Impairment: Responds to verbal commands. Has no sensory deficit that would limit ability to feel or communicate pain or discomfort.	4	4	4
Mobility Ability to change and maintain own position	**Completely immobile:** Does not make even slight changes in body or extremity position without assistance.	1	1	1
	Very limited: Makes occasional slight changes in body or extremity position but unable to make frequent or significant changes independently.	2	2	2
	Slightly limited: Makes frequent though slight changes in body or extremity position independently	3	3	3
	No limitations: makes major and frequent changes in position without assistance.	4	4	4
Activity Degree of physical activity	**Bedfast:** confined to bed (can't sit at all).	1	1	1
	Chairfast: Ability to walk severely limited or non-existent. Cannot bear own weight and/or must be assisted into chair or wheelchair.	2	2	2
	Walks occasionally: walks occasionally during day, but for very short distances, with or without assistance. Spends majority of each shift in bed or chair.	3	3	3
	Walks frequently: Walks outside the room at least twice a day and inside room at least once every 2 hours during waking hours.	4	4	4
Moisture Degree to which skin is exposed to moisture	**Constantly moist:** skin is kept moist almost constantly by perspiration, urine, drainage etc. Dampness is detected every time patient is moved or turned.	1	1	1
	Very moist: Skin is often, but not always, moist. Linen must be changed at least every 8 hours. Dry 2-3 hours at a time	2	2	2
	Occasionally moist: Skin is occasionally moist, requiring linen change every 12 hours	3	3	3
	Rarely moist: Skin is usually dry, linen only requires changing every 24 hours.	4	4	4
Friction Shear	**Problem:** Requires moderate to maximum assistance in moving. Complete lifting without sliding against sheets is impossible. Frequently slides down in bed or chair, requiring frequent repositioning with maximum assistance. spasticity, contractures, itching or agitation leads to almost constant friction	1	1	1
	Potential problem: Moves feebly or requires minimum assistance. During a move, skin probably slides to some extent against sheets, chair, restraint or other devices. Maintains relative good position in chair or bed most of the time but occasionally slides down.	2	2	2
	No apparent problem: Able to completely lift patient during a position change, moves in bed and in chair independently and has sufficient muscle strength to lift completely during move. Maintains good position in bed or chair at all times.	3	3	3
Nutrition	**Very poor:** NPO and/or maintained on clear fluids, or IVs for more than 5 days OR never eats a complete meal. Rarely eats more than 1/3 of any food offered. Protein intake includes only 2 servings of meat or dairy products per day. Takes fluids poorly. Does not take a liquid dietary supplement.	1	1	1
	Inadequate: Is on a liquid diet or tube feedings/TPN, which provide inadequate calories and minerals for age OR rarely eats a complete meal and generally eats only half of any food offered. Protein intake includes only 3 servings of meat or dairy products per day. Occasionally will take a dietary supplement	2	2	2
	Adequate: Is on tube feedings OR eats over half of most meals. Eats a total of 4 servings of protein each day. Occasionally eats between meals. Does not require supplementation.	3	3	3
	Excellent: Is on TPN, which provides adequate calories and minerals for age OR Is on a normal diet providing adequate calories for age. For example, eats most of every meal. Never refuses a meal. Usually eats a total of 4 or more servings of meat and dairy products. Occasionally eats between meals. Does not require supplementation.	4	4	4
	mild risk- 18-15 moderate risk - 14-13 high risk - 12-10 severe risk - <9	TOTAL SCORE		

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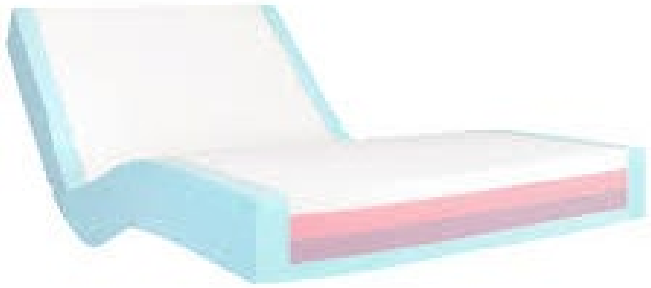
What is a support surface?

Support surfaces are designed to redistribute pressure, reduce friction and shear, and aid microclimate management e.g.

- Specialized mattresses and overlays
- Pressure care cushions (can also provide postural support)



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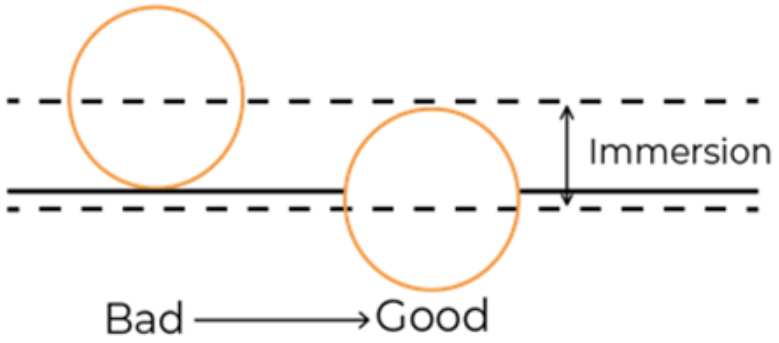
How can a support surface reduce pressure risk?

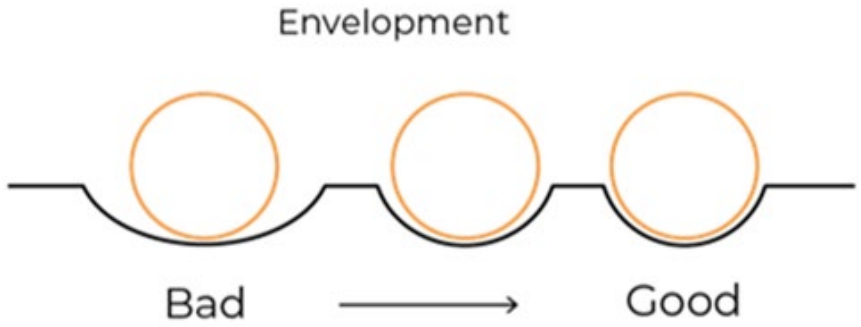
Immersion

- The ability of the **individual to sink into** the support surface.
- Support surface takes the body's shape, alleviating the bony prominences from unwanted peak pressure to maximise pressure redistribution.



Envelopment

- The ability of the **support surface to conform** to the individuals shape.
- When the material in the support surface surrounds or engulfs the shape of the body, this increases the surface contact area to maximize pressure redistribution.



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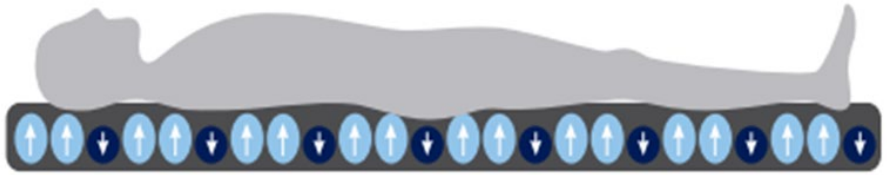
What are the different types of support surface?

Reactive

- Where a support surface will change its load distribution properties **only in response to an applied load** (e.g., an individual laying on a foam mattress)
- Pressure is not completely removed; it is reduced it by redistributing the pressure over a greater surface area.

Active

- Where a support surface will change its load distribution properties **regardless of an applied load and** is powered.
- The repeated “pressure on / pressure off” cycle
  - Off-loads a previously loaded surface (cell configurations vary - 1 in 2, 1 in 3)
  - Facilitates the return of blood flow to the previously loaded area (Reactive Hyperaemia)



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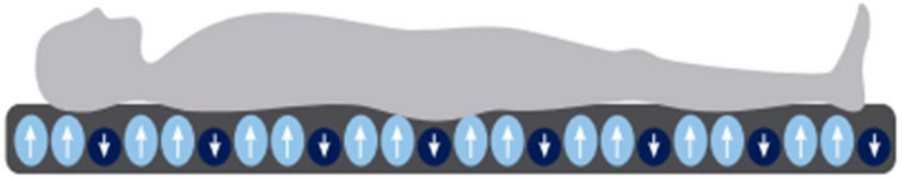
What does the evidence say about support surfaces?

Support surfaces are an important element in pressure injury prevention and treatment because they can;

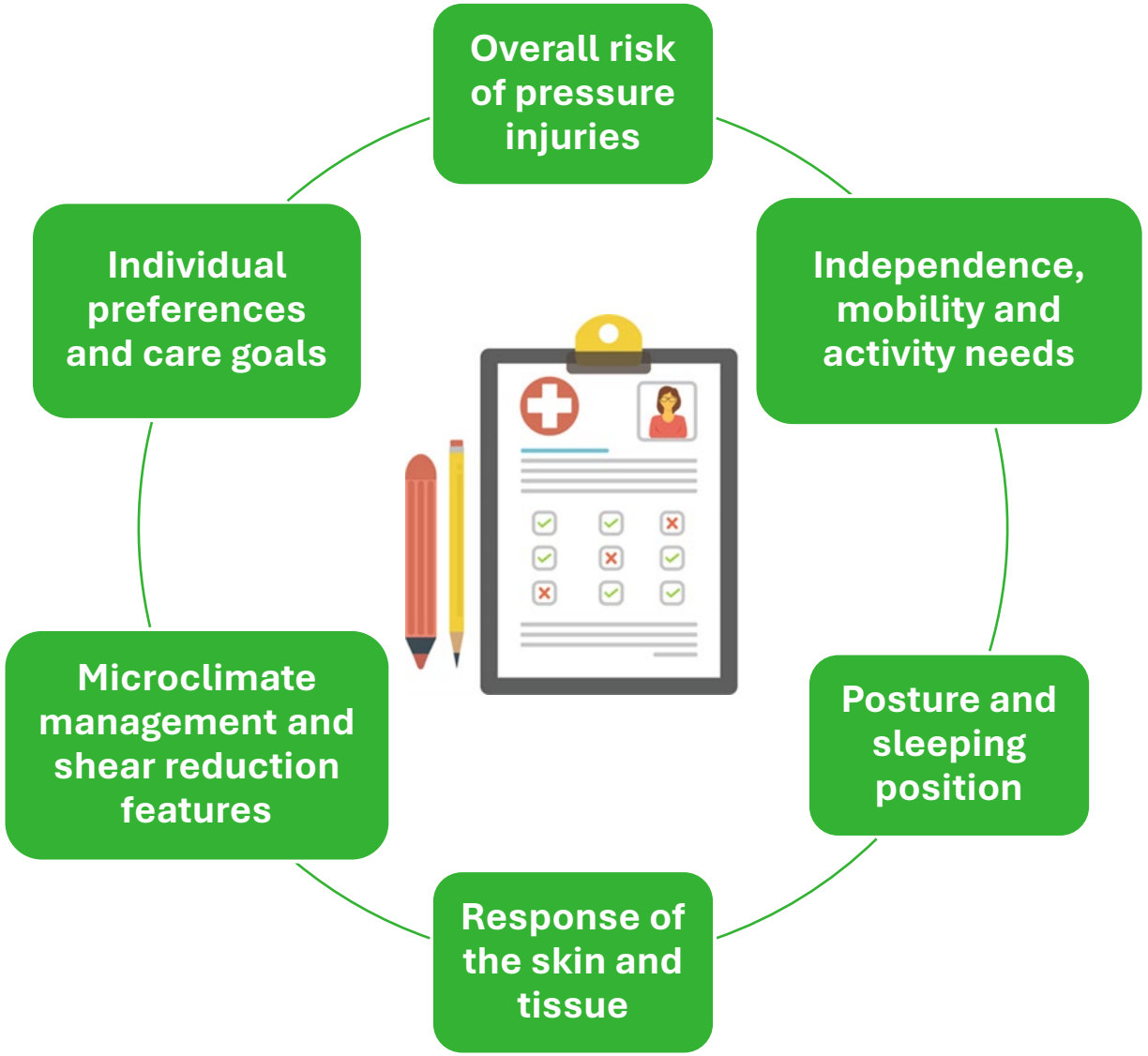
- **prevent damaging tissue deformation**
- **provide an environment that enhances perfusion of at risk or injured tissue**.



They should be used as part of a holistic approach to pressure care -

“Support surfaces alone neither prevent nor heal pressure injuries” (NPIAP, 2019, p. 156)

What should be considered when selecting a support surface?



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It’s not just what's on the inside....

Breathable 4-way stretch water resistant cover

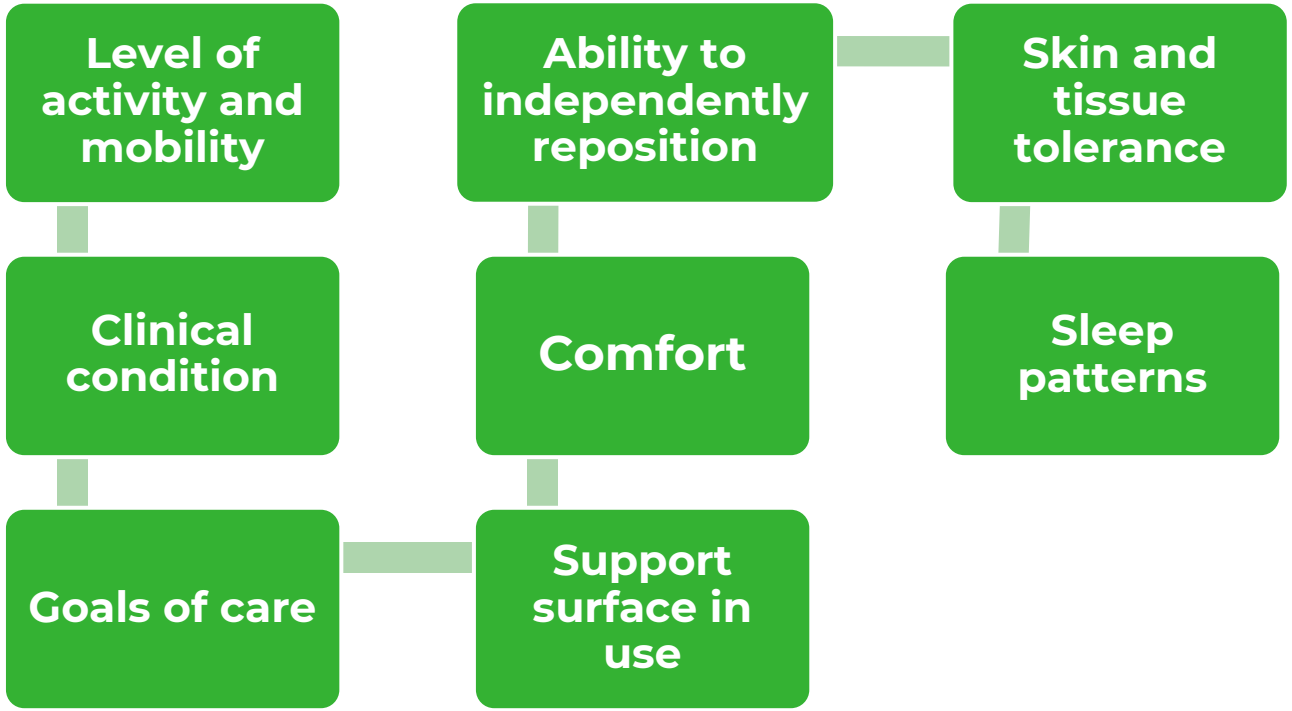
- Allows full immersion into support surface
- Shear mitigation and friction reduction
- Assists to maintain skin microclimate.

Medical Grade Waterfall Covers are fully-welded over the zipper to minimise ingress of fluids to the foam, which maximises infection control and longevity of the mattress.

4-sided zipper – covers can be completely removed for effective cleaning

Repositioning

It is good practice to reposition all individuals with or at risk of pressure injuries using an **individualised regimen,** based on comprehensive assessments of the persons;



It is good practice to **assess for signs of early skin and tissue injury** that may mean the individual requires **more frequent repositioning** or **preferential positioning** off damaged areas.

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Pressure Care – Seating considerations

When posture is not ideal, pressure will be distributed unevenly or onto areas not intended to be weight bearing, increasing the risk of a pressure injury.

With poor posture, the incorrect or inappropriately adjusted equipment, the risk of instability increases, which in turn increases the risk of pressure injury.

A poor position can impact:

- Respiration and ability to swallow safely
- Comfort and length of sitting time
- Function – inability to complete tasks
- Restrict social engagement

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Questions & Key Takeaways

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