

# The Effects of Combined Spa -Exercise Therapy on Balance and Peripheral Muscle Strength Related Symptoms in Patients With Spondyloarthritis



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## Introduction

There is limited evidence on effects of combined spa -exercise therapy in patients with spondyloarthritis. Most studies with this population focus on pain, morning stiffness and spinal mobility. Posture deterioration is one of the most important symptom which causes and effected by muscle peripheral muscle weakness and balance problems. Therefore the purpose of the study was to evaluate the effects of combined spa -exercise therapy on balance and peripheral muscle strength related symptoms in patients with spondyloarthritis.

## Methods

Eighteen patients with spondyloarthritis diagnosis were allocated to combined spa therapy.

N=18	Age (years)	BMI (kg/m <sup>2</sup> )	Diagnose year (years)
Mean	50	26,23	11,61
Median	48,5	27,15	11
Interquartile range	47,00-53,25	23,01-27,81	4,75-16,25

- Combined spa therapy =land group therapy+ pool group therapy+ individual land therapy + superficial heat (+electrotherapy if needed).
- Exercise therapy= spinal mobility  
gross muscle strengthening  
stretching  
relaxation
- Exercise seassions= 30 min X 5days X 4 weeks

Pool exercises were in 36-38 °C and 130-140cm deep water.

Outcome measures were;

Functional reach test  
30 sec sit-to-stand  
Hand grip dynamometer  
Pain  
Morning stiffness  
Fatigue

## Results

	Before n= 18 (Median-Interquartile range)	After n= 18 (Median-Interquartile range)	p
<b>Functional Reach</b>			
Lateral R	31,0 cm (23,5-41,0)	36,0 cm (28,0-44,5)	p<0,01
Lateral L	29,5 cm (22,2-36,5)	39,0 cm (27,5-46,5)	p<0,01
Forward	33,5 cm (29,7- 37,7)	36,0 cm (32,7-41,5)	p<0,01
Hand Grip	23,5 kg (19,5-35,2)	34,0 kg (27,7-34,0)	p<0,01
30 sec Sit to Stand	22,5 rep (18,0-28,0)	28,5 rep (25,7-33,0)	p<0,01
Pain	3,0 (1,8-4,6)	0,7 (0,0-2,0)	p<0,01
Morning Stiffness	2,5 (1,0-5,1)	0,7 (0,0-3,1)	p<0,01
Fatigue	4,5 (2,5-5,6)	1,2 (1,2-2,2)	p<0,01

## Conclusions

Combined spa exercise therapy was reported as beneficial for patients with spondyloarthritis in terms of pain, morning stiffness and spinal mobility. Patients with spondyloarthritis predominantly suffer from posture problems which may affect balance and peripheral muscle strength. This study provides some evidence that combined spa exercise therapy improves balance and peripheral muscle strength in patients with spondyloarthritis.

## References

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