

repose[®]

A multi-centre prospective randomized controlled clinical trial to compare the effectiveness and cost of a static air mattress and alternating air pressure mattress to prevent pressure ulcers in high risk nursing home residents.

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308 Patients
> 65 Years



26
Care Homes



High Risk
Braden Score ≤ 12 and/or Braden subscale score for mobility ≤ 2

Intervention

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Incidence



5.2%

Intervention

11.7%

Control

Incidence Density



0.41/100
days

0.89/100
days

Control

(alternating air pressure mattress)

Time to develop



10.5 days

Intervention

5.4 days

Control

Cost



0.18p

0.48p

Repose works!

1/2 the
incidence rate
 $p = 0.04$



Pressure
ulcer free for
twice as long
 $p = 0.05$



Less than
1/2
the cost



START STUDY: AN RCT TO COMPARE THE EFFECTIVENESS OF A STATIC AIR MATTRESS VERSUS AN ALTERNATING AIR PRESSURE MATTRESS TO PREVENT PRESSURE ULCERS

Background: Prevalence of pressure ulcers in European nursing homes is 4.45–21.4%. Recommendations of international guidelines for pressure ulcer prevention: 1) rigorous and regular risk assessments, 2) regular repositioning, 3) skin care, and 4) support surfaces.

Objective: To compare the effectiveness and cost between a static air mattress and an alternating air pressure mattress to prevent pressure ulcers category II/III in high-risk nursing home residents.

Design: Multicentre Prospective Randomized Controlled Clinical Trial (trial registration: NCT03097750).

Setting: 26 nursing homes in Belgium (total 308 residents).

Participants: 111 high-risk for pressure ulcer development (Braden score ≤ 12 and/or Braden subscale mobility ≤ 2 and/or non-blanchable erythema), 21 being bedbound and/or chairbound, 31 ≥ 65 years, 41 using an alternating air pressure mattress.

Intervention: 111 at resident level in two groups:
 - Experiment: Static air support surface (Repose mattress overlay, Repose cushion, Repose wedge or foot protector).
 - Control: Care as usual (alternating air pressure mattress, usual pressure relieving cushion, usual heel off-loading device).

Primary outcomes: Pressure ulcer incidence.
 - Experiment: 5.2% (95% CI 2.8–9.6)
 - Control: 11.7% (95% CI 7.8–17.6)
 - RR: 0.44 (95% CI 0.23–0.84), $p = 0.04$

Secondary outcomes: Time to develop a new pressure ulcer category II/III (mean: 10.5 vs 5.4 days, $p = 0.05$); Experiment: 0.41 vs 0.89 per 100 days, $p = 0.04$); Purchase costs of the support surfaces (€0.18 vs €0.48 per patient per day, $p = 0.001$).

Conclusion: The use of a static air mattress versus an alternating air pressure mattress to prevent pressure ulcers category II/III in high-risk nursing home residents is more effective, reduces the time to develop a new pressure ulcer, and is less costly.