Letters to the Editor

Pulley Injuries in Rock Climbers

To the Editor:

I wanted to compliment the authors of the excellent article “Pulley Injuries in Rock Climbers” by Schoffl, Hochholzer, Winkelmann, and Strecker in *Wilderness and Environmental Medicine*.¹ I did think that it would be helpful for most readers to see a figure or graphic showing the anatomic position of the flexor tendon pulleys and their nomenclature. I am submitting 2 diagrams for reference taken from page 3332 of *Campbell's Operative Orthopaedics*.² It is useful, I think, to see dia-

Fig. 66-23 This anatomical diagram of various parts of flexor sheath is helpful in understanding gliding of tendon. Maintenance of second annulus (A2) and fourth annulus (A4) is essential to retain appropriate angle of approach and prevent “bowstringing” of flexor tendons or tendon graft. (Redrawn from Doyle JR, Blythe W: The finger flexor tendon sheath and pulleys: anatomy and reconstruction. In American Academy of Orthopaedic Surgeons: *Symposium on tendon surgery in the hand*, St Louis, 1975, Mosby.)

Fig. 66-24 Diagram of relationship of synovial layers (there are two) and annulus. (Redrawn from Doyle JR, Blythe W: The finger flexor tendon sheath and pulleys: anatomy and reconstruction. In American Academy of Orthopaedic Surgeons: *Symposium on tendon surgery in the hand*, St Louis, 1975, Mosby.)

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grammatically that the A1 and A3 pulleys overlay the volar metacarpophalangeal (MCP) and proximal interphalangeal (PIP) joints, respectively. The A2 and A4 pulleys overlay the bases of the proximal and middle phalanges, respectively. The C1, C2, and C3 pulleys are cruciate in design—hence, their designation. Comparison of this diagram with the sagittal T1-MRI image in figure 5 of the article helps one appreciate the nature of an A2 pulley injury and why taping helps. The utility of ultrasound in their study should inspire US caregivers to use this imaging modality more frequently. The results can usually be obtained much more quickly, and the cost is significantly less than magnetic resonance imaging (MRI). Ultrasound offers excellent dynamic imaging of many potential tendon injuries, including: posterior tibialis, common peroneal, achilles, biceps, and, in the right hands, supraspinatus/rotator cuff. All in all, the paper was relevant, timely, and well done.

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References

1. Schoffl V, Hochholzer T, Winkelmann HP, Strecker W. Pulley injuries in rock climbers. *Wilderness Environ Med*. 2003;14:94–100.
2. Daugherty K, Jones L, Canale ST, Campbell W, eds. *Campbell's Operative Orthopaedics*. Vol 4. 9th ed. St Louis, MO: Mosby; 1998.

Degassed Liquids to Prevent/Treat Decompression Sickness

Dear Dr Norris:

Recompression and oxygen breathing constitute the primary treatments for decompression sickness (DCS). Increasing the volume of distribution of dissolved gas with high-volume liquid therapy represents an alternative strategy to prevent or treat DCS. Furthermore, degassing of ingested and infused liquids would increase their potential to keep supersaturated tissue gases in solution after decompression. We hypothesize that the administration of degassed liquids will prevent or reverse DCS by increasing the volume of distribution of dissolved gas in DCS victims and those at risk. Degassed