



Exercise/Fitness: Resistance Training for Persons with Physical Disabilities

[Home](#) | [My NCPAD](#) | [Newsletter](#) | [Webshop](#) | [About Us](#) | [Contact](#) | [Forums](#) | [Staff](#) | [Search](#)

[Introduction](#)

[Home > Exercise/Fitness](#)

[Conditions Associated with Physical Disabilities](#)

[all sections](#) | [print version](#)

[Resistance Exercise Guidelines](#)

[Next Section](#)

[Table 1](#)

Introduction

[Table 2](#)

[Guidelines for Wheelchair Users](#)

James H. Rimmer, Ph.D.

[Table 3](#)

[Training Guidelines for Spinal Cord Injury](#)

Federal officials and members of the public health community are growing concerned that as persons with disabilities age, they will have increasing difficulty performing activities of daily living (ADL) (i.e., dressing, showering) and instrumental activities of daily living (IADL) (i.e., ambulation, doing laundry, and grocery shopping) at a much earlier rate than the general population (Freedman & Martin, 1999; Sherwood, 1999). Persons with physical disabilities are often confronted with many physical challenges as a result of their functional limitations (i.e., inability to walk) and associated health conditions (i.e., spasticity, weakness, fatigue). When combined with the natural aging process, the likelihood of becoming physically dependent on others for assistance with daily activities (ADL & IADL) substantially increases (Brandt & Pope, 1997). Some experts believe that the high incidence of inactivity and poor health practices seen in persons with disabilities (Heath & Fentem; Rimmer, 1999), combined with the natural aging process and the potential loss of function from the disability itself, presents a volatile combination for those people living at or close to the "threshold" of physical dependence.

[Table 4](#)

[Training Guidelines for Multiple Sclerosis](#)

[Training Guidelines for Postpolio Syndrome](#)

[Training Guidelines for Cerebral Palsy](#)

[Training Guidelines for Stroke](#)

[Table 5. Summary](#)

[Note](#)

[Organizations](#)

[References](#)



Maintaining a high level of fitness among persons with physical disabilities has even greater importance than in the general population, because a loss in strength could erode a person's ability to care for themselves, work, recreate or engage in community events (i.e., attend worship services, socialize with friends). Persons with physical disabilities would benefit greatly from participation in resistance training programs and would have a greater likelihood of maintaining their physical function and independence (Cress et al., 1999; Ferketich, Kirby, & Always, 1998; Morey, Pieper, & Cornoni-Huntley, 1998).

As persons with physical disabilities age, the interaction between the natural aging process and the disability creates a demanding physical environment. Tasks that could be accomplished in

Accesskeys
(Deactivated)
[Activate Accesskeys](#)



younger adulthood become major barriers in middle and later adulthood. Climbing stairs, walking with a cane or walker, carrying packages, transferring from a wheelchair to a bed, commode, chair or car, pushing a wheelchair up a ramp or over a curb cut, standing for long periods of time, become difficult or impossible tasks.

Many persons with physical disabilities are deconditioned and lack adequate muscular strength and endurance (Rimmer, 1994; Rimmer, Rubin, Braddock, & Hedman, 1999). Fitness professionals can play an important role in improving the health of persons with physical disabilities by developing resistance training programs that will assist them in maintaining adequate levels of muscular strength and endurance (Rimmer, Pitetti, & Braddock, 1996). The physical challenges that many people with disabilities are faced with on a daily basis are exacerbated by poor strength levels. If persons with physical disabilities are unable to transfer from their wheelchair to their car, or walk from their home to the bus stop or train station, they will have difficulty working and participating in social and community events. This will impose a substantial physical and psychological hardship and will reduce the person's overall quality of life (Rimmer, Braddock, & Pitetti, 1996).

Improving strength levels in persons with physical disabilities is, to some extent, even more important than in the general population. A comprehensive strength training program could provide persons with physical disabilities greater confidence in accomplishing more physically demanding tasks, and greatly improve their ability to overcome physical barriers in their environment. Strength improvements will ultimately result in greater freedom and physical independence.

This chapter will discuss resistance training guidelines for persons with physical disabilities. The first section will focus on associated conditions and general resistance training guidelines, and the last section will discuss guidelines for specific disability groups. Although the emphasis of this chapter is on five disabilities - spinal cord injury, multiple sclerosis, post-polio syndrome, cerebral palsy, and stroke - the *General Guidelines* section will be useful for other types of physical disabilities that have similar movement limitations (i.e., spina bifida, amputations, brain injury).

[Next Section](#)

This fact sheet was last updated on 12-21-2005.

[Disclaimer](#) | [Webmaster](#) | [Contact NCPAD](#): 1-800-900-8086 or e-mail:ncpad@uic.edu | [RSS](#)

The information provided in this website was supported by Grant/Cooperative Agreement Number U59/CCU522742-02 from the Centers for Disease Control and Prevention (CDC).

The contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC.



Copyright 2012 The Board of Trustees of the University of Illinois