

Help sheet no.20

Formal physical activity programs

Formal exercise programs are those where exercise is conducted either in a group or individualised home program format, usually under the supervision of a trained exercise leader or therapist.

Strength exercise programs are among the more commonly used exercise programs in residential settings, partly because of their demonstrated effectiveness and partly because they can be carried out safely with minimal use of equipment and cost.

Several studies have highlighted the significant gains that can be achieved with strengthening programs in frail older residents (Connelly & Vandervoort, 1995; Fiatarone et al., 1994; Sauvage et al., 1992). A strength training program conducted for eight weeks resulted in statistically significant improvements in muscle strength and walking speed in a group of older women living in a nursing home setting (Connelly & Vandervoort, 1995).

Strength training can be modified to suit the abilities of each resident and may commence with no weights, simply performing movements against gravity. Strength training can be performed lying, sitting or standing.

However, when funding for this program ceased, and subjects were followed up 12 months later, there was clear evidence of deconditioning in terms of reduced muscle strength and walking speed at least back to pre-strength program levels, and in some cases, lower than this (Connelly & Vandervoort, 1997).

Similar strength and functional changes were seen in another study of male nursing home residents using a program of lower limb weight training and stationary bicycle riding (Sauvage et al., 1992).

Strength training doesn't necessarily involve 'weights'. Similar benefits may be achieved by performing functional activities involving lifting, such as filling and moving small garden pots.

Other forms of formal exercise programs in residential settings may include general exercise programs (with a focus on flexibility, strength, balance and coordination), hydrotherapy (exercise in water) and even tai-chi.

Physiotherapy, occupational therapy and other exercise interventions

Individualised programs of physiotherapy or occupational therapy have been shown to be of considerable benefit to frailer older people in hostel and nursing home settings. Harada and colleagues conducted an individual assessment of older people in residential settings (mean age 87 years) and tailored one-to-one physiotherapy treatment sessions two to three times per week for five weeks (Harada, Chiu, Fowler, Lee, & Reuben, 1995).

Significant improvements were found in balance abilities, and a trend towards improved walking speed was evident following the program. Benefits were maintained on re-measurement one month after completion of the program.

A 16 per cent improvement in the mobility section of a disability rating, and less use of assistive devices and wheelchairs for mobility were observed in one research study involving a four month, three times weekly one to one physical therapy program for a group of residents (Mulrow et al., 1994).

Another study investigated two different levels of physiotherapy and occupational therapy intervention in a nursing home setting. It was found that significantly higher Functional Independence Measure (FIM) total scores; Functional Assessment Measure (FAM) total scores; and measures on the Clinical Outcome Variables Scale (COVS) were observed in the group receiving higher levels of therapy at both six and 12-month follow up measures (Przybylski et al, 1996).

References

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