

## STUDY FOCUS CLINICAL REVIEW



Issue 13 - September 2022  
Bracing & Supports

# KNEE OA PATIENTS REPORT IMPROVED PAIN, FUNCTION AND MOBILITY WITH OA DEFIANCE

## Effects of a semi-rigid knee brace on mobility and pain in people with knee osteoarthritis.

<b>Authors</b>	Dries T, van der Windt JW, Akkerman W, Kluijtmans M, Janssen RPA.
<b>Published</b>	J Rehabil Med Clin Commun. 2022 Jul 5;5:2483.
<b>Date</b>	Jul 2022
<b>Place of origin</b>	Livit Orthopedie, The Netherlands; Eindhoven University of Technology and Eindhoven University of Applied Sciences, Eindhoven, The Netherlands.
<b>Background</b>	Several systematic reviews have quantified the effectiveness of unloader braces in improving clinical outcomes and mechanical leverage. However, to the best of authors' knowledge, there is a significant research gap in perception-based studies understanding the short- and long-term consequences of these braces on the knee joint, including the cartilage and ligaments.

## Objective

The aim of this perception-based study is to evaluate the short- and long-term effects of conservative therapeutic use of a semi-rigid knee brace for management of patients with knee osteoarthritis, using patient-reported outcomes (PROM).

## Tested products

### Donjoy OA Defiance

Ottobock Agillium Reactive

## Study design & methods

### Perception-based evaluation study.

**Subjects:** 381 patients with Knee OA who were allocated treatment with a semi-rigid knee brace (both new users and repeat users).

The diagnosis of OA was confirmed by a medical doctor (MD) for all patients. The diagnosis was mostly made based on X-rays and/or MRI.

**Methods:** Patients were provided with either a Donjoy OA Defiance brace or a Ottobock Agillium Reactive brace (both selected for their unloading capabilities).

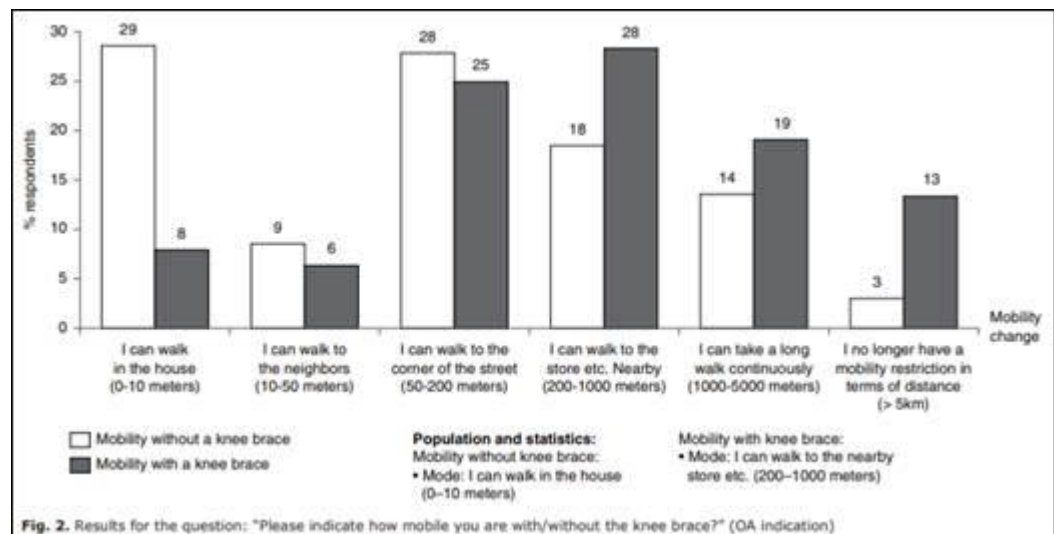
Patients were asked to complete a questionnaire about the effectiveness of the brace after wearing it for 3 weeks.

### Outcomes:

- Mobility, assessed using an ordinal scale with and without use of the knee brace,
- Pain symptoms,
- Overall daily functioning.

## Results

- The results show considerably improved mobility while using a knee brace in different mobility groups.
  - The number of respondents who were limited to their home environment decreased from 29% without using a knee brace to 8% while using a knee brace.
  - The number of respondents who were able to walk to a nearby shop increased from 18% without using a knee brace to 28% while using a knee brace.
  - The group experiencing no mobility restrictions increased from 3% without using a knee brace to 13% while using a knee brace.



- 54% of respondents reported a reduction in pain symptoms.

- 62% of respondents reported an improvement in overall daily functioning while using a knee brace.
  - 29% indicated that daily functioning improved significantly, and 7% very significantly.

*Remark*

- *The study did not compare results between the two braces*

**Conclusion**

- Use of semi-rigid knee braces in patients with knee OA contributes to general daily functioning, reduces pain, and increases the possibility to perform daily activities.
- For patients with OA, reduced pain enables increased mobility away from the home environment, resulting in a more active life and increased quality of life.
- Knee brace should be considered a useful non-surgical treatment method for use in patients with knee osteoarthritis.

**Key message**

Based on patient feedback in this study, Donjoy OA Defiance can be considered a useful non-surgical treatment method for knee OA patients, offering pain relief, improved daily functioning and increased mobility and freedom of movement.

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[OA Defiance web page](#)

**Francine Van Steenkiste**

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Enovis  
1a Guildford Business Park  
Guildford, Surrey  
GU2 8XG  
UNITED KINGDOM

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