



THUASNE®

## UniReliever®

The proven efficacy<sup>1</sup>  
of our semi-rigid OA\*  
knee brace



OA = Osteoarthritis

# Controlled, randomised, open label study to assess the efficacy of UniReliever® offloading brace in the management of knee osteoarthritis - UNIBRACE STUDY

Michael Benning, Stéphanie Villet, Alyssia Marques, Prasanna Shrestha, Ralf-Dieter Hilgers - 24th Congress of the European Society for Physical and Rehabilitation Medicine (ESPRM), Ljubljana, Slovenia, 23 – 27 April 2024



## METHODS

**60 patients** (34 males and 26 females) diagnosed with **medial knee OA** (Kellgren-Lawrence scale: stage II 11.7%, stage III 66.7% and stage IV 21.6%) were randomly divided into **three groups of 20 patients** and followed for **6 weeks**. The mean age of patients was  $69.6 \pm 9.6$  years, and the mean BMI was  $26.9 \pm 3.2$ . The median time since knee OA diagnosis was 5.5 years.



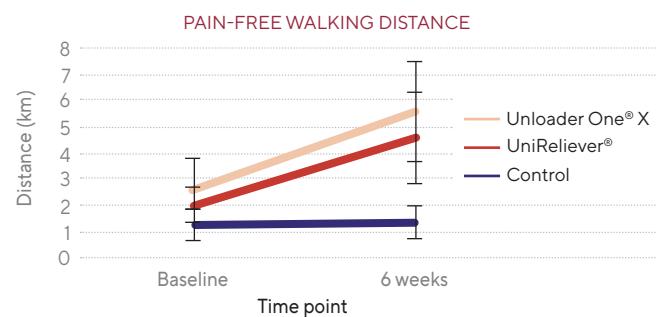
## THE RESULTS



### 1. Pain-free walking distance – Main Outcome

**Pain-free walking distance significantly increased** for patients wearing UniReliever® (+2.6 km) and Unloader One® X (+3.0 km) for 6 weeks in contrast to the control group (+0.1 km) ( $p < 0.0001$ ).

**Key take away:** Similar improvement in pain-free walking distance between both braces.



### 2. Pain – Secondary Outcome

**Pain on exertion significantly decreased** for patients wearing UniReliever® and Unloader One® X for 6 weeks compared to the control group ( $p < 0.0001$ ). No significant difference was observed between both orthoses ( $p = 0.3443$ ).

**Key take away:** Similar pain reduction between both braces.

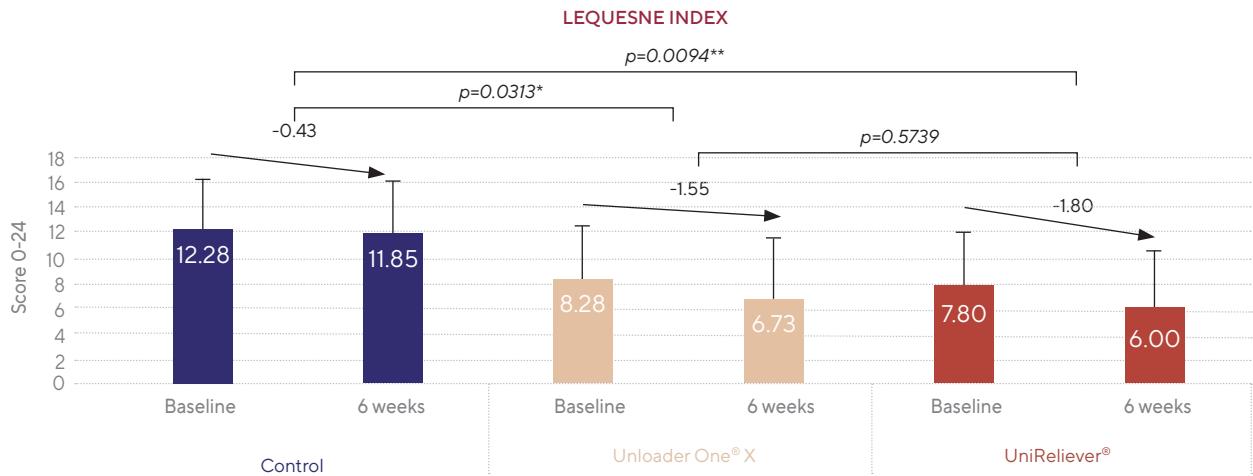




### 3. Function Impairment – Secondary Outcome

The decrease in mean algofunctional Lequesne index was significantly higher in the UniReliever® (p=0.0094) and Unloader One® X groups (p=0.0313) after 6 weeks as compared to the control group, without a significant difference between both orthoses (p=0.5739).

**Key take away:** Higher **improvement in functional capacity** with both orthoses.

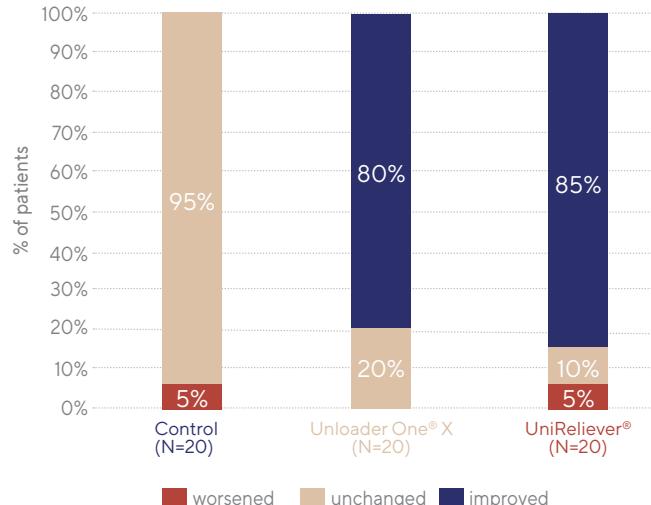


### 4. Mobility – Secondary Outcome

Most patients in the knee brace groups reported that their range of motion had improved (UniRelieverTM group: 85%; Unloader One® X group: 80%), whereas this was not the case for the control group (0%). 95% of patients reported an unchanged mobility

**Key take away:** Improved mobility for both braces group.

### SUBJECTIVE MOBILITY AFTER 6 WEEKS (N=60)

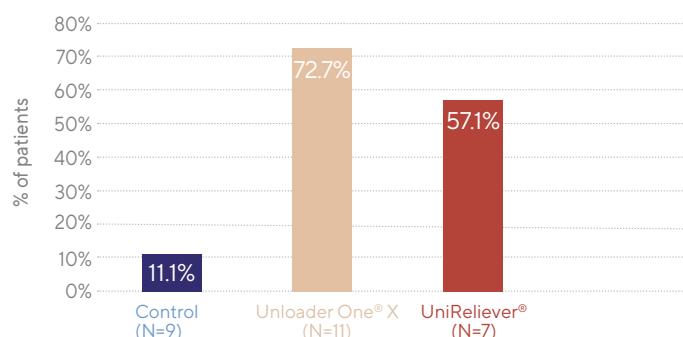


### 5. Pain Medication – Secondary Outcome

Around half of the patients took analgesics at baseline. Most of these patients reduced or stopped this medication if they received a knee brace (UniReliever® group: 57.1%; Unloader One® X group: 72.7%), whereas this was not the case for most controls (11.1%).

**Key take away:** Reduction in use of medication for both braces groups.

### PERCENTAGE OF PATIENTS WHO STOPPED/REDUCED ANALGESICS





## 6. Compliance – Secondary Outcome

The mean number of hours the brace was worn during the day was **higher for UniReliever®**, with 4.4 hours a day vs 3.1 hours a day for Unloader One® X.

**Key take away: A better compliance with UniReliever® than with Unloader One X®.**



## 7. Patients' Global Impression of Change – Secondary Outcome

80% of patients wearing UniReliever® and 85% of patients wearing Unloader One® X reported an **improvement of their condition** as compared to a total absence of improvement in the control group.

**Key take away: Improvement in patients' condition for both braces group.**



## 8. Safety – Secondary Outcome

One patient had swollen veins on a foot and another described muscle problems when using UniReliever®. For the Unloader One® X group, two patients reported having irritated skin (one with blistering), and one reported swelling. No serious adverse event were reported in the study.

**Key take away: Both braces can be used safely. No skin issue reported for UniReliever®.**



## 9. Patient Satisfaction – Secondary Outcome

**Patients were generally satisfied** with both knee braces in terms of the ease-of-use, fit, aesthetics, and comfort. **95% of patients planned to continue using the brace after the study.**

**Key take away: A good satisfaction for UniReliever® and Unloader One® X.**

## CONCLUSION

This study supports the **effectiveness and safety of the UniReliever® offloading knee brace for treating medial knee osteoarthritis.**

Wearing **UniReliever® improved pain and functional capacity** with the same efficiency as Unloader One® X.

Patients reported a **better compliance and no skin issue with UniReliever®** as compared to Unloader One® X.

Some further studies with longer follow-up duration are needed to confirm the benefit of the brace for the long-term management of osteoarthritis.

# Comparative study of two unloading braces for unicompartmental knee osteoarthritis: are they different?

A K Kainth, A Mushtaq, A Watts, P Pulvirenti, R Kotwal, A Chandratreya. Institution: Princess of Wales Hospital Bridgend. Cwm Taf Morgannwg University Health Board, Wales. Corresponding Author: A K Kainth - 25th Annual British Indian Orthopaedic Society (BIOS) Conference, Newcastle Upon Tyne, United Kingdom, 5-6 July 2024



## KEY INFORMATION

Another comparison trial has been done on UniReliever® (Thuasne®) and Unloader® (Össur®) brace, with similar results. Method: 2 braces tested on 28 patients (10 female and 18 male) aged between 45 and 70 and with radiographically confirmed unicompartmental knee arthritis, with a wearing time of 1 hour for each brace.

Both braces gave a similar type of pain relief which was immediate in 45% of patients. However, **86% of patients chose the Thuasne® UniReliever® brace over the Össur® Unloader® brace.**

The study's findings indicate that in comparison, although both braces provide equal pain relief, the **Thuasne® UniReliever® brace has better patient acceptance.**

## THE PROVEN EFFICACY OF OUR KNEE BRACE RANGE

With the current studies proving the efficacy of Rebel Reliever®, Action Reliever® and the UniBrace study for UniReliever®<sup>1</sup>, we can now claim that the **3 offloading braces of the Reliever range have now a proven efficacy with clinical studies.**

### Overview of Thuasne® offloading range for knee brace



**Action Reliever®**  
Soft offloading knee brace

**Discretion<sup>4</sup>**  
Featuring compression and a 3-point strapping system, the Action Reliever® is low-profile and offers proven<sup>3</sup> relief from OA pain.



**UniReliever®**  
Single upright knee brace

**Versatility**  
The single upright OA knee brace offers a now proven offloading<sup>1</sup> in one light, flexible and easy to use device<sup>5</sup>. The most versatile option within the Reliever range.



**Rebel Reliever®**  
Offloading rigid knee brace

**Robustness<sup>4</sup>**  
Featuring quick-release buckles, easy to replace straps, and contoured padding, Rebel Reliever® provide proven<sup>2</sup> offloading while being easy to fit. Adapted to heavy duty users.

If the patient can be fitted with any of these braces, please make sure to choose, with their agreement, the device that is best suited to their expectations and needs (low profile, type of activities...)

# WINGS FOR YOUR HEALTH

\*OA = Osteoarthritis

1: Michael Benning, Ralf-Dieter Hilgers, Stephanie Villet, Prasanna Shrestha and Nils Lynen. Efficacy and safety of a new offloading brace in the management of knee osteoarthritis. A randomized controlled UNIBRACE Study. 24th European congress of Physical and Rehabilitation Medicine - ESPRM. Ljubljana, Slovenia. 23-27 April 2024.

2: Thoumie Philippe, et al. 2018 "Effect of Unloading Brace Treatment on Pain and Function in Patients with Symptomatic Knee Osteoarthritis: The ROTOR Randomized Clinical Trial." *Scientific Reports* 8 (1): 10519.

3: Superiority of a knee relief orthosis in the treatment of knee OA. M. Benning & R. Schneider-Nieskens, 08/2017 *orthopädie Technik*.

4: Internal CE marking data.

Availability of these products might vary from a given country or region to another, as a result of specific local regulatory approval or clearance requirements for sales in such country or region. The medical devices mentioned on this document are CE marked according to the Regulation 2017/745 on medical devices. Products mentioned in this document are CE class I devices. Please contact Thuisne® should you need any additional information on devices classification. Please read carefully the instructions for use, indications and contraindications of the product.

Last revision date: 12/2025

Find more about our products in our website [www.thuisne.com](http://www.thuisne.com)

Credit : Studio Caterin



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