

# Effect of Balneotherapy in chronic low back pain treatment

Efecto de la balneoterapia en el tratamiento del dolor lumbar crónico

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## Abstract

The balneotherapy is a therapy that uses the mineral springs for the treatment of numerous diseases, and the physical properties of these waters may have a role in the mechanism of action of mineral water.<sup>1</sup> Over the past decades, a re-assessment of the use of mineral water for the treatment of several diseases has taken place around the world.<sup>2</sup>

Chronic low back pain is a major public health problem in industrialized countries<sup>3</sup>, it affects 80% of people and, in 85% of cases, the inaugural episode is followed by recurrences<sup>1,4</sup>. Its incidence and prevalence increases with age<sup>2</sup> and is considered chronic when it persists for more than 7-12 weeks.<sup>1,5</sup>

The impoverished existing evidence contrasts with the popularity of these treatments and with the expenses incurred by insurers and health systems of some European countries (eg. Germany).<sup>1,5</sup>

The authors proposed reviewing the literature to clarify the present evidence regarding the effect of this therapeutic modality in the treatment of chronic low back pain.

The meta-analysis of 2 randomized clinical trials concluded there was a significant reduction in pain intensity, measured on a 100mm visual analogue scale (VAS), in treated patients relative to controls. Individually, one of these studies also showed a decrease in analgesic consumption ( $p < 0.01$ ) and the other one showed an increase in functionality measured by the modified Schober test ( $p < 0.001$ ).<sup>5</sup>

One randomized study evaluated the VAS, lumbar mobility, and the Oswestry, EuroQoL-5D and Short Form-36 indices, with a significant improvement in all tests in the treatment group relative to the controls. The improvement observed in the first three lasted 10 weeks. It was also observed a significant decrease in the con-

sumption of NSAIDs and analgesics in the treatment group, but the difference between groups was not statistically significant.<sup>1</sup>

Another randomized study showed an improvement in VAS ( $p < 0,01$ ), decrease in the paravertebral muscle spasms and sensitivity ( $p < 0,01$ ), as well as increased mobility ( $p < 0,01$ ) in patients treated for a period 3 months. In contrast, the improvement observed in the control group was only temporary and only in the VAS ( $p < 0,01$ ).<sup>6</sup>

In a nonrandomized study were evaluated pain intensity, Oswestry index, quality of life, use of NSAIDs/analgesics, and the subjective perception of disease for patients and observers. All parameters were significantly improved, and the effects lasted at least 3 months.<sup>4</sup>

The mean age of the patients ranged from 39-44 to 64 years.

The data collected showed significant improvements in pain, functionality, quality of life and consumption of NSAID/analgesic drugs in patients with chronic low back pain undergoing thermal therapy. As a major limitation, there were no double-blinded studies, since the physical and chemical properties of the mineral springs differ significantly from those found in tap water.

We conclude that balneotherapy is an effective modality in the treatment of chronic low back pain in patients of middle age, being necessary more studies to validate thermal waters for individual springs, and pharmacoeconomic studies that evaluate the balneotherapy as a complementary modality in the management of low back pain is chronic.

**Key words:** Balneotherapy, Chronic low back pain, Treatment

**Palabras clave:** Balneoterapia, Dolor lumbar crónico, Tratamiento

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