
CHAIR BASED EXERCISE – The evidence

Chair based exercises have been shown to have a beneficial effect at maintaining or promoting independence and mobility in older people. The range of improvements demonstrated in research trials, lasting 8 weeks or longer, considering chair-based seated and chair-assisted standing exercises in both community dwelling and frail institutionalised older people include:

- ↑ **STRENGTH** (1, 3, 5, 6, 9, 10, 11, 12),
- ↑ **POWER** (9),
- ↑ **FLEXIBILITY** (1, 5, 7, 10, 16),
- ↑ **ABILITY TO PERFORM EVERYDAY TASKS** (1, 5, 6, 9, 10, 11, 12)
- ↑ **BALANCE** (1, 10, 12)
- ↓ **DEPRESSION** (5),
- ↓ **BODY FAT** (8),
- ↓ **ARTHRITIC PAIN** (4)
- ↓ **POSTURAL HYPOTENSION** (15)
- ↓ **RISK OF FALLS** (1, 12).

Compliance to chair based programmes is generally better than that of standing or dynamic exercise, especially amongst the oldest old and amongst those with low baseline levels of fitness and function. Chair based exercise has specific benefits as a training method - it stabilises the lower spine by providing a fixed base (particularly important in those with kyphosis or lordosis of the spine); it facilitates greater range of movement by providing points of leverage and support; it minimises load-bearing and reduces balance problems in those with particularly poor mobility and arthritic pain; it increases confidence in those unable to perform free-standing exercise.

Even one session of chair based exercises can improve memory recall during the session and for up to half an hour after, in nursing home residents (2). Chair based exercise is invaluable in the rehabilitation of the older person with osteoarthritis because it allows range of motion work without weight-bearing (4). Finally, seated exercises have been shown to increase habitual physical activity in patients with heart failure (13) and may be a feasible exercise program for women with advanced cancer for controlling fatigue and improving physical well-being (14).

There is now ample evidence that exercise intervention programmes using mixed group (1 p/w or 2 p/w) with home based seated resistance band work (1 p/w or 2 p/w) produce significant improvements in both physical and mental health. This provides evidence that home based programmes can be used to ensure that frequency guidelines (17) of three times a week can be achieved without older people having to attend three group sessions a week.

Although chair based exercise has been shown to be effective, it should, in principle, be a starting point for those with low baseline function and be a part of a fuller rejuvenation/rehabilitation process. Ideally, for full preservation of independence, a programme that moves on, in time, to standing and to more dynamic challenges will better preserve gait, balance and mobility.

The Later Life Training Chair Based Exercise Leadership module, run in partnership with PFE, uses the particular exercises in the research published by Skelton (9, 10).

References

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