I am very excited to be a part of this special backpack issue of Orthopaedic Practice. With teaching, raising children, observing the dramatic changes in backpacks and use over the years, and my continued interest in posture, I have developed a keen awareness of backpacks and the possible effects they might have on posture. I want to thank Susan Appling for allowing me to be a Guest Editor for this special backpack issue.

I was fortunate enough to gather together a very diverse group of authors from all corners of the United States as well as Australia. This includes experts in the field of physical therapy, professors, private practitioners, and students, as well as a leader in the field of occupational therapy. The backgrounds and special interests of the authors vary from biomechanics and motion analysis to pediatrics and orthopedics.

Karen Grimmer, PhD, MMedSc, B Appl Sc.(Phys), LMusA, Cert Health Ec is a professor at the Centre for Allied Health Research at the University of South Australia. Her name and work are always in the forefront when one speaks of musculoskeletal pain. Shelley A. Goodgold, PT, ScD is a professor with the Graduate Program in Physical Therapy at Simmons College in Boston and discusses her backpack safety program, Backpack Intelligence, which is a school-based injury and prevention and wellness program. Kimberly A. Wesdock, PT, MS, PCS is a pediatric specialist in Virginia, who in conjunction with Martin Dominguez, PT, CFMT, has looked at the impact of backpack use on musculoskeletal pain. They are using evidence from their research in implementing their Backpack Awareness Campaign (BAC).

My colleague, Timothy S. Hilliard, PhD, and I have also gathered data on postural changes following backpack loading as part of the complex scenario of backpack use and evidence-based practice. Christine T. San Agustin, MSPT, CSCS and Jonathan Raymond, MSPT are two recent graduates who worked with us as students assessing students regarding the above-mentioned variations. Marilyn Miller von Forster, PT, MA is in private practice in Oregon. She works with individuals as well as with schools regarding the whole backpack issue that is near and dear to her heart. She works from the center out keeping in mind that form follows function, always evaluating each individual as a whole.

And last, but certainly not least, Karen Jacobs, EdD, CPE, OTR/L, FAOTA is a professor of occupational therapy at Boston University’s Sargent College of Health and Rehabilitation Sciences. She tells us about the Occupational Therapy National Awareness Campaign to promote health in student backpack users. The National Occupational Therapy Association has been working closely with L.L. Bean in Freeport, Maine to raise awareness about safe and healthy school backpack use.

Regardless of who is authoring an article, one thing appears to be consistently true, backpack or bag carriage and posture have a complex multifactorial relationship. Whether it is the craniovertebral angle or forward lean or back pain or type of backpack or weight, the interaction of these factors is key in the area of study involving backpack use.

In 2003 a study by Wiersema and colleagues looked at musculoskeletal pain associated with emergency room visits. The results of this study point to the fact that children are more likely to hurt themselves tripping over a backpack than they are to suffer musculoskeletal injuries while wearing a backpack. However, when back injuries were reported, the majority of such injuries were in fact related to carrying the backpack. I would use caution when interpreting this study. The major issue with backpack use is not one of acute injuries as would be seen in an emergency room, but rather injuries that are more chronic in nature. That being said, we are more likely to see musculoskeletal injuries that are chronic in nature with patients being seen in pediatric or family practice medical offices. There is a need for further research in this area, especially with regards to the long-term effects of backpack or bag use.

There are many issues to be discussed and researched further, particularly longitudinal studies. As with all research there are times when more questions are raised than are answered. An example of this would be possible gender differences that surface with some of these studies. Will we be discussing “Venus and Mars Wear Backpacks” in the not-too-distant future?

The debate about what type of backpack to use continues as well. Dr. Grimmer’s research has led to the development of an ergonomic backpack and more companies are seeing the need for stringent guidelines for designing and manufacturing backpacks. There is also the debate surrounding standard versus rolling backpacks. One issue with rolling backpacks can be the extra weight that is significant if students have to carry the backpack up and down stairs frequently during the day. The Lower School Division Head at The Pike School spoke to me about her concern with younger children not only tripping over rolling backpacks, but their use as potential rolling toys or weapons for knocking down other fellow students. Bags with wheels are great in places such as airports, but how practical are they in most schools with many stairs and limited space?

Although numerous questions remain regarding backpack use, I believe that you will find many solutions within the pages of this magazine. I want to express my sincere gratitude to those authors who contributed to this special issue of Orthopaedic Physical Therapy Practice, and I also look forward to continued dialogues and research surrounding the optimal use of backpacks.

REFERENCE


Enjoy your reading!
Mary Ann Wilmarth, PT, DPT, MS, OCS, MTC, Cert MDT

Mary Ann Wilmarth is assistant clinical specialist, Department of Physical Therapy at Northeastern University in Boston and also is our current Home Study Course Editor for the Orthopaedic Section.