

# Clinical effects

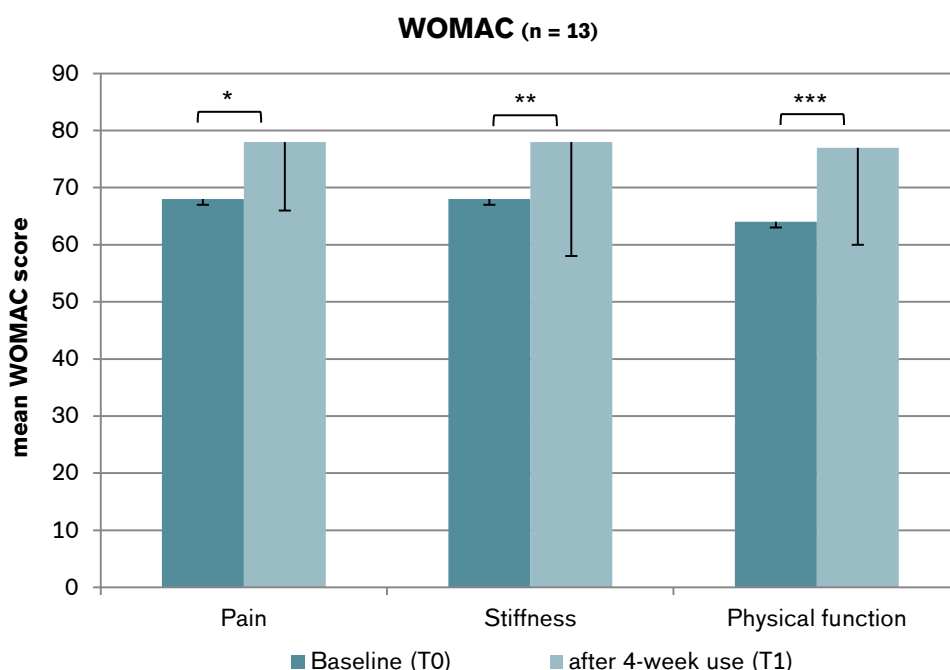
## Major Findings

With Agilium Reactive:

→ **All WOMAC sub-scores improved significantly after 4-week use of Agilium Reactive** (Liebau et al. 2017)

- Pain sub-score: + 19%
- Stiffness sub-score: + 28%
- Physical function sub-score: + 30%

**Significant improvement of all WOMAC sub-scores with Agilium Reactive after 4 weeks**



\* = significant less pain with Agilium Reactive after 4-week use ( $p = 0.003$ )

\*\* = significant less stiffness with Agilium Reactive after 4-week use ( $p = 0.043$ )

\*\*\* = significant improved physical function with Agilium Reactive after 4-week use ( $p = 0.001$ )

(Liebau et al., 2017)

## Clinical Relevance

Knee osteoarthritis (OA) is one of the most common joint disorders. Approximately 6% of the population aged 30 years or older and 12% of the population aged 65 years or older suffer from knee OA (Maleki et al. 2016, Raja & Dewan 2011). OA of the medial knee compartment is most prevalent due to the load distribution in normal walking. Here, 60%–80% of load is distributed over the medial compartment of the knee joint because of the external varus (or adduction) moment acting on the knee joint. (Krohn 2005, Maleki et al. 2016)

Knee OA causes considerable pain, immobility, disability, a sensation of instability and buckling of the affected knee, a reduced quality of life, and negative changes in kinetic and kinematic parameters. These problems may limit the ability to rise from a chair, stand comfortably, walk or climb stairs. In response to pain, patients change their gait pattern and these adaptations may result in further progression of OA. Treatments for knee OA are designed to alleviate pain by attempting to correct mechanical malalignment. (Chuang et al. 2007, Felson et al. 2009, Kaufman et al. 2001, Maleki et al. 2016, Simic et al. 2011)

The WOMAC (Western Ontario and McMaster Universities Arthritis Index) is self-administered and assesses the patient's opinion about their knee and associated problems. Pain, stiffness and mobility are assessed to gain insights into the level of independence of the patient. A decreased pain level as well as an increased grade of mobility is crucial to reach a satisfying level of quality of life. Activities of daily living (ADLs) include self-care activities as functional mobility, dressing, eating and personal hygiene as well as activities to live independently in a community.

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### Summary

All three WOMAC sub-scores (pain, stiffness and physical function) could be significantly improved after 4-week use of Agilium Reactive. The improvements amount for 19% in the pain score, for 28% in the stiffness score and for 30% in the physical function score. (Liebau et al. 2017)

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### References of summarized studies

Liebau, C., Petersen, W., Rembitzki, I.V. (2017). Eine klinische Studie zur Wirksamkeit einer medialen Entlastungssorthese (Agilium Reactive®) bei Patienten mit unikompartimenteller Gonarthrose. A clinical study on the effectiveness of a medial unloader brace (Agilium Reactive®) in patients with unicompartimental knee OA. *MOT: Medizinisch Orthopädische Technik*, 1: 32-36.

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