Abstracts from the 7th World Congress of Mountain & Wilderness Medicine, July 30-August 4, 2016 Telluride, Colorado

A combined meeting of the International Society for Mountain Medicine and the Wilderness Medical Society

Every two years, the International Society for Mountain Medicine (ISMM) holds its World Congress of Mountain Medicine. The meetings attract scientists and clinicians interested in high altitude medicine, biology, and rescue operations, who provide care and promote safety and health in mountainous regions around the world. Every four years, the Wilderness Medical Society (WMS) sponsors a World Congress of Wilderness Medicine that deals with the latest research and clinical aspects of all wilderness environments. In 2016, the two organizations joined forces for the 7th World Congress on Mountain and Wilderness Medicine. Presentations by global experts addressed altitude medicine, mountain rescue, diving medicine, wilderness education, emerging diagnostic methods, improvised rescue techniques, disaster medicine, neglected tropical diseases, and more.

The abstracts selected for publication are divided between *High Altitude Medicine & Biology*, featuring ISMM members and topics, and *Wilderness & Environmental Medicine*, featuring WMS members and topics. There is some subject overlap, and the reader is encouraged to refer to both journals for a complete picture of the breadth and excellence of work in these fields.

Survey of Hand and Upper-Extremity Injuries Among Rock Climbers

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Introduction.—As rock-climbing increases in popularity, the number of rock-climbing-related injuries also increases. Despite the available literature, there remains a paucity of information about upper extremity injuries sustained by climbers and no studies to date focus on sex-specific injuries in climbers.

Objective.—To investigate demographics and patterns of upper-extremity injuries among rock climbers, specifically examining differences in climbing practices, experience levels, and postinjury treatment between male and female rock climbers.

Methods.—A 24-question online survey was designed and distributed to rock climbers about upper-extremity injuries sustained during rock climbing. Statistical analysis was used to study associations between participants' demographics and the nature of injuries.

Results.—A total of 397 participants responded to the survey with men comprising the majority of respondents. No significant differences in demographics or climbing behaviors were found between men and women. Three hundred fifty-seven participants reported sustaining an upper-extremity injury. Fingers were the most commonly injured area, followed by the shoulder/arm and the elbow/forearm. Of those reporting tendon injuries, the majority were reported as a flexor tendon/pulley injury. Our study found women to be significantly more likely to report shoulder/

upper arm injuries compared with men, with the odds of sustaining a shoulder/upper arm injury for women being twice that for men after adjusting for climbing frequency and years of climbing. Among respondents who reported a shoulder/upper arm injury, women were more likely to undergo surgery.

Conclusion.—Female rock climbers were significantly more likely to report a shoulder/upper arm injury and also were more likely to report undergoing surgery compared with male rock climbers. These differences were not due to age or climbing behaviors. Further investigation is warranted into the association between shoulder injuries and female athletes to determine how sex differences relate to extent of injury as well as health service utilization behaviors.

Performance Matters: Training Tools to Improve Medical Team Disaster Performance in Austere Environments

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Introduction.—High-quality clinical disaster medicine requires medical teams working together in austere, chaotic environments. Many providers lack adequate training, and many educators fail to adequately assess disaster performance during training.

Objective.—To create a competency-based, 5-hour emergency preparedness training (EPT) curriculum with low-fidelity training tools and easy-to-reproduce skill assessments. We hypothesized that our unique tools and