

CLINICAL FOCUS

THERAPEUTIC SURFACES

LOW WEIGHT PATIENTS

This document explains from a technical point of view why in some cases a lower patient weight limit has been recommended for huntleigh healthcare alternating pressure mattresses and overlays. This is reviewed in light of clinical feedback showing that many low weight patients have been successfully nursed on our alternating products.

Rationale for lower weight limits

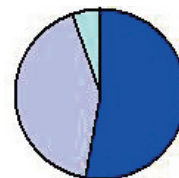
- Laboratory interface pressure measurements of healthy subjects plays a crucial role in development of Huntleigh products.
- 40Kg is the minimum weight products are tested to due to the impracticality of finding subjects below 40Kg.
- For products with an AutoMatt® such as the Nimbus® 3 and Autoexcel® systems, sensitivity has not been tested in healthy subjects below 40Kg.
- Therefore a minimum weight of 40Kg reflects the threshold of testing.

Clinical Evidence

To date we have 38 case reports of patients below 40Kg being nursed on Huntleigh alternating pressure products (9 on Nimbus® 3, 21 on Autoexcel® and 8 on AlphaXcell®). The case reports were analysed from evaluations carried out in a variety of settings in acute and community sectors. Patient age ranged from 14 to 99 years and they weighed between 22 and 40Kg:

1. All products evaluated were successful in preventing pressure ulcers in the 19 patients without existing ulcers at the start of the evaluation period.
2. 19 patients had existing ulcers at the start of the evaluation period (grades 1 to 5). Five patients had multiple ulcers. 95% either improved or maintained their condition.
3. Patients rated the comfort of the products on a scale of 1 (very comfortable) to 5 (very uncomfortable). No patients found the products uncomfortable.
4. 95% of the evaluators found the products easy to use.

Pressure ulcer treatment:



- Improved
- Maintained condition
- Worsened

Patient comfort:



- Very comfortable
- Comfortable
- Fairly comfortable
- Not stated

Easy to use?



- Yes
- No
- Not stated

AutoMatt® sensor pad functionality below 40kg

1. The AutoMatt sensor pad within the Nimbus® and Autoexcel® systems, continually adjusts cell pressure to suit the patient according to weight distribution, position and size. This means providing enough air to prevent bottoming out, but avoiding excessive inflation, which makes the mattress hard and uncomfortable.
2. If a patient does not trigger the AutoMatt® sensor pad, the system will continue to alternate normally and simply operate at fixed low cell pressure.
3. The disadvantage of operating at fixed pressure is that optimal pressure for pressure relief and comfort for each patient may not be achieved. In the case of very light patients this could lead to them finding the mattress too hard. **However, the clinical data presented above shows that this was not reported by the patients tested.**
4. Many other alternating products on the market have no such facility to automatically adjust cell pressure to suit patients and operate continually at a fixed pressure.
5. Rithalia et al 1999 showed the Nimbus® 3 system varied peak inflation pressure according to patient weight and posture. *JTV; 9(1): 26-27*

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