Intelli-Gel® Cushions
Evidence based design

Incorporating the latest pressure care advances to bring you an innovative range of stand alone cushions that offer pressure relief for those at very high risk. In addition to the outstanding results proven in research and clinical trials, we have been using Intelli-Gel® within our seating systems for over 18 months with amazing results and customer feedback.

Now available as a stand alone cushion, Intelli-Gel® is a technology we’ve been excited about for a while, but it wasn’t until the results of the independent research that we realised quite what we had discovered.

The results from Professor Stephen Sprigle’s lab at Georgia Tech indicated that Intelli-Gel® performed similarly to a commercially available air bladder wheelchair cushion. Unlike an air-based cushion however, Intelli-Gel® cannot leak or puncture and will continue to perform effectively even if damaged.

What is a Pressure Ulcer?

A pressure ulcer is an injury to the skin and tissue under it. Sitting or lying in the same position will begin to cut off the flow of blood to that area, blocking oxygen and vital nutrients from maintaining healthy tissue. When the tissue becomes starved for too long it begins to die and a pressure ulcer starts to form.

Pressure ulcers can be referred to as pressure sores or decubitus ulcers. Damage from a pressure ulcer will range from slight discoloration of the skin (stage 1) to open ulcers that go all the way to the bone (severe).

While there are many aetiological factors that contribute to the development of pressure damage, the largest single cause is unrelieved pressure. Intrinsic factors include malnutrition, incontinence, altered levels of consciousness and/or sensation whilst extrinsic factors look towards pressure, friction, shear, temperature and moisture. It is difficult to identify any one particular cause of pressure damage as it is often a combination of the above factors.

For those individuals seated for long periods and unable to adjust their position to relieve pressure, the risk of pressure related problems increase. At this point the importance of choosing the most appropriate pressure care is vital.

Intelli-Gel® Cushions

Intelli-Gel® is a technology we’ve been excited about for a while, but it wasn’t until the results of the independent research that we realised quite what we had discovered.
Inelli-Gel® is made up of a deep grid-like array of gel columns which allow it to redistribute pressure easily. Under areas of low pressure the gel columns support the weight of the body. Where peak pressures are present the gel columns buckle and a very low ‘spring back’ force is applied meaning peak pressure areas, such as the ischial tuberosities, are eliminated.

Intelli-Gel® is naturally good at reducing heat build up in the skin. This is due to the co-polymer gel material having a high specific heat capacity which means it takes a lot of energy to heat up and is therefore more likely to cool the patient than increase in temperature.

It is known that a 1° rise in skin temperature increases cell metabolism by 10%. Cell necrosis occurs when the metabolic demand of the cell is not met by the supply of the blood. So as pressure reduces the supply, heat increases the demand causing the beginnings of a pressure ulcer.

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Contouring helps to prevent the pelvis from rotating backwards and in doing so protects the sacrum and improves posture. Contouring also improves the stability of the cushion helping users feel secure when seated. All Intelli-Gel® cushions have some degree of contouring which maximizes the inherent pressure redistribution characteristics of the product.

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Moisture is an important risk factor in the development of a pressure ulcer. Due to the array of gel columns with nothing between but air, Intelli-Gel® encourages the circulation of air and the transport of moisture from the body.

Both Intelli-Gel® and the closed cell foam beneath are non-absorbent. They can be submersed in water, cleaned and dried quickly. The non-absorbent qualities also mean the cushion cannot hold bacteria making it much more hygienic than open cell foams. Holes in the foam base encourage airflow whilst maintaining the cushion’s cleaning capabilities.
Intelli-Gel® Cushion Range
The Intelli-Gel® Cushions come in two styles; a Contoured version and a Low Profile Topper.

Intelli-Gel® Contour:
The Intelli-Gel® Contour is designed to reduce the risk of individuals developing a pressure ulcer and to assist in the healing of pressure ulcers up to Grade II (EPUAP). The Intelli-Gel® Contour is intended to replace existing seat cushions in chairs and to be used as seat cushions in wheelchairs, on hard surfaces and sling seats.

Intelli-Gel® Low-Profile Topper:
The Intelli-Gel® Low-Profile Topper is designed to be used over existing seat cushioning or on sling wheelchair seats to improve comfort and deliver many of the benefits of the Intelli-Gel® Contour without significantly increasing seat height. Used as a topper in conjunction with an existing seat cushion the Intelli-Gel® Low-Profile can reduce the risk of pressure ulcers for those at low to medium risk. For a replacement cushion for those at very high risk of pressure ulcers, or with existing pressure ulcers up to Grade II (EPUAP) the Intelli-Gel® Contour is recommended. The Intelli-Gel® Low-Profile is also intended to improve comfort for healthy individuals who sit for long durations, such as road or air travel, or in the office.

Intelli-Gel® Cushion Covers:
The Intelli-Gel® Cushions are available in two options:
1) A light weight, two-way stretch, knitted fabric cover, with spacer fabric sides and a non-slip base with carry handle.
2) A light weight, two-way stretch, vapour permeable, waterproof, welded fabric.

The Intelli-Gel® Cushions are suitable for a wide range of users in both domestic and healthcare applications. It is recommended to use the PU seam sealed cover where regular cleaning is necessary.

**the options**

With fabric cover

Intelli-Gel® Contour
(3.5”/90mm thick) with fabric cover

Dimensions

- 16” x 16” 400mm x 400mm
- 18” x 16” 450mm x 400mm
- 18” x 18” 450mm x 450mm
- 20” x 16” 510mm x 400mm
- 20” x 18” 510mm x 450mm

Intelli-Gel® Low Profile Topper
(2”/50mm thick) with fabric cover

With PU seam sealed cover

Dimensions

- 16” x 16” 400mm x 400mm
- 18” x 16” 450mm x 400mm
- 18” x 18” 450mm x 450mm
- 20” x 16” 510mm x 400mm
- 20” x 18” 510mm x 450mm
About Us

We specialise in the provision of seating and pressure care solutions for domestic and healthcare environments including local and health authorities, care environments and private individuals.

Based across two UK production sites in Haverhill, Suffolk and High Wycombe, Buckinghamshire, we pride ourselves on excellence in design, manufacturing and service delivery. Our extensive experience in pressure care and seating design enables us to respond to customers and their requirements efficiently and effectively.

Let’s Talk

If you would like to discuss our Intelli-Gel® Cushions in further detail, arrange a training session or learn more about The Kirton Healthcare Group please contact

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