

## CLINICAL UPDATES

# Air mattresses only 'marginally better' at preventing pressure sores than foam mattresses, finds study

For every 50 patients allocated high-tech air mattresses, only one would benefit from it.



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By **James McKay** 



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**High-tech alternating-pressure mattress cost around five times more than their specialist foam counterparts.**





Expensive air mattresses are only 'marginally better' at preventing pressure area damage than cheaper foam mattresses, says a new study led by nurse researchers.



Known as an alternating-pressure mattress, the high-tech devices contain air pockets that inflate and deflate to constantly change pressure points on the skin and cost at least £1,000 each.

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In comparison, a specialist foam mattress is around £200 and is made up of high-quality polyurethane and viscoelastic foam designed to cradle the patient to reduce pressure on the skin.

Due to a lack of independent research on the benefits of air mattresses, the National Institute of Health and Care Excellence (NICE), has previously called for clinical trials to investigate.

### **Only 1 in 50 would benefit.**

The study, published in the journal *EClinicalMedicine*, concluded that for every 50 patients allocated to one of the high-tech air mattresses, only one would benefit from it.

The results showed that 6.9% of patients on the high-tech air mattresses developed a pressure sore that was grade two (ie blister or break in the skin) or worse compared with 8.9% on the

specialist foam mattress. Ulcers are graded on a scale from one to four, with four being the most serious.

The median length of time it took for the ulcers to develop for the patients on a high-tech air mattress was 18 days compared to 12 days for those on the specialist foam mattress.

Researchers also highlighted the issue that many patients dislike air mattresses, finding them “unsettling”.

This is the first large-scale study world-wide into the effectiveness of high-tech air and specialised foam mattresses to prevent pressure sores and involved more than 2000 patients at high risk of developing pressure sores.

## **No evaluation of their effectiveness.**

Jane Nixon, lead for the study and Professor of Tissue Viability and Clinical Trials at the University of Leeds, said; “The professional guidelines tell healthcare staff that they should use specialist foam for all at-risk patients and high-tech air- mattresses for patients with an existing pressure ulcer when adequate pressure distribution cannot be achieved.

“But in practice, some nurses provide high-risk patients as well as those with existing pressure ulcers with the high-tech air mattresses and there has not been any evaluation of the effectiveness of one type of mattress over another.

“Some patients find the air mattress unsettling. They are kept awake by the noise of the pump, feel unsafe because the mattress is moving, or just find them uncomfortable.

“Rehabilitating patients also complain that they can’t move around themselves or get in and out of bed — and that exacerbates already limited mobility.”

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