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# The role of physiotherapy in weight control

**I can't exercise; my knee hurts; my back aches; I've got diabetes. How many times have you heard the long list of excuses from patients who are told they need to lose weight?**

There are many patients who can't achieve the recommended 30 minutes of moderate walking most days in order to control their weight. These people need an individual program designed to meet their particular needs, their body, and their environment. General practitioners can refer patients to a physiotherapist for a therapeutic exercise regimen that is evidence based and realistic. The GP's referral detailing medical history, medications and specific goals (and an assessment of cardiovascular and hypoglycaemic risk) facilitates optimal patient care.

Promoting physical activity is an important strategy to address the problem of obesity. Musculoskeletal problems can prevent overweight patients from successfully using exercise to reduce their body weight. The overweight patient is more susceptible to musculoskeletal problems in their weight bearing joints, creating a vicious circle – knee or back pain prevents the patient from walking enough to lose weight, so they don't exercise, put on more weight and suffer more pain.

Current research shows that exercise has significant benefits for people with osteoarthritis. Exercise can reduce pain, improve strength, and increase aerobic capacity and functional activity.<sup>1</sup> Similarly, there is strong evidence that in people with chronic low back pain, exercise can reduce pain, improve activity levels and reduce sick leave.<sup>2</sup> This evidence can be used to reassure patients that exercise will not only help with their weight control but can also reduce their musculoskeletal dysfunction.

Concomitant conditions such as type 2 diabetes place obese patients at increased risk of adverse effects from exercise. However, evidence suggests that well designed and controlled programs minimise this risk. Aerobic training for at least 30 minutes, 3–6 times per week can lower glycosylated haemoglobin levels by clinically significant amounts.<sup>3</sup>

Incontinence, although unlikely to be verbalised, is another common barrier to exercise for overweight people.

Individualised pelvic floor training significantly improves the symptoms of urinary incontinence and decreases leakage episodes.<sup>4</sup> This can assist overweight patients to increase their physical activity levels and thus improve weight control.

## Injury prevention

Fear of injury or re-injury is a significant deterrent to exercise in the general population, particularly in children and the elderly.<sup>5</sup> Involvement of a physiotherapist in injury prevention can help to allay these fears and remove barriers to physical activity. Injury prevention strategies include prescribing appropriate therapeutic exercise and physical activities, providing programs of specific stretching, strengthening and skills (eg. balance) to reduce the risk of injury, ensuring warm up and cool down periods, and assisting with choices of equipment/footwear and exercise environment. In the example of an overweight patient with diabetes, daily exercise is ideal to maintain consistency of activity for both the diabetes and to facilitate weight loss. A useful combination would be a cardiovascular based program for 4 days (eg. stationary cycling, swimming, walking) and on alternate days, a strength, stretch and balance based program for back and knee pain. Key muscle groups to stretch are: quadriceps, calf and hamstrings for the knee; hip flexors and back extensors for the back.



Figure 1. Romberg test

The strength program should include: calf rises, step ups and lunges for the knee; trunk muscle activation (transverses abdominis and multifidus) for the back. Standing heel to toe, eyes open and closed is an appropriate balance exercise (*Figure 1*). A hydrotherapy session is a good option as water enables the patient to stimulate the cardiovascular and musculoskeletal systems without increasing weight bearing pain.

### Follow up

Exercise programs tend to be more effective if individually designed and supervised, and combined with regular follow up. This is particularly relevant for the overweight population where the goal is to achieve slow and steady weight loss and an increase in physical activity over time. Follow up is critical for maintaining motivational levels, progressing the activity, and modifying the exercise program if circumstances change. Physiotherapists play a significant role in: reducing or removing the barriers to physical activity; designing, implementing and monitoring exercise programs; and promoting safe participation in physical activity to facilitate weight reduction and weight control (see *Resource*).

### Resource

Australian Physiotherapist Association [www.physiotherapy.asn.au](http://www.physiotherapy.asn.au)

Conflict of interest: none declared.

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