



## Rheumatoid Arthritis

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In a double-blind study, 2 groups of rheumatism patients were investigated.

→ Group A

30 patients

16 men aged between 44 and 82 yr.

14 woman aged between 40 and 88 yr.

→ Group B

30 patients

15 men aged between 41 and 83 yr.

15 woman aged between 39 and 84 yr.

A total of 60 patients were treated medically and serologically over a 3 month period. Of the 60 patients, 100% of the cases tested positive of the rheumatism factor. All patients showed clear clinical and radiological symptoms of the basic disease.

RF		Total
Positive	Negative	
100%	0%	100%

When treating inflammatory intestinal diseases, analgesics and steroid and non-steroid anti-inflammatories were used.

The following blood parameters were investigated:

- Total protein
- Albumins
- CRP
- RF
- Creatinine
- Uric acid
- GGT
- ALAT
- Alkaline phosphatase
- Haematological parameters
- BSE
- Leucocytes



The patients received questionnaires in which they documented the following parameters:

- Use of pharmaceutical drugs
- Pain
- Stool (quality and quantity)
- Weight
- Sleep
- Mobility
- Sense of well-being

At each doctor's visit the questionnaire with 20 questions was handed in and evaluated.

## Preconditions for treatment

During treatment, regular pharmaceutical drug therapy was continued. The patients also received regular physiotherapy to maintain their mobility.

The following standard classes of pharmaceutical drugs were used regularly or when needed on all test subjects, depending on basic attitude:

- Analgesics (lidocaine, xylocaine, procaine)
- Steroid and non-steroid anti-inflammatories (ibuprofen, diclophenac, paracetamol, gold, cortisone derivatives, methotrexate)
- Hypnotic drugs



## Therapy

### Group A

In addition to the known treatment, Group A inhaled for 30 Minutes twice daily. Inhalation was done both mornings and evenings. At the beginning of treatment the test subjects were serologically and clinically examined by the doctor who was treating them. During the first week the patients were seen 3 times and questioned, then they were seen weekly (after 2, 4, 6, 8, 10, 12 weeks).

The laboratory parameters of all the test subjects were recorded at the commencement of treatment. Further laboratory tests were done after 2, 4, 8 and 12 weeks.

### Group B

The same preconditions applied to Group B. This group was not given any activated breathing air. This group continued to receive the conventional standard treatment.



Results

Group A

After 1 week of application of the system, 23 out of 30 patients (77%) used less medicine. As a whole, regular inhalation resulted in an improvement in the laboratory values and an increase in mobility. This can be explained by a reduction in inflammation which led to an improvement in the pain symptoms and so to improved mobility.

Laboratory

			0	2	4	8	12	number	As a %
Uric acid	M	$\bar{X}$	0,50	0,44	0,38	0,35	0,32	22 of 30	73
		sd	0,10	0,10	0,08	0,07	0,06		
	F	$\bar{X}$	0,35	0,31	0,20	0,21	0,2		
		sd	0,09	0,09	0,06	0,06	0,06		
CRP		$\bar{X}$	39	30	20	12	12	27 of 30	90
		sd	11	10	8	5	5		
BSE		$\bar{X}$	44	34	21	20	19	24 of 30	80
		sd	15	15	10	11	10		
RF titre		$\bar{X}$	Go	Go	Go	Go	Go	25 of 30	83
		sd	down	down	down	down	down		



# Stichting Ziekenzorg Westelijke Mijnstreek

## Group B

In general, there was a small reduction in the dosage of medication during treatment. There was no significant improvement in the intervals of pain in the course of the illness. With regular physiotherapy, mobility was maintained in particularly severe and advanced forms of illness.

## Laboratory

			0	2	4	8	12	Number	As a %
Uric acid	M	$\bar{X}$	0,52	0,48	0,47	0,45	0,46	9 of 30	30
		sd	0,13	0,09	0,08	0,07	0,07		
	F	$\bar{X}$	0,43	0,39	0,32	0,29	0,30		
		sd	0,12	0,09	0,09	0,11	0,10		
CRP	$\bar{X}$	39	32	32	30	31	8 of 30	27	
	sd	11	9	9	8	9			
BSE	$\bar{X}$	46	39	35	35	36	8 of 30	27	
	sd	17	15	14	12	13			
RF titre			Go down	Go down	Go down	Go down	Go down	11 of 30	37



## Conclusion

### Group A

In 24 out of 30 patients, mobility was improved after a week. We took into consideration the mobility of the entire skeletal and connective tissue system. At the same time, symptoms of pain decreased in 87% of those examined, which to a large extent could also be seen as a course of the improved mobility. 87% of those examined reported after just a few days that they had deeper, continuous sleep which had a significant effect on their quality of life, since the test subjects were no longer lacking in sleep. A total of 87% of the patients reported that their quality of life improved significantly after just 1 week and that it improved even more over the following weeks. The subjective and also objective improvements in the clinical picture were mirrored by an improvement in the laboratory values.

Values as a %	Better	The same	Worse	Total
Mobility	80	20	0	100
Pain	87	13	0	100
Sleep	87	13	0	100
Quality of life	92	8	0	100
Pharmaceutical drugs	77	23	0	100

### Group B

Only 8 out of 30 patients were able to reduce their dosage of pharmaceutical drugs during the first 3 weeks.

The mobility of 9 out of 30 patients (30%) improved after about 2 weeks, and at the same time 23% of the test subjects reported that their pain symptoms decreased after 2 weeks. 25% had more peaceful and deeper sleep and felt more balanced and full of energy during the day. With conventional treatment, there was overall only a slight improvement in the clinical picture, which was, however, still subject to serious, medical incident-dependent variations.

Values as a %	Better	The same	Worse	Total
Mobility	30	65	5	100
Pain	23	70	7	100
Sleep	25	60	15	100
Quality of life	40	60	0	100
Pharmaceutical drugs	27	70	3	100

