

# JOURNAL OF ATHLETIC TRAINING

Official Publication of the National Athletic Trainers' Association, Inc.

Volume 44, Number 2, March–April 2009



## Original Research

### Clinical Studies

#### Sodium Replacement and Plasma Sodium Drop During Exercise in the Heat When Fluid Intake Matches Fluid Loss

Costas A. Anastasiou, PhD; Stavros A. Kavouras, PhD; Giannis Arnaoutis, MS; Aristeia Gioxari, MS; Maria Kollia, MS; Efthimia Botoula, BS; Labros S. Sidossis, PhD ..... 117

#### Validity and Reliability of Devices That Assess Body Temperature During Indoor Exercise in the Heat

Matthew S. Ganio, MS; Christopher M. Brown, MA, ATC; Douglas J. Casa, PhD, ATC, FNATA, FACSM; Shannon M. Becker, MA, ATC; Susan W. Yeargin, PhD, ATC; Brendon P. McDermott, MS, ATC; Lindsay M. Boots, BS, ATC; Paul W. Boyd, BS, ATC; Lawrence E. Armstrong, PhD, FACSM; Carl M. Maresh, PhD, FACSM ..... 124

#### Comparisons of Cubed Ice, Crushed Ice, and Wetted Ice on Intramuscular and Surface Temperature Changes

Joseph H. Dykstra, MA, ATC; Holly M. Hill, MA, LAT, ATC; Michael G. Miller, EdD, ATC; Christopher C. Cheatham, PhD; Timothy J. Michael, PhD; Robert J. Baker, MD, PhD, ATC ..... 136

#### Ultrasound Techniques Applied to Body Fat Measurement in Male and Female Athletes

Jean-Claude Pineau, PhD; Jean Robert Filliard, PhD; Michel Bocquet, PhD ..... 142

#### Rotator Cuff Tear Pain and Tear Size and Scapulohumeral Rhythm

Jason S. Scibek, PhD, ATC; James E. Carpenter, MD; Richard E. Hughes, PhD ..... 148

#### A Clinical Method for Identifying Scapular Dyskinesia, Part 1: Reliability

Philip McClure, PhD, PT; Angela R. Tate, PhD, PT; Stephen Kareha, DPT, PT, ATC, CSCS; Dominic Irwin, DPT, PT; Erica Zlupko, DPT, PT ..... 160

#### A Clinical Method for Identifying Scapular Dyskinesia, Part 2: Validity

Angela R. Tate, PhD, PT; Philip McClure, PhD, PT; Stephen Kareha, DPT, PT, ATC, CSCS; Dominic Irwin, DPT, PT; Mary F. Barbe, PhD ..... 165

#### Sagittal-Plane Trunk Position, Landing Forces, and Quadriceps Electromyographic Activity

J. Troy Blackburn, PhD, ATC; Darin A. Padua, PhD, ATC ..... 174

#### Soccer-Specific Fatigue and Eccentric Hamstrings Muscle Strength

Matt Greig, PhD; Jason C. Siegler, PhD, ATC ..... 180

### Observational Studies

#### Development and Preliminary Validation of the Injury-Psychological Readiness to Return to Sport (I-PRRS) Scale

Douglas D. Glazer, DPE, ATC ..... 185

#### An Assessment of Burnout in Undergraduate Athletic Training Education Program Directors

Jessica M. Walter, MEd, ATC; Bonnie L. Van Lunen, PhD, ATC; Stacy E. Walker, PhD, ATC; Zahra C. Ismaeli, MS, ATC; James A. Oñate, PhD, ATC ..... 190

#### Student Retention in Athletic Training Education Programs

Thomas M. Dodge, PhD, ATC, CSCS; Murray F. Mitchell, PhD; James M. Mensch, PhD, ATC ..... 197

#### Ice Hockey Injuries in a Japanese Elite Team: A 3-Year Prospective Study

Kenji Kuzuhara, MA, MEd, ATC, CSCS; Hideki Shimamoto, PhD; Yasuyoshi Mase, MD ..... 208

### Systematic Reviews

#### Does Creatine Supplementation Hinder Exercise Heat Tolerance or Hydration Status? A Systematic Review With

Meta-Analyses  
Rebecca M. Lopez, MS, ATC; Douglas J. Casa, PhD, ATC, FNATA, FACSM; Brendon P. McDermott, MS, ATC; Matthew S. Ganio, MS; Lawrence E. Armstrong, PhD, FACSM; Carl M. Maresh, PhD, FACSM ..... 215