

Abstracts

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Bronner S, Brownstein B: Profile of dance injuries in a Broadway show: A discussion of issues in dance medicine epidemiology. J Orthop Sports Phys Ther 26(2):87-94, 1997

The authors report dance injuries in a Broadway show using ballet techniques; this is the first such paper on this field of dance. With increased interest and research in dance medicine, standardization of reporting methods and definitions becomes critical in discussions of epidemiology and etiology. The authors, both dance physical therapists, use a modified sports medicine phrase when suggesting that dance injury be defined as "time lost from performing." They reported injuries occurring during a seven-week run of a show using professional ballet dancers. The overall rate was 40%, low in comparison with those of classical ballet companies, while the pattern of injuries was similar to those incurred in ballet. The authors discuss reasons for these findings, many of which related to the nature of the show and the demands placed on the dance company. Information necessary to facilitate comparison of data with other studies is also given, and the authors suggest additional areas of future research.

Harvey PL, David DE, Miller SH: Nutrition and the singing voice, part two. NATS J 54(2):43-49, 1997

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In the first part of this study, published in 1996, the authors presented information on basic nutrition and dietary guidelines, food fact labels, and weight management. The current paper discusses several topics, beginning with recent research in nutrition and focusing on the continuing decline of nutrients in everyday dietary intake. There follows a discussion of free-radical pathology and the role of natural and supplemental antioxidants as a defense against their effects. One's nutritional status now may be determined in part by the use of several newer functional tests, including the Essential Metabolics Analysis (EMA) and the Health and Nutrition Examination Survey (HANES). Finally, the authors present recommendations for choosing vitamin and mineral supplements, and recommend eight nutritional goals for singers. These goals or resolutions are applicable to other performers, as well as to the public in general.

Ross MH, Charness ME, Sudarsky I, et al: Treatment of occupational cramp with botulinum toxin: Diffusion of toxin to adjacent noninjected muscles. Muscle Nerve 20:593-598, 1997

Over a five-year period, the authors treated 40 patients—11 musicians and 29 individuals with writer's cramp—with botulinum toxin A by a precise injection technique in which the hollow-bore electromyography (EMG) needle was positioned by both standard EMG and by muscle twitch, evoked by stimulating current passed through it. Moderate to complete improvement in dystonia occurred in 70% after the first injection and in 85% after the second injection, with better outcomes in

nonmusicians than in musicians. Weakness of muscles immediately adjacent to those injected was noted in 63%. The most common patterns of toxin spread were from superficial to deep finger flexors and from the extensor indicis proprius to the extensor pollicis brevis. Spread to, and weakness of, adjacent uninjected muscles was a major factor contributing to suboptimal outcome in 15% of all the patients.

Keay N, Fogelman I, Blake G: Bone mineral density in professional female dancers. Br J Sports Med 31: 143-147, 1997

Professional female dancers with a history of delayed menarche or amenorrhea have been identified as a group of premenopausal women potentially at risk for developing osteoporosis. This London-based study measured the long-term effects of dance training and the contribution of the timing and duration of any menstrual disruption on bone mineral density in 57 subjects. Bone mineral densities (BMDs) at the femoral neck and lumbar spine were evaluated. The average Z score for lumbar BMD in amenorrheic dancers was significantly below that for the normal population. The score for BMD at the femoral neck in eumenorrheic dancers was significantly above that for the normal population. There was a significant difference in BMD at both lumbar spine and femoral neck areas between amenorrheic and eumenorrheic dancers. The femoral neck in dancers with a history of amenorrhea was partially protected from loss of BMD by virtue of being the major weight-bearing site in previous dance training, and in eumenorrheic dancers BMD was significantly increased at this site.

Gilbert TB: Breathing difficulties in wind instrument players. *Md Med J* 47(1):23–27, 1998

Wind instrument performance requires appreciable lung volume and mechanical force of the diaphragm, skilled breath control, patency and adequate humidity of the air passages, and precise oropharyngeal control. The various classes of instrument demand variable rates of air flow, pressure, and duration. Wind players may be severely impaired by respiratory diseases and conditions that might appear comparatively trivial to the nonperformer. The workplace and/or musical environment should be evaluated for occupational hazards when managing these patients, and smoking in particular should be discouraged. It is controversial whether wind instrument use actually exacerbates respiratory diseases, including bronchial, laryngeal, pharyngeal, and oral anatomic changes—a result of repetitive performance-related barotrauma. Asthma is the most common chronic pulmonary disorder among wind instrumentalists, and therapeutic programs that include breath training and physical exercise do much to improve symptoms, endurance, and general well-being.

Teie PU: Noise-induced hearing loss and symphony orchestra musicians: Risk factors, effects, and management [review]. *M Med J* 47(1):13–18, 1998

This article is also from an issue focusing on performing arts medicine. The authors state that industrial and recreational noise have long been recognized as potential causes of noise-induced hearing loss. However, only in the last decade have the sound levels within a symphony orchestra been implicated as possibly harmful sources of noise. Many studies have concluded that not only are dangerous levels of noise present within the symphony orchestra, but also there is evidence of noise-induced hearing loss among musicians in those organizations. Although hearing protection designed for industrial use may not be appropriate for the special listening needs of professional musicians, recent advances in hearing protection design have made these types of appliances practical for this population. Suggestions are made for noise level and hearing loss monitoring and for protecting the professional ear.

Nagel JJ: Injury and pain in performing musicians: A psychodynamic diagnosis. *Bull Menninger Clin* 62(1):83–94, 1988

In recent years, increased attention has been given to the physical complaints of musical performers. According to Lockwood in his 1989 study, “complaints of purely psychic origin are very unusual.”¹ The author of the current article, a clinical psychologist and psychotherapist, disagrees with this position and presents an article that explores the multiple meanings of pain and injury in musicians. Clinical material, consisting of a comprehensively presented case study, illustrates how a variety of dynamic and unconscious phenomena can influence a musical performer’s somatic complaints. Indeed, the author feels that the psychological implications of injury and pain for the performing musician are as life-threatening and profound as the physical consequences of many terminal diseases.

REFERENCE

1. Lockwood AH: Medical problems of musicians. *N Engl J Med* 320:221–227, 1989.