

# Effects of sulfur bath on hip osteoarthritis

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The effects of balneotherapy were evaluated in patients with osteoarthritis of the hip. This randomized, controlled, investigator-blinded study enrolled outpatients with hip osteoarthritis according to ACR criteria.

In addition to home exercise therapy, one patient group received balneotherapy for 3 weeks on 15 occasions. The mineral water used in this study is one of the mineral waters with the highest sulfide ion content (13.2 mg/L) in Hungary. The control group received exercise therapy alone.

The WOMAC Likert 3.1 index and the EQ 5D quality of life self-administered questionnaire were completed three times during the study: prior to first treatment, at the end of the 3 week treatment course, and 12 weeks later.

The main endpoint was achievement of Minimal Clinically Important Improvement (MCII) at 12 weeks, defined as  $\geq 7.9$  points in a normalized WOMAC function score.

The intention to treat analysis included 20 controls and 21 balneotherapy patients. At 12 weeks, 17 (81) of controls ( $p=0.001$ ).

Comparing the results of the two groups at the end of treatment, there was a significant difference in the WOMAC stiffness score only, whereas after 12 weeks, the WOMAC pain, stiffness, function, and total scores also showed a significant difference in favor of the balneotherapy group. The difference between the two groups was significant after 12 weeks in point of EQVAS score, too.

The results of our study suggest that the combination of balneotherapy and exercise therapy achieves more sustained improvement of joint function and decreases in pain than exercise therapy alone.