

# Swiss ball improves muscle strength and walking performance in ankylosing spondylitis

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A new study presented at EULAR 2013, the Annual Congress of the European League Against Rheumatism, demonstrates that progressive muscle strengthening using a Swiss ball is effective in improving muscle strength and walking performance in patients with Ankylosing Spondylitis (AS).

Patients randomised to the exercise programme showed statistically significant improvements in [muscle strength](#) with no worsening of disease activity; in addition these patients reported greater satisfaction with their treatment than those in the control group.

AS is a chronic inflammatory [rheumatic disease](#) affecting the spine and joints in the lower back and pelvis. 0.1-2% of the population suffers from AS, with the highest prevalence in northern European countries.<sup>2</sup> Initial symptoms are chronic pain and stiffness in the middle and lower part of the spine, which is worse at rest and eased by exercise. However, many patients find their mobility to be significantly restricted, impacting their ability to exercise.

According to lead author Mr Marcelo de Souza [physiotherapist](#) of the Rheumatology Division, Federal University of Sao Paulo, Brazil, "exercises are recommended in the management of patients with AS, yet the benefits of specific exercise programmes are not as well defined."

"Our study has confirmed that a progressive muscle strengthening programme using a Swiss ball significantly improves [functional capacity](#), muscle strength, and mobility in patients with AS, with no harmful effects on disease activity," Mr de Souza concluded.

There was a statistically significant improvement in strength in the intervention (exercise) group, compared to the control group, for the muscles used in the exercises: abdominal ( $p=0.003$ ), rowing exercises ( $p=0.02$ ), squat ( $p=0.01$ ), triceps ( $p=0.021$ ) and reverse fly ( $p=0.02$ ). The [intervention group](#) also improved the 6-minute walk test ( $p=0.005$ ) at week 16.

There was also a statistically significant difference between the two groups in terms of treatment satisfaction at all times ( $p$

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