



RESEARCH SUMMARY

The etiology and prevention of functional instability of the foot

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PURPOSE: To compare the effects of specialized coordination training using balance boards on patients with recent ankle sprains.

METHODS: 84 subjects with recent ankle sprains were randomly assigned to one of 3 groups: control (immobilization); traditional physical therapy (strengthening & gait training); and traditional physical therapy plus "coordination exercises" using a rocker and wobble board. Subjects averaged 3 to 5 treatments of 50 minutes. Subjects perform single leg balancing on the rocker board with the foot in various angles to the axis of movement. When they "mastered" these positions, they performed single leg balance on the wobble board. Subjects were assessed for balance and symptoms of instability before and after treatment, as well as long-term follow-up (15 months).

RESULTS: Subjects completing the balance board training significantly improved in balance and experienced less instability compared to traditional therapy or immobilization.

CONCLUSION: The authors reported that their treatment with coordination exercises was based upon the thought that some central process might compensate for the loss of joint proprioception, and the process might be improved with training. They concluded that (1) patients with ankle sprains have poor proprioception, (2) those patients also experience "functional instability", and (3) the proprioceptive deficit and instability can be resolved with balance board training.

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