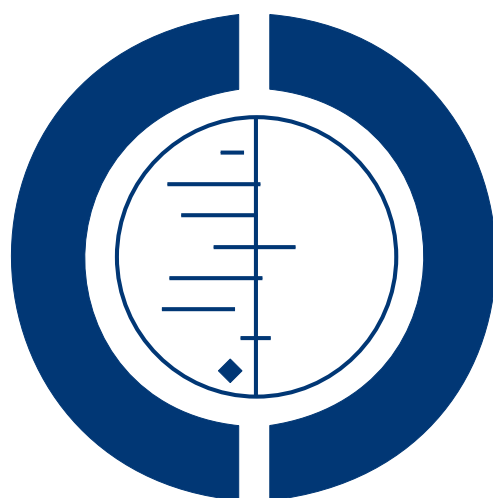


## Balneotherapy for rheumatoid arthritis (Review)

Verhagen AP, Bierma-Zeinstra SMA, Boers M, Cardoso JR, Lambeck J, de Bie R, de Vet HCW



**THE COCHRANE  
COLLABORATION®**

This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in *The Cochrane Library* 2008, Issue 4

<http://www.thecochranelibrary.com>



[Intervention Review]

## Balneotherapy for rheumatoid arthritis

Arianne P Verhagen<sup>1</sup>, Sita MA Bierma-Zeinstra<sup>2</sup>, Maarten Boers<sup>3</sup>, Jefferson Rosa Cardoso<sup>4</sup>, Johan Lambeck<sup>5</sup>, Rob de Bie<sup>6</sup>, Henrica CW de Vet<sup>7</sup>

<sup>1</sup>Department of General Practice, Erasmus University Medical Centre, 3000 DR Rotterdam, Netherlands. <sup>2</sup>Department of General Practice, Erasmus Medical Centre University, Rotterdam, Netherlands. <sup>3</sup>Department of Clinical Epidemiology, Free University Hospital, 1007 MB Amsterdam, Netherlands. <sup>4</sup>Physical Therapy Department, Universidade Estadual de Londrina, Londrina, Brazil. <sup>5</sup>Faculty of Kinesiology and rehabilitation sciences Katholieke, Universiteit Leuven Tervuursevest, Leuven, Belgium. <sup>6</sup>Department of Epidemiology, Maastricht University, Maastricht, Netherlands. <sup>7</sup>EMGO Institute, Vrije Universiteit Medical Center, Amsterdam, Netherlands

Contact address: Arianne P Verhagen, Department of General Practice, Erasmus University Medical Centre, PO Box 1738, 3000 DR Rotterdam, Netherlands. [a.verhagen@erasmusmc.nl](mailto:a.verhagen@erasmusmc.nl).

**Editorial group:** Cochrane Musculoskeletal Group.

**Publication status and date:** Edited (no change to conclusions), published in Issue 4, 2008.

**Review content assessed as up-to-date:** 21 August 2007.

**Citation:** Verhagen AP, Bierma-Zeinstra SMA, Boers M, Cardoso JR, Lambeck J, de Bie R, de Vet HCW. Balneotherapy for rheumatoid arthritis. *Cochrane Database of Systematic Reviews* 2004, Issue 1. Art. No.: CD000518. DOI: 10.1002/14651858.CD000518.

Copyright © 2008 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

### ABSTRACT

#### Background

Balneotherapy (spa therapy or mineral baths) for patients with arthritis is one of the oldest forms of therapy. One of the aims of balneotherapy is to soothe the pain, improve joint motion and as a consequence to relieve patients' suffering and make them feel well. In this update we included one extra study.

#### Objectives

To assess the effectiveness of balneotherapy for rheumatoid arthritis.

#### Search strategy

We searched the following databases up to October 2006: CENTRAL (Issue 3, 2006), PubMed, CINAHL, the database from the Cochrane 'Rehabilitation and Related Therapies' Field and Pedro. We also performed reference checking and personal communications with authors to retrieve eligible studies.

#### Selection criteria

Randomised controlled trials comparing balneotherapy with any other intervention or with no intervention.

Included patients were all suffering from definite or classical rheumatoid arthritis as defined by the American Rheumatism Association Criteria or by the criteria of Steinbrocker. At least one of the WHO/ILAR core set of endpoints for RA clinical trials had to be among the main outcome measures.

#### Data collection and analysis

Two authors independently assessed quality and extracted data. Disagreements were solved by consensus.

---

**Balneotherapy for rheumatoid arthritis (Review)**

Copyright © 2008 The Cochrane Collaboration. Published by John Wiley & Sons, Ltd.

## Main results

One extra study is included in this update. Now seven trials (412 patients) were included in this review. Most trials reported positive findings on their main outcomes, but were methodologically flawed to some extent. A 'quality of life' outcome was reported by two trials. None of the trials performed an intention-to-treat analysis and only two performed a comparison of effects between groups.

Pooling of the data was not performed because of heterogeneity of the studies, multiple outcome measurements, and the overall poor data presentation.

We found a significant benefit of mineral baths compared to Cyclosporine A at eight weeks on pain in one study (RR=2.4; 95%CI: 1.4,3.8).

Overall there is insufficient evidence that balneotherapy is more effective than no treatment, that one type of bath is more effective than another, or that one type of bath is more effective than mudpacks, exercises or relaxation therapy.

## Authors' conclusions

Silver level evidence was found for one study in favour of mineral baths compared to drug treatment at eight weeks. Insufficient evidence was found for all other comparisons. However the scientific evidence is insufficient because of poor methodological quality. Therefore, the noted "positive findings" should be viewed with caution. Because of the methodological flaws, an answer about the apparent effectiveness of balneotherapy cannot be provided at this moment.

## PLAIN LANGUAGE SUMMARY

### Balneotherapy or spa-therapy for Rheumatoid Arthritis

This summary of a Cochrane review presents what we know from research about the effect of Balneotherapy for Rheumatoid Arthritis (RA).

The review shows that in people with RA:

- Radon-carbon dioxin baths compared with carbon dioxin baths may not lead to any difference in pain on the short-term, only possibly at 6 months.
- Tap water baths compared to land exercises or relaxation may not lead to any difference in pain.
- Mineral baths compared with taking the drug Cyclosporine A may lead to a significant difference in pain at 8 weeks, but may also lead to some side effects .
- Sulfur baths or Dead Sea baths compared to no treatment may not lead to any difference in the way people feel overall.

Swollen or tender joints, inflammation (acute phase reactants), the doctor's assessment of overall well-being, x-rays of joints and other laboratory tests were not measured in these studies.

Not enough data was provide to tell whether mineral baths would improve how people feel overall compared with taking the drug Cyclosporine A.

Not enough data was provided to tell whether physical disability would improve with various forms of balneotherapy.

### What is RA and what is Balneotherapy?

In rheumatoid arthritis, your immune system, which normally fights infection, attacks the lining of your joints. This makes your joints swollen, stiff and painful. The small joints of your hands and feet are usually affected first. There is no cure for RA at present, so the treatments aim to relieve pain and stiffness and improve your ability to move.

Balneotherapy (also called mineral baths or spa-therapy) is an ancient and popular therapy. It involves spending time in an indoor pool filled with mineral water at temperature of between 31 to 36 degrees Celsius (88 to 97 degrees Fahrenheit). Different types of mineral water can be used in this therapy, for example, radon or carbon dioxin.