Effect of backpack weight on posture of the spine in schoolchildren

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Abstract

Objective: To determine effect of various backpack loads on the posture of the spine during stance and after walking. Subjects and methods: Fifty school females children with age ranging from 10 to 15 years represented the sample of the study. The craniovertebral and side bending angle of the neck were measured using CROM during neutral position and after lifting a backpack with weights of 5%,10% and 15% body weights during stance before and after walking 100m. Results: This study identified a unique relationship between various backpack weights, condition and the forward/side head postural compensation in schoolchildren ages 10 and 15 years of age. The 5% body weight, 10% body weight and 15% body weight loads immediately increase the CVA and side bending at initial loading. After walking 100 m, the CVA and side bending angle increased further for both the 5% body weight and 10% body weight loads, and for the 15% body weight load ($p \leq 0.05$). Conclusions: A the school bag should not be more than 5% of the body weight in the female students otherwise it will be a risk factor for postural changes at that age.

Key words: Cervical, posture, forward head, side bending, school children

Recent Publications (minimum 5)

1. Y Safoury, M.R. Atteya, et al (2017) Postoperative physical therapy program for latissimus dorsi and teres major tendons transfer to rotator cuff in children with obstetrical brachial plexus injury, European journal of physical and rehabilitation medicine.
2. M.R. Atteya et al (2017) Effects of obesity on balance in Hail University, International Journal of Science and Research.
3. M.R. Atteya et al (2018) Comparative study between supervised and unsupervised exercise program for cervical spondylosis, International Journal of Science and Research
4. M.R. Atteya et al (2018) Impact of postural taping in patients with forward shoulder posture, International Journal of Advanced Research
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6. M.R. Atteya et al (2018) Determination And Incidence Of Persistent Finger Joint Pain Among Male College Students Due To Mobile Phones Over use, International Journal Of Advanced Research.
7. M.R. Atteya et al (2018) Strength and Mobility of the Neck-Shoulder Region in Females Students with Tension-Type Headache in UOH, KSA. International Journal of Advanced Research.
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9. Y Safoury, M.R. Atteya, et al (2011) Treatment of post-infection nonunion of the supracondylar humerus with Ilizarov external fixator, Journal of Shoulder and Elbow Surgery Board of Trustees. doi:10.1016/j.jse.2011.04.021



Biography (150 word limit)

Mohamed Raafat has her expertise in physical therapy evaluation and treatment. He is the voce dean of quality in applied medical science University of Hail – KSA. He is specialized in hand therapy.

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Notes/Comments

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