



## 24 hour Community Support The Clinicians Handbook







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Invacare UK is part of Invacare Corporation, a global leader in the manufacture and supply of innovative Healthcare Equipment to the Acute, Primary and Community sectors. With dedicated Research and Development resources and stringent Quality procedures in place, Invacare's products fully conform to NHS and Industry standards.

The Invacare Propad range was introduced to the market over two decades ago and was very quickly an established and successful part of many pressure ulcer prevention strategies. The range consists of both overlays and cushions and is suitable for a 24 hour care plan.

The success of the Propad range came from its unique construction with Invacare using only the highest quality materials from renowned UK suppliers and having been developed alongside key Healthcare Professionals.

The foam has unique geometrically-cut surface cells that were designed specifically to reduce shear, friction and peak pressures with a high quality polyurethane cover. The Propad range was one of the first to market with this innovative concept which can still be seen in new support surfaces of today.

The 24 hour care range provides a comfortable and cost effective pressure reducing surface with the foam overlays designed to be used on top of an existing mattress, and the cushions placed on either a static chair or a wheelchair.

The Propad range of today still retains the traditional features that it has been recognised for but has had enhancements and improvements to make it suitable for the 21st century healthcare environment.



#### **REACH Compliant**

Invacare has undergone a meticulous inspection and evaluation of the product portfolio to ensure all materials and fabrics used within the Propad range are compliant with the regulation concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

#### What is REACH?

REACH (Registration Evaluation Authorisation and Restriction of Chemicals) is a European

Regulation (No. 1907/2006) concerning chemicals and their safe use.

It addresses the production and use of chemical substances (i.e. everything made of atoms), and their potential impacts on both human health and the environment.

In December 2012, REACH added DecaBDE to its 'Candidate List' which is often used in support surfaces as a flame retardant. The Candidate list is a list of chemicals that could have an impact on both human health and the environment and as a result, all chemicals stated on this list are not to be used in manufacturing. There are 144 chemicals on the 'Candidate list' at present.

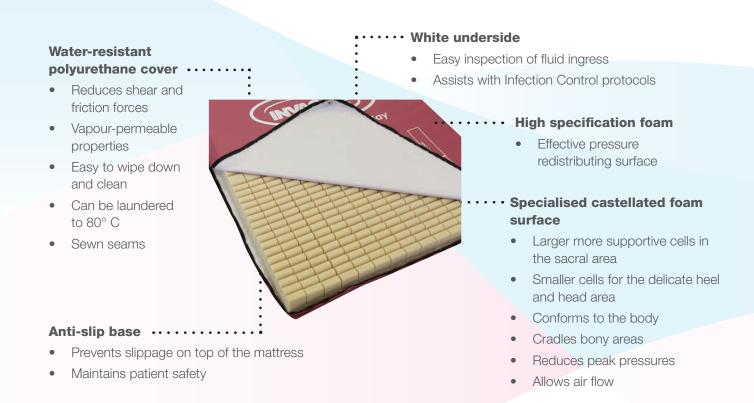
#### Anyone can get a pressure ulcer but those most at risk are:

- People who have difficulty moving or repositioning themselves
- Those who cannot feel pain over part or all of their body
- Those who have limited bladder or bowel control
- People who are seriously ill or have had surgery
- Those with a poor diet and low fluid intake
- People who smoke
- Those with previous pressure ulcers/ skin damage
- People with poor circulation

## **Invacare Propad Overlay**

#### High specification pressure redistributing overlay

The Propad Overlay is designed to sit on top of an existing conventional mattress, providing a high level of patient comfort with excellent pressure redistribution abilities. The overlay is light weight, available in a range of sizes and suitable for those considered at 'High Risk'\* of developing pressure ulcers, making it ideal for the homecare environment.



Available in a range of sizes from single to king-size



## **Invacare Propad Premier Overlay**

#### Easy transport and storage solution

The Propad Premier Overlay offers the same features and benefits as the Propad Overlay, however, its unique foam and cover construction facilitates easy storage and delivery.

The design of the overlay along with the retaining straps enables the overlay to fold to a quarter of its size, ensuring ease of handling and transportation.

Available in L187.5 x W87.6 x H8.5cm - suitable for a standard single bed



## **Invacare Propad** Visco Overlay

#### Dual layered visco elastic overlay

The Propad Visco Overlay is composed of the same polyurethane cover as both the Propad and Propad Premier overlay, but features a high density visco elastic (memory) foam surface with a robust foam base.

This high specification surface is temperature sensitive allowing it to conform to the shape of the body and maximise contact area. This facilitates pressure redistribution and minimises pressure on key areas of the body such as the sacral and heels.

Available in a range of sizes from single to double

#### Key technical data:

	Length	Width	Height	Weight	Max User Weight	Warranty
Propad Overlay	1830-1980mm	560-1525mm	85mm	5.5kg	108kg/ 17 stone	3 years
Propad Premier Overlay	1875mm	876mm	85mm	5.5kg	108kg/ 17 stone	3 years
Propad Visco Overlay	1830-1980mm	560-1370mm	85mm	7.1kg	108kg/ 17 stone	3 years

#### For more detailed technical information, please go to page 20

\*Essential nursing care is pivotal in pressure ulcer prevention. This product will positively contribute to the outcome of a pressure ulcer prevention care plan. Education, clinical judgement and action based planning based on vulnerability are fundamental factors in the prevention of pressure ulcers. A range of assessment scales can be used as a formal method of assessing risk from pressure ulcer development, and should be used in conjunction with an informal assessment (informed nursing judgement). Informal assessment is considered to be of greater importance and clinical value.

#### Did you know ...?

- Pressure ulcers/ sores cause patients long term pain and distress, resulting in longer hospital stays
- Treating pressure ulcers costs the NHS more than £3.8 million every day
- In severe cases, pressure ulcers can become life threatening
- Most pressure ulcers can be avoided

## **Invacare Propad Original**

#### The ultimate comfort cushion

The Propad Original is manufactured using the highest quality pressure redistributing foam, designed to give superior levels of comfort. Specifically engineered to enhance support, the 4" cushion foam maximise's air flow and provides optimum levels of temperature control to deliver unbeatable levels of comfort. The Propad Original is suitable for those at 'High Risk' of developing pressure ulcers.

#### High specification foam .....

 High density foam that gives support, comfort and durability and maintains its original shape and density

#### ····· Water-resistant polyurethane cover

- Reduces shear and friction forces
- Vapour-permeable properties
- White underside for easy inspection
- Easy to wipe down and clean
- Can be laundered to 80° C

#### A wide range of sizes available ....

• 98 sizes available from paediatric 10x10" to bariatric 24x22"

#### ···· Anti-slip base

- Prevents cushion slipping
- Maintains patient safety

#### **Unique castellation design**

The foam core has independent, geometrically-cut surface cells that significantly reduce shear and friction, whilst increasing the overall support surface area, thereby reducing peak pressure.





### **Invacare Propad Profile**

#### 3" foam cushion for a lower seat to floor height

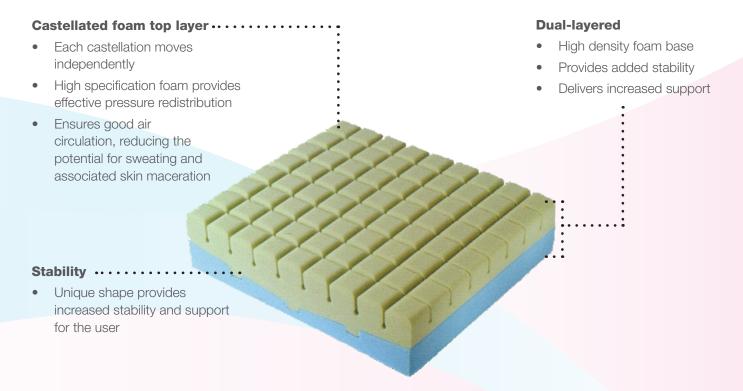
The Propad Profile is a 3" cushion designed for those who require a comfortable 'High Risk'\* cushion benefiting from the same clinical applications as the Propad Original but in a lower height.

Available in 102 sizes ranging from 10x10" to 24x22"

## **Invacare Propad Premier**

#### For comfort and increased stability

The Propad Premier cushion combines comfort and stability with a dual layer construction to ensure improved support as well as prolonged longevity. The cushion has the same water-resistant polyurethane cover as the Propad Original, with a unique foam core suitable for those 'High Risk'\* of developing a pressure ulcer.



#### Key technical data:

	Depth	Width	Height	Weight	Max User Weight**	Warranty
Propad Original	10"-22"	10"-24"	4"	1kg	Up to 127kg/ 20 stone	3 years
Propad Profile	10"-22"	10"-24"	3"	1kg	Up to 127kg/ 20 stone	3 years
Propad Premier	13-22"	13-24"	4"	1kg	Up to 197kg/ 31 stone	3 years

#### For more detailed technical information, please go to page 20

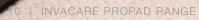
## To spot a pressure ulcer, look for the following:

- On lighter skin, look for persistent red patches forming which do not fade after the pressure is removed from the area
- Look for bluish/ purple patches on darker skin

\*Essential nursing care is pivotal in pressure ulcer prevention. This product will positively contribute to the outcome of a pressure ulcer prevention care plan. Education, clinical judgement and action based planning based on vulnerability are fundamental factors in the prevention of pressure ulcers. A range of assessment scales can be used as a formal method of assessing risk from pressure ulcer development, and should be used in conjunction with an informal assessment (informed nursing judgement). Informal assessment is considered to be of greater importance and clinical value.

\*\* Maximum user weight limits are set provided that the cushion selected is of appropriate width and depth for the intended user/s.

The maximum weight limit applies to a 24"x22" cushions.





## **Risk Assessment**

When assessing an individual for a pressure reducing cushion or overlay, it is always advisable to carryout some form of risk assessment. This risk assessment can include a formal risk assessment scale such as the Norton scale (1962), the Braden scale (1985) or the Waterlow scale (1985). The Waterlow scale for example provides a guide category of potential risk for that individual, based on the final score.

Category	Waterlow Score
At Risk	10+
High Risk	15+
Very High Risk	20+

It is recommended, however, that the results of a formal risk assessment are always considered alongside more informal clinical judgement before the total care package is decided, of which pressure redistributing equipment is an important part. This ensures that factors that may not be included in the formal risk assessment are given sufficient consideration.

In addition, Invacare recommend that guidance on pressure ulcer risk assessment is sought from relevant institutes, agencies and advisory panels as detailed in the reference section below.

#### Waterlow Score

# ProductWaterlow ScorePropad Overlay15+Propad Premier Overlay15+Propad Visco Overlay15+Propad Original15+Propad Profile15+Propad Premier15+

#### References

Bergstrom N., Braden, B., Laguzza A., Holman, V. The Braden Scale for predicting pressure sore risk: reliability studies. Nurse Res 1987; 34(6);205-210.

European Pressure Ulcer Advisory Panel and National Pressure Ulcer Advisory Panel. Prevention and treatment of pressure ulcers: quick reference guide. Washington DC: National Pressure Ulcer Advisory Panel; 2009.

National Institute for Clinical Excellence. Clinical Guideline 179. The prevention and management of pressure ulcers in primary and secondary care. National Institute for Clinical Excellence, April 2014.

Norton, D., Exton Smith A.N., McLaren R. An investigation of geriatric nursing problems in hospital. London: National Corporation for the Care of Old People. 1962.

Waterlow, J. A risk assessment card. Nurs Times 1985; 81 (49);5115

Waterlow, J. The Waterlow pressure ulcer prevention manual. Taunton: Newtons. 2005.



## **Knowledge Bank**

#### What is a pressure ulcer?

A pressure ulcer (also known as a bed sore or pressure sore) is an area of damage to the skin and the underlying tissue, usually over a bony area of the body. Damage to the skin is most commonly caused by pressure, or pressure in combination with shear.

Pressure ulcers range in severity from skin discoloration, to severe open wounds where the muscle and bone are visible.

#### What causes pressure ulcers?

#### To spot a pressure ulcer, look for the following:

- On lighter skin, look for persistent red patches forming which do not fade after the pressure is removed from the area
- Look for bluish/ purple patches on darker skin
- They are more common over the bony parts of the body like the bottom, heel, elbow and shoulder
- It is not uncommon for them to develop on the back of the ear or other areas of the head and body

The damage to the skin and underlying tissues can be caused by a combination of the following:

#### Pressure

Pressure is a direct (vertical) force which occurs when our skin makes contact with a surface e.g. when sitting on a chair or lying on a mattress. Pressure causes the skin to compress or squash restricting blood flow. Oxygen and nutrients are carried via the blood to our skin, thus when pressure squashes the tissues, which make up our skin, the blood cannot transport the oxygen and nutrients and nutrients and the tissues become damaged.

#### Shear

Shear is also a force but it works in a different direction to pressure. Shear is a (parallel) or horizontal force which causes the skin and underlying tissues to stretch. Shear can occur when someone partially slips down the bed or chair. The skin can stay stuck to the mattress or cushion distorting the underlying tissues.

#### **Friction**

Friction is when the skin is rubbed against another surface and can occur when slipping down a chair of bed. This type of damage is usually quite superficial and should heal without problems. However, for some ill or elderly people, healing may be impaired and a shallow ulcer may progress to something more serious.

#### **Temperature**

Increased body temperature is also thought to increase the risk of pressure ulcer development.





## **Knowledge Bank**

If you are looking for an overlay or cushion and not sure where to start, here are a few key features you should look for:

#### **Pressure Care**

**Castellated foam** surfaces allow the patient to be immersed into the foam to maximise body contact area, therefore optimising pressure redistribution. The individual movement of each castellation can significantly reduce shear and friction forces.

**High quality foams** ensure a good life span and reduce the possibility of them bottoming out. Avoid cheap foam overlays and cushions – they are a false economy. Cheap foam will collapse after a short period of use and will need to be replaced. They may also put clients at risk of developing pressure ulcers.

A good overlay or cushion will feature a **multi-stretch polyurethane (PU)** cover, which is designed to contribute to the reduction of shear and friction forces. Avoid non-stretch materials and materials that have poor vapour-permeability. Also, avoid cover materials that include Latex; Latex has poor allergenic properties; and some patients can be particularly vulnerable, leading to adverse skin reactions. Some overlays and cushions use glue as an essential part of their construction but this is primarily to save cost.

**Glue should be avoided where possible**, but if used, should be deployed sparingly. An overlay or cushion which uses a lot of glue to hold the foam core together will become rigid and inflexible overtime, thereby significantly reducing its ability to conform to a client's body. This will reduce any pressure redistributing properties within the overlay and cushion, and may significantly increase the potential of skin tissue damage.

#### **Infection Control**

The overlay and cushion cover should be water resistant and vapour permeable but should not allow bacteria through. These features will also help to prolong the longevity of the product and reduce the risk of strikethrough, hydrolysis and de-lamination.

A quality overlay and cushion will also feature a toughened PU coated base to help prolong the longevity and reduce the risk of strikethrough, hydrolysis and delamination.

The overlay and cushion should be able to satisfy all laundering requirements laid down by the Infection control department. Full laundering instructions should be clearly printed on the mattress cover.

Easily removable covers are key to avoid the need to replace the entire overlay or cushion if the cover is damaged, prolonging its life and saving money.

#### Prolonged chair nursing may result in:

- An increase in shear damage to skin and tissue
- Can contribute to ankle or leg oedema due to impaired venous return
- Increase in pressure at skin and/or muscle layer due to a reduction in support surface area

#### **Remember:**

Complications of bedrest do not exist. The complications occur as a result of immobility. Chairfast patients are generally more vulnerable to pressure ulcer development than patients on bedrest

## Knowledge bank

#### Seating and posture guide

Good posture is dependent on the balance of the skeleton and symmetrical alignment of body segments. Posture is not static, but is an active and dynamic process which underpins movement and function. This means we change our posture continuously to enable our bodies to move and allow us to do what we want to do. On average we change our posture every 8 seconds.

#### The following influences a persons posture:

- Muscle tone (high or low)
- Contracture
- Body shape and size (height and weight)
- Decreased balance & equilibrium reactions
- Proprioception
- Fatigue
- Level of health; well being/emotional state of individual
- Existing pressure ulcer

#### A persons posture can then influence:

- Pressure ulcer development
- Function
- Pain & discomfort
- Postural deformity
- Breathing
- Swallowing
- Communication
- Vision

#### What is a good posture?

- Historically 90/90/90 (Hips, knees and ankles) was the benchmark for seating but we have come to realise that this position is really tiring and cannot be maintained for any length of time. However, it is a starting point and you may need to adjust these angles to meet the needs of your client
- The pelvis should be level with the ASIS and the PSIS
- There should be equal weight bearing
- The trunk should be upright with a slight lumbar curve
- Stability is key

## The most common seating and postural problems are as follows:



#### Seat too low

#### **Difficult To Get Out**

Body weight is supported on a small area. This leads to high pressure under the buttocks.



#### Arm rest too high

#### **Uncomfortable – Poor Posture**

High pressure under elbows. May be difficult to eat and drink.



#### Seat too narrow

#### Difficult To Get In and About

Allows no movement in the seat.



#### Seat too wide

#### **No Support – Poor Posture**

No stability may lead to fixed spinal deformities with time

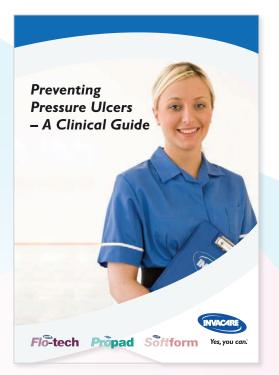


#### Correct arm rest height & seat width

#### **Good Posture and Support**

A correctly sized seat provides good pressure care, good sitting posture and allows the individual to move in the seat.

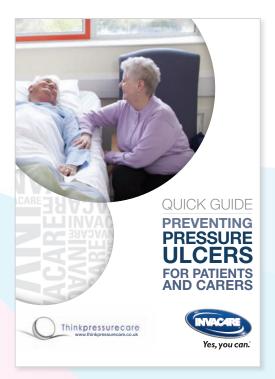
## **Training resources**



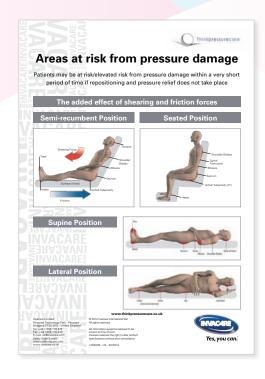
Preventing Pressure Ulcers – A Clinial Guide Part no. 1517305



Simple...safe...effective... the 30° tilt Part no. 1492224



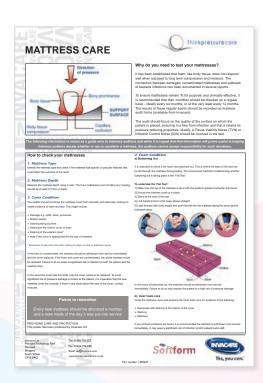
Quick guide: Preventing pressure ulcers for patients and carers Part no. 1573897



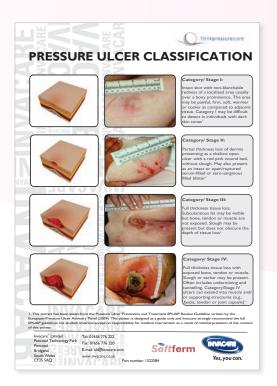
Areas at risk from pressure damage Part no. 1492636



Concepts of chair nursing Part no. 1492635



Mattress care Part no. 1576928



If you would like to download a copy of the Invacare brochures and posters, please visit www.thinkpressurecare. co.uk. Alternatively, if you would like free hard copies, please call Customer Services on 01656 776222 quoting the part numbers.

# How to clean and care for your overlays and cushions

#### **Cleaning the covers**

It is recommended that a solution of neutral detergent and warm water with a single use nonabrasive cloth is used to clean the overlay and cushion covers. Ensure the cover is rinsed with clean water, using a single use non-abrasive cloth and make sure the surface is thoroughly dried.

All covers are removable for laundering. The recommended washing temperature is between 60° C - 80° C using a diluted detergent solution (please see instructions on label).

The covers should then be hung from a line or bar and drip dried in a clean indoor environment.

Tumble dry on a low heat setting. Covers must be thoroughly dried before re-fitting to the mattress.

Tumble dry setting must not exceed 40° C
 Do not tumble dry for longer than 10 minutes
 Washing at higher temperatures may cause shrinkage

#### **Disinfecting the covers**

**Light soilage:** Ensure that any residual detergent has been removed prior to disinfection. The cover can be wiped down with a 0.1% Chlorine Solution (1,000ppm). Ensure that the cover is rinsed with clean water using a single use nonabrasive cloth, and thoroughly dried.

**Heavy soilage:** For spillages of bodily fluids i.e blood, urine, faeces, sputum, wound exudate and all other bodily secretions. All spillages should be cleared up as soon as possible. A 1% Chlorine Solution (10,000ppm) can be used to disinfect the mattress. Rinse well with clean water and a damp single use non-abrasive cloth. Large spillages of blood should be absorbed and removed



with paper towels followed by as above. Do not use granules. The surface should then be rinsed using clean water with a clean non-abrasive cloth.

Polyurethane coated fabrics can absorb liquids for short periods causing a temporary change to the polyurethane characteristics. The mattress cover swells temporarily and is more vulnerable to physical damage for a period after it is surface dried, by which time it will revert to its previous state.

The foam when either contaminated or when it reaches its end of life should be disposed of in accordance with Environmental Legislation.

1% Chlorine Solution used on a regular basis can diminish the life of the cover if not rinsed and dried properly.

#### N.B; Always ensure you read the user instructions prior to use and inspect the interior and exterior of the overlays and cushions on a regular basis.

For further information on mattress cleaning and care, please refer to the BHTA 'Protect, Rinse and Dry' document that can be downloaded from www.bhta.net



## Postural complications of the seated patient:

#### **Pelvic Obliquity**

 Results in one ischial tuberosity supporting extra weight which over time will effect the trochanter

#### **Posterior Pelvic Tilt**

 Results in greater weight and pressure being transferred through the coccyx and sacrum. May contribute to the development of sacral and heel ulcers Such complications can arise for two reasons:

- Patient's condition
- Poor seating

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## **Technical Information**

Product	Warranty	Fire Testing	Grade Ref & Colour	Nominal Density Range (kg/m)	Nominal Hardness Range (N)	Fatigue Class	Weight of Product (kg)
Propad Premier Overlay	3 years	BS 5852: Crib 5	Gr. RX36/125 Beige	35-37	110-140	Very Severe	5.5
		BS 7175: Crib 5					
Propad Overlay	3 years	BS 5852: Crib 5	Gr. RX36/125 Beige	35-37	110-140	Very Severe	5.5
		BS 7175: Crib 5					
Propad Visco	3 years	BS 7177:	Gr. VC5580 White	55	80	N/A	7.1
Overlay	Crib 5	Gr. RX36/125 Beige	35-37	110-140	Very Severe		
Propad Original Cushion	3 years	BS 7176: Crib 5	Gr. RX36-125 Beige	36-37	110-140	Very Severe	1
Propad Profile Cushion	3 years	BS 7176: Crib 5	Gr. RX36-125 Beige	35-37	110-140	Very Severe	1
Propad Premier Cushion	3 years	BS 7176: Crib 5	Gr. RX36/125 Beige	35-37	110-140	Very Severe	1
			Gr. RX39-/200 Blue	38-40	180-200	Very Severe	

- The following will assist with reducing pressure ulcers:
- Check the skin for damage at least once a day if lying or sitting for long periods
- Make sure the client is turned and changes position regularly to transfer weight off bony areas
- Reposition in a chair every
  15-30 minutes
- Ensure suitable support surfaces are in place
- Eat a well-balanced diet and drink plenty of fluids
- Keep the skin clean and dry







#### Part no. 1578275

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