

# Specialist Seating: The Role of Posture in Pressure Care Management



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## Introduction

With an increasing emphasis on patient independence, particularly with campaigns such as EndPJPParalysis and Fit2Sit, seating has become an integral and key part of patient care. Therefore, with more and more patients sat out of bed for prolonged periods, the importance of pressure care management in seating should be placed equally alongside the importance of equipment provision for pressure care in the bed.

The correct use of specialist seating can help to improve the user's quality of life, independence and put the individual at a lowered risk of developing pressure related injuries through:

- ✓ Offering a range of integral pressure reducing seat cushions
- ✓ Maintaining mobility by promoting independent or assisted transfers
- ✓ Achieving a comfortable and pressure reducing posture

For individuals with physical disabilities, including neurological conditions or injury, the ability to regularly adjust their position can be reduced. Postural management is extremely important, and support through the correct specialist seating can help to achieve the optimum seated posture and assist in redistribution of pressure. Specialist tilt-in-space seating allows position to be varied easily and regularly, with minimal shear or friction, and increasing the user's overall quality of life and independence.

## How Can Posture Influence Pressure Care Management?

Seated patients may be at an increased risk of pressure ulcers if they present with any of the following postural abnormalities:



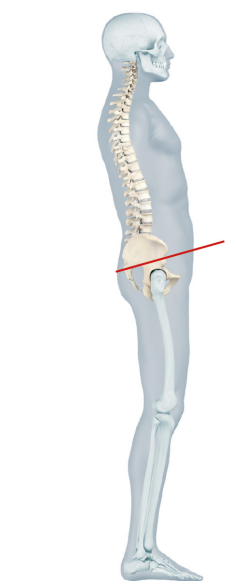
**Anterior Pelvic Tilt**  
Identified by the PSIS becoming higher than the ASIS, typically leading to increased pressure risk through the Ischial Tuberosities.



**Pelvic Obliquity**  
Pelvic obliquity occurs when one side of the pelvis is higher than the other. Due to uneven weight distribution through the Ischial Tuberosities, there is an increased likelihood of pressure damage occurring on the loaded side.



**Posterior Pelvic Tilt**  
Also known as sacral sitting, this is identified by the PSIS becoming lower than the ASIS. As a result of the patient attempting to stop themselves sliding forward, there is increased loading and shear stresses, and therefore pressure risk, at the sacrum, spinal apex and heels.



**Kyphosis**  
Forward flexion caused by an excessive outward curvature of the spine may cause individuals to experience increased risk of pressure damage at the spinal apex, sacrum and heels.

## The Clinicians Role in Posture for Pressure Care Management

It is important that the clinician identifies postural abnormalities while seated as early as possible and typically the easiest way to do this is to establish the position of the pelvis. The adjustability of specialist seating allows the clinician to correct or accommodate pelvic changes:

| Specialist Seat Feature | Clinical Application  |
|-------------------------|---|
| Tilt-in-Space           | Adjusts the areas of pressure, tilt-in-space of between 15°-30° aids in posterior pelvic tilt and can also be used to redistribute pressure for anterior pelvic tilt.   |
| Back Angle Recline      | Back angle recline can be used to open the hip angle during anterior pelvic tilt, reducing the pressure going through the Ischial Tuberosities.   |
| Adjustable Footplate    | Helps to adequately support the feet, evenly distributes pressure under the ischial tuberosities, offloads pressure at the heels, and plays a role in preventing the user sliding forward in the chair therefore reducing shear and friction. |
| Ramped Seat Module      | A ramped seat module can help to keep the pelvis level and discourages the user from sliding forward. This, in turn, will help reduce shear and friction.   |
| Seat Size               | Correct sizing will not only enhance user comfort but also play a significant role in posture management and therefore pressure ulcer risk.   |

## Case Study

The patient suffered a stroke which affected their right side. Following an assessment, it was noted that the patient was experiencing low tone in her trunk and right arm causing them to lean heavily to the side in their current chair (Figure 1A). Due to this, the patient would often spend prolonged periods in bed. The patient also suffered from a category IV pressure ulcer on the sacrum, due to a diminished ability to move independently.

Through assessment the patient was provided a specialist seat (Figure 1B) with additional lateral support to compensate for the low tone in the trunk. The seat provided the postural support required to maintain a stable, midline position to ensure even distribution of pressure. The additional benefit of removable, swivel-back armrests allowed ease of transfer of the patient from the bed to chair, significantly decreasing the length of time spent in bed. Due to an existing Category IV pressure ulcer, a suitable integral seat module was used to both successfully treat the pressure ulcer and mitigate any future pressure ulcer risk.



Figure 1A: Representation of patient prior to specialist seating provision



Figure 1B: Representation of patient's posture following the provision of specialist seating with additional lateral support

## Conclusion

Whilst many recognise the support surface of a specialist seat to be important in pressure risk, considerations should also be given to how the individuals posture may be playing a role. Different postural abnormalities pose different challenges and having a rounded knowledge of how a user's posture will influence the area at greatest risk of pressure damage, and how the adjustments of a specialist seat can counteract this, is important in providing a continuum of care from bed to seat.