CEREBRAL PALSY AND STRENGHT TRAINING

Chapter 8

Hatice YAKUT[1]

Introduction

Although CP (cerebral palsy) is not a non-progressive disease, muscle pathology continues a lifelong progression. (Graham and Selber 2003, Rosenbaum, Paneth et al. 2007). The worldwide prevalence of this disease is the most common form of childhood disability, with the frequency of seeing at rates of 1.5 to 3.8 per 1.000 birth. The main disorders associated with this disease are decreased muscle strength and decreased cardiorespiratory fitness, which are manifested in activities such as standing, walking and climbing stairs that make daily lives compatible. However, many authors mention the relationship among activity limitation, participation restriction and motor impairment, and that anyone can affect another. There is evidence that especially muscle strength is associated with activity, in children with CP (Verschuren, Ketelaar et al.Nov. 2009, Park and Kim 2013). Applied exercise programs should be in the direction of improving muscle strength, muscular endurance and cardiorespiratory fitness which are physical fitness parameters. Muscle weakness in CP limits functional performance, this situation can only be achieved by training. Therapists should be cautious in advance about preventing secondary disorders that may occur and improving the health and physical fitness of these patients. Strengthening and endurance training can complement the important components of physical fitness. Besides these trainings, children and adults with CP should be involved in occupational, recreational and social activities throughout their lives and these trainings should be continued.

More than 50% of individuals with CP who have reached adulthood report that their walking is worse than in their youth (Opheim, Jahnsen et al. 2009). A complete consensus has not been reached on muscle strength training and its effects in cases of cerebral palsy and spasticity. There is the idea that inactive muscle can be exercised, but there is also the idea that it will be detrimental in strengthening

[1] Hatice YAKUT,PT, Asst. Prof. Süleyman Demirel University Faculty of Health Sciences Department of Physiotherapy and Rehabilitation haticeyakut@sdu.edu.tr

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