ISSN 2321 – 7359 EISSN 2321 – 7367

discovery

Medical Science

The International Weekly Journal for Medicine

Back packs: Burden bearer or burden itself?

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Publication History
Received: 13 June 2014
Accepted: 12 July 2014
Published: 23 July 2014

Citation
Nida Yazdani, Atta Abbas. Back packs: Burden bearer or burden itself?. *Medical Science*, 2014, 10(39), 84-86

ABSTRACT

Backpack plays a vital role in every student's school life but how do they affect one's spine. Symptoms of back pain are the second leading reason expressed by patients in the United States for consulting physicians. This article discusses the correlation of backpack with back pain, a challenging dilemma faced by many. Collaboration of academicians and allied health professionals supplemented by media campaign can help in minimizing the associated risks.

Keywords: Back pack; students

1. INTRODUCTION

Back pain is a prevalent problem in the adult population, but where does its foundation lay? The roots have been prevailing for quite some time now. People see it every day, they see it everywhere, hopped on the little backs of kids running around frantically but could one imagine the serious problems it might be causing to the young's spinal cord? Backpacks! Who knew? Many teens carry school backpacks that exceed 10 to 15 percent of their body weight, which puts them at risk for back pain and related disorders; a new study says (Health Day News). Bearing immense weight can result in back pain, which may last from days to weeks. Low back soreness, incessant and involuntary muscle spasms are also some widespread problems associated with back problem. *Scoliosis,* principally a sideways curvature

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of the spine seen most frequently at some stage in the growth spurt i.e. just before puberty, is another disorder that is on the increase (National Institute of Arthritis and Musculoskeletal and Skin Diseases).

2. DISCUSSION

Symptoms of back pain are the second leading reason expressed by patients in the United States for consulting physicians (Cypress, 1983). The story of Pakistan is no different, as the population of Pakistan continues to increase, so does the amount of people living below the poverty line. There are many reasons for this, including neglect, ignorance and apathy towards the nation's standards of illiteracy and health. It appears many of our NGOs have their collective plates full with issues relating to the rights of women, children, consumers and the labour workforce, and the effects of heavy backpacks on small bodies is way down the list.

NGO's are tirelessly working to promote public health in Pakistan, but what about the fear for the distortion of the spine due to these cumbersome rucksacks. Where is the media campaign for this issue? There is a need to raise flags and discuss about a healthy back along with the other imperative issues. If one's back is sore, it will be hard and at times impossible to work.

The spinal cord is the strongest bone of the body, composed of 33 bones, vertebrae. The discs between these vertebrae act as shock absorbers. When a heavy load is placed on someone's shoulder especially in an uneven way, the weight can drag them down, leading them to either bow forward by the side of their hips or arching their back bone. This will result in their spine being compressed abnormally. This type of imbalance increases the likelihood of developing shoulder, neck and back pain, owing to pulling of neck muscles or due to muscle spasm or muscle strain which can again be short term or capable of occuring later in life if not corrected.

Girls are at higher risk than boys, and their threat tends to boost with age, regardless of their sex and build, most of the time, packs are simply too bulky for bodies going through their formative years (Reflexology for back pain).

There are various kinds of backpacks available in the marketplace with different shapes, sizes and attachments. Procuring a chic and attractive backpack has become an influential back-to-school ritual for a number of students, but choosing the right backpack from the start is essential to avoid tribulations associated with it. An internal frame backpack is an innovation, invented in 1967 by Greg Lowe, known for creating Lowe Alpine and Lowepro, companies that specialize in backpacks and other forms of carrying bags for a range of equipment ("Innovations" Lowepro).

In a study by Viry et al., (1999) absence from school or sporting activities due to back or shoulder pain was reported in 50% of the patients who employ hands to carry their backpack as opposed to 11.5% of those who use the shoulder harness. Heavy packs drain kids of their vivacity that might be better utilized doing some worthwhile school work or engaging in physical activity. Kids who habitually use a single shoulder strap are in danger of developing bad posture and change in gait. The back tends to compensate any mass placed on it at the cost of distortion of natural curves of the mid and bottom spine. Other than bones, the nerves also get affected, particularly in the case of thin inflexible straps, as they cut into wearer's shoulder nipping and pinching nerves. They interfere with the blood circulation and may lead to numbness and tingling sensations in their arms and hands.

Protective measures if applied should be able to reduce back problems for kids of all age and sizes such as: break up the units or chapters of the book into multiple archives, so only the chapter of the day is placed in the pack making it a lot more feasible; Using wide and padded shoulder straps on both shoulders, placement of all belongings in an even layout to distribute the weight squarely; Lift backpack on bended knees so spine is not directly accountable for the whole load at once; select a pack that ends above the waist; introduce locker system in schools and colleges; only the books and text copies necessary for each day should be carried; use of wheels, this would eliminate the need to carry their pack on shoulder all day long, however the obvious limitation would be carrying it on stairs or areas where there is frequent snow.

3. CONCLUSION

In the interest of public service, it is the duty of academicians and health care professionals to join forces and work together to enlighten students and their parents on the proper use of backpacks and the risk of improper use. There should be an introduction of various media campaigns (e.g. on popular websites and magazines) alerting kids of the dangers of incorrect use of backpacks, along with the best and safest way to prevent related issues.

CONFLICT OF INTERESTS

The authors declare no conflict of interests exists.

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http://www.discovery.org.in/md.htm

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