

ENVIRONMENTAL PHYSIOLOGY-RELATED PRESENTATIONS AND SESSIONS

Tuesday, May 29, 2007

6:00pm – Pre-Conference P-00. Exercise-Induced Bronchoconstriction, Oxygen 253
8:00 pm Utilization in Cold, and Use of Portable Metabolic Cart during On-Snow
Training in Alpine Ski Racing

Wednesday, May 30, 2007

7:30 am - Free Communication/Poster A-23. Blood Pressure and Heart Rate Hall E
12:30 pm Variability

◆ 11:00 am - 12:30 pm 1254/17 **Blood Pressure Responses During Cycle Ergometry And Cold Pressor Test In Overweight And Non-overweight Adolescents**
Viswanath B. Unnithan, FACSM¹, Tracy Baynard², Kevin Heffernan³, Erin Kelly², Greg Yates², Max Garrard¹, Bo Fernhall, FACSM³. ¹*Liverpool Hope University, Liverpool, United Kingdom.* ²*Syracuse University, Syracuse, NY.* ³*University of Illinois, Champaign, IL.*
Email: unnithv@hope.ac.uk

7:30 am - Free Communication/Poster A-24. Exercise Immunology I Hall E
12:30 pm

◆ 9:30 am - 11:00 am 1269/32 **IGA Salivary chronobiology in Lifeguards Exposed to Chlorinated Environment**
BEATRICE MERCIER. *UPRES 2991 Efficience et Déficience Motrices Faculté des Sciences du Sport UNIVERSITE Montpellier 1, Montpellier, France.*
Email: b.mercier@univ-montp1.fr

7:30 am - Free Communication/Poster A-32. Military Physiology Hall E
12:30 pm

◆ 9:30 am - 11:00 am 1405/168 **Thermoregulation During Exercise-Heat Stress When Wearing Body Armor and Spacer Vest Technologies**
Daniel A. Goodman, Samuel N. Cheuvront, FACSM, Robert W. Kenefick, FACSM, Scott J. Montain, FACSM, Michael N. Sawka, FACSM. *U.S. Army Institute of Environmental Medicine, Natick, MA.*
Email: daniel.goodman@na.amedd.army.mil

◆ 9:30 am - 11:00 am 1412/175 **Evaluation of Operational Acclimatisation During Deployment to a Hot-dry Environment**
Simon K. Delves¹, Joanne L. Fallowfield¹, Gemma Milligan¹, Jeremy Owen², Mark Middleton¹. ¹*Institute of Naval Medicine, Gosport, United Kingdom.* ²*Royal Centre for Defence Medicine, Birmingham, United Kingdom.*

1:00 pm - Free Communication/Slide B-13. Heat Stress and Fluid Balance in Sport 262
3:00 pm

571 Chair
E. Randy Eichner, FACSM. *University of Oklahoma, Oklahoma City, OK.*

◆ 1:00 pm - 1:15 pm 572 **Acute Change In Blood Sodium During Two-A-Day Training In Professional Football Players**

John R. Stofan¹, Craig A. Horswill¹, Margarita Lacambra¹, Todd Torriscelli², Robert Murray, FACSM¹. ¹*Gatorade Sports Science Institute, Barrington, IL.* ²*Tampa Bay Buccaneers, Tampa, FL.*

◆ 1:15 pm - 1:30 pm 573 **Blood Electrolytes in NFL Players while Experiencing EAMC compared to when they are not Cramping after Similar Practice Conditions**

Arthur R. Bartolozzi¹, Sandra Fowkes Godek², Richard Greene¹, Richard Burkholder³, Gary Dorshimer⁴. ¹*Pennsylvania Hospital, Philadelphia, PA.* ²*West Chester University, West Chester, PA.* ³*Philadelphia Eagles, Philadelphia, PA.* ⁴*Delancey Medical Associates, Philadelphia, PA.*

◆ 1:30 pm - 1:45 pm 574 **Sweat Sodium and Total Sodium Losses in NFL players with EAMC during Training Camp versus Matched Non-crampers**

Richard Greene¹, Sandra Fowkes Godek², Arthur R. Burkholder¹, Chris Peduzzi³. ¹*Pennsylvania Hospital, Philadelphia, PA.* ²*West Chester University, West Chester, PA.* ³*Philadelphia Eagles, Philadelphia, PA.*

◆ 1:45 pm - 2:00 pm 575 **Sweat And Core Temperature Responses In Professional Women's Tennis During Tournament Play In The Heat**

Melissa L. Tippet¹, John R. Stofan¹, Magie Lacambra¹, Amber Donaldson², Carole Doherty². ¹*Gatorade Sports Science Institute, Barrington, IL.* ²*Sony Ericsson WTA Tour Sport Sciences & Medicine, St. Petersburg, FL.*

◆ 2:00 pm - 2:15 pm 576 **Tennis In Severe Heat: Multiple Factors Predict Match Outcome In A National Junior Championship**

John Coyle. *Heart Center of Tulsa, Tulsa, OK.* (Sponsor: William O. Roberts, FACSM)
Email: johncoyle@sprintmail.com

◆ 2:15 pm - 2:30 pm 577 **The Influence of Glycerol Ingestion on Physical Performance and Thermoregulatory Responses during Soccer Training Sessions**

Jason C. Siegler¹, Christine Mermier², Fabiano Amorim². ¹*University of Hull, Hull, United Kingdom.* ²*University of New Mexico, Albuquerque, NM.*
Email: J.Siegler@hull.ac.uk

◆ 2:30 pm - 2:45 pm 578 **Hydration Indices, Sweat Variables, and an Educational Intervention of Youth Football Campers**

Brendon P. McDermott¹, Douglas J. Casa, FACSM¹, Susan W. Yeargin¹, Matthew S. Ganio¹, Sarah L. Myers¹, Neal R. Glaviano¹, Robert A. Huggins¹, Nora R. Decher¹, Elizabeth A. Stover². ¹*University of Connecticut, Storrs, CT.* ²*Gatorade Sports Science Institute, Barrington, IL.*
Email: brendon.mcdermott@uconn.edu

◆ 2:45 pm - 3:00 pm 579 **Tracking Hydration Variables in Adolescents during Preseason High School Football Practices**

Susan W. Yeargin¹, Douglas J. Casa, FACSM¹, Brendon P. McDermott¹, Matthew S. Ganio¹, Rebecca M. Lopez¹, Rebecca L. Stearns¹, Linda M. Yamamoto¹, Julie A. Blowers¹, Sarah B. Chow¹, Marc D. Warchol¹, Lawrence E. Armstrong, FACSM¹, Jeffrey M. Anderson¹, Carl M.

Maresh, FACSM¹, Elizabeth A. Stover². ¹*University of Connecticut, Storrs, CT.* ²*Gatorade Sports Science Institute, Barrington, IL.*
Email: susan.walker@uconn.edu

1:00 pm - Free Communication/Poster B-31. Responses to Cold Stress
6:00 pm

Hall E

◆ 3:30 pm - 5:00 pm 1698/188 **Analysis and Evaluation of Patterns of Cold-induced Vasodilation Response**

Akihiro Taimura¹, Masaru Matsunami², Masaki Nakagaichi¹, Masashi Sugawara¹. ¹*Nagasaki University, Nagasaki, Japan.* ²*Beppu Mizobe Gakuen College, Beppu, Japan.*
Email: taimura@nagasaki-u.ac.jp

◆ 3:30 pm - 5:00 pm 1699/189 **Cold Weather Exercise Induces Oxidative Burst Activity In Alveolar Macrophages**

Michael S. Davis¹, Sabrina Cummings¹, Katherine Williamson¹, Virginia Buechner-Maxwell². ¹*Oklahoma State University, Stillwater, OK.* ²*Virginia Polytechnic Institute and State University, Blacksburg, VA.*
Email: msdavis@okstate.edu

◆ 3:30 pm - 5:00 pm 1700/190 **Effect of Aspirin Ingestion on Epinephrine and Norepinephrine Levels Following Acute Cold Exposure**

Katherine Pierce¹, Leigh Murray², Greg Farnell¹, Robby Demes¹, Judi Juvancic-Heltzel¹, Tiffany Collinsworth¹, Ellen L. Glickman, FACSM¹, Gary H. Kamimori, FACSM³. ¹*Kent State University, Kent, OH.* ²*Walsh University, North Canton, OH.* ³*Walter Reed Army Institute of Research, Silver Spring, MD.*

◆ 3:30 pm - 5:00 pm 1701/191 **Effect of Aspirin Ingestion and Fitness Level on Thermal Sensation Following Acute Cold Exposure**

Ellen L. Glickman, FACSM¹, Leigh Murray², Robby Demes¹, Judi Juvancic-Heltzel¹, Katherine Pierce¹, Tiffany Collinsworth¹, Ronald Otterstetter³, Greg Farnell¹. ¹*Kent State University, Kent, OH.* ²*Walsh University, North Canton, OH.* ³*University of Akron, Akron, OH.*
Email: eglickma@kent.edu

◆ 3:30 pm - 5:00 pm 1702/192 **Effect of Fitness Level on Thermoregulatory Variables in Healthy Males After Cold Exposure**

Leigh K. Murray¹, Rob Demes², Judi Heltzel-Juvancic², Katie Pierce², Greg Farnell², Tiffany Collinsworth², Ronald Otterstetter³, Ellen L. Glickman, FACSM². ¹*Walsh University, North Canton, OH.* ²*Kent State University, Kent, OH.* ³*The University of Akron, Akron, OH.*
Email: lmurray@walsh.edu

◆ 3:30 pm - 5:00 pm 1703/193 **The Influence of Ethnicity on Thermoregulation Following Acute Cold Exposure**

Tiffany Collinsworth¹, Greg Farnell¹, Katie Pierce¹, Leigh Murray², Rob Demes¹, Judi Juvancic-Heltzel¹, Ellen L. Glickman, FACSM¹. ¹*Kent State University, Kent, OH.* ²*Walsh University, North Canton, OH.*

◆ 3:30 pm - 5:00 pm 1704/194 **Effects Of Aspirin On Catecholamine Responses Of Males During Acute Cold Exposure**

Ronald Otterstetter¹, Leigh Murray², Gary H. Kamimori, FACSM³, Ellen Glickman, FACSM⁴. ¹*The University of Akron, Akron, OH.* ²*Walsh University, North Canton, OH.* ³*Walter Reed Army*

Institute of Research, Silver Spring, MD. ⁴Kent State University, Kent, OH.
Email: ro5@uakron.edu

◆ 3:30 pm - 5:00 pm 1705/195 **Effects of Body-Weight Dependent Aspirin Dosage on Substrate Utilization Following Acute Cold Exposure**

Greg Farnell¹, Leigh Murray², Rob Demes¹, Judi Juvancic-Heltzel¹, Katie Pierce¹, Tiffany Collinsworth¹, Ellen L. Glickman, FACSM¹. ¹*Kent State University, Kent, OH.* ²*Walsh University, North Canton, OH.*

◆ 3:30 pm - 5:00 pm 1706/196 **The Effect Of Nacl Ingestion On Plasma Osmolality And Thirst Ratings During Cold Exposure**

Robert W. Kenefick, FACSM¹, Adam St. Pierre², Nathan A. Riel², John W. Castellani, FACSM¹. ¹*U.S. Army Research Institute of Environmental Medicine, Natick, MA.* ²*University of New Hampshire, Durham, NH.*
Email: Robert.Kenefick@us.army.mil

1:00 pm - Free Communication/Poster B-32. Sweat Electrolytes in Sport Hall E
6:00 pm

◆ 3:30 pm - 5:00 pm 1709/199 **Does Heat Acclimation Reduce Sweat Calcium Concentration?**

Jessica T. Cerra, Katie D. Bouton, Michael J. Buono, FACSM. *San Diego State University, San Diego, CA.*
Email: jessicacerra@hotmail.com

◆ 3:30 pm - 5:00 pm 1710/200 **Gender Differences In Sweat Sodium Loss In Well-trained Endurance Athletes**

Matthew D. Pahnke, Joel D. Trinity, Edward F. Coyle, FACSM. *The University of Texas at Austin, Austin, TX.*
Email: mpahnke@mail.utexas.edu

Thursday, May 31, 2007

7:30 am - Free Communication/Poster C-28. Heat Stress Hall E
12:30 pm

◆ 8:00 am - 9:30 am 1839/127

Acclimation To Moderate Heat Adequately Prepares Individuals For Work In A Hotter Environment

Anna G. Jonkman¹, Denise M. Linnane², Andrew S. Weller², Hein A.M. Daanen¹. ¹*TNO Defence, Security and Safety, Soesterberg, The Netherlands.* ²*QinetiQ, Farnborough, United Kingdom.*
(Sponsor: Thomas Janssen, FACSM)
Email: anna.jonkman@tno.nl

◆ 8:00 am - 9:30 am 1840/128

Effect of Palm Cooling on Heat Extraction During Exercise in a Hot Dry Environment

Fabiano Amorim, Paulette Yamada, Robert Robergs, Suzanne Schneider. *University of New Mexico, Albuquerque, NM.*
Email: amorim@unm.edu

◆ 8:00 am - 9:30 am 1841/129 **The Reliability of a 90-minute Preloaded Treadmill Time-Trial in Hot and Moderate Ambient Temperatures**

Chris Tyler, Caroline Sunderland. *Nottingham Trent University, Nottingham, United Kingdom.*
Email: christopher.tyler@ntu.ac.uk

◆ 8:00 am - 9:30 am 1842/130 **Physiological Strain and Perceptual Differences during Repeated-bout Exercise in the Heat**

Melissa D. Laird, Michael F. Bergeron, FACSM, Elaina L. Marinik, Joel S. Brenner, Mimi Lou, Jennifer L. Waller. *Medical College of Georgia, Augusta, GA.*

◆ 8:00 am - 9:30 am 1843/131 **Uncompensable Heat Stress and Repeated Constant Workloads**

Greg J. Mulligan, David Docherty. *University of Victoria, Victoria, BC, Canada.*
Email: mulligan@uvic.ca

◆ 8:00 am - 9:30 am 1844/132 **Acute Neuroendocrine Response to Uncompensable Heat Stress in Endurance Trained Versus Untrained Males**

Heather E. Wright, Glen A. Selkirk, Tom M. McLellan. *Defence Research & Development Canada, Toronto, ON, Canada.* (Sponsor: I. Jacobs, FACSM)
Email: Heather.Wright@drdc-rddc.gc.ca

◆ 8:00 am - 9:30 am 1845/133 **Weather Conditions for Optimal Marathon Performance**

Matthew R. Ely, Samuel N. Cheuvront, FACSM, Scott J. Montain, FACSM. *USARIEM, Natick, MA.*

7:30 am - 12:30 pm Free Communication/Poster C-30. Exercise-Induced Muscle Damage Hall E

◆ 9:00 am - 10:30 am 1860/148 **The Effects of Hydration State and Resistance Exercise on Markers of Muscle Damage**

Linda M. Yamamoto¹, Daniel A. Judelson², Mark J. Farrell¹, Lawrence E. Armstrong, FACSM¹, Douglas J. Casa, FACSM¹, William J. Kraemer, FACSM¹, Jeff S. Volek¹, Carl M. Maresh, FACSM¹. ¹*University of Connecticut, Storrs, CT.* ²*California State University, Fullerton, Fullerton, CA.*

7:30 am - 12:30 pm Free Communication/Poster C-31. Hydration and Fluid Balance in Sport Hall E

◆ 8:00 am - 9:30 am 1864/152 **Voluntary Intake of Sports Drinks and Water in Males and Females Running in Hot Environment**

Anita M. Rivera-Brown¹, Luis F. Aragón-Vargas, FACSM², Yazaira Cabrera-Dávila¹, Luis E. Berrios¹. ¹*University of Puerto Rico, Salinas, PR.* ²*Gatorade Sports Science Institute, San José, Costa Rica.*
Email: aniriver@coqui.net

◆ 8:00 am - 9:30 am 1867/155 **Motorcycle Enduro Race in Heat: Fluid Balance and Thermoregulation**

Ricardo Javornik¹, Luis Fernando Aragon-Vargas, FACSM², Garcia Pedro Reinaldo³. ¹*Valle Arriba Athletic Club, Caracas, Venezuela.* ²*Universidad de Costa Rica, San José, Costa Rica.* ³*Universidad Central de Venezuela, Caracas, Venezuela.* (Sponsor: Luis Fernando Aragon, FACSM)
Email: javornik@telcel.net.ve

◆ 8:00 am - 9:30 am 1868/156 **Effect of Glycerol Hyperhydration on Running Performance in the Heat**

Matthew J. Garver¹, Greg Hovey², Leland Nielsen³, Jared Dickinson⁴, Neil Melvin², Tracy Schaefer², David Gee², Vincent Nethery², Charilaos Papadopoulos². ¹*The Ohio State University, Columbus, OH.* ²*Central Washington University, Ellensburg, WA.* ³*University of Georgia, Athens, GA.* ⁴*Ball State University, Muncie, IN.*

Email: Garver.50@osu.edu

7:30 am - Free Communication/Poster C-34. Occupational Physiology, Law Hall E
12:30 pm Enforcement, and the Worker

◆ 8:00 am - 9:30 am 1898/186 **Decreased Lung Function and Altered Nitrate Formation after High Auto/Truck Emission Inhalation during Exercise**

Josh L. Slee, Renee Caviston, Amanda M. Hollenbach, Ronald Bulbulian, FACSM, Kenneth W. Rundell, FACSM. *Marywood University, Scranton, PA.*

Email: rundell@marywood.edu

◆ 8:00 am - 9:30 am 1899/187 **Exercise while Breathing High Ambient Auto/Truck Emission causes Decreased Lung Function in Non-Asthmatic Subjects**

Amanda M. Hollenbach, Renee Caviston, Kenneth W. Rundell, FACSM. *Marywood University, Scranton, PA.*

7:30 am - Free Communication/Poster C-35. Space Physiology and Microgravity Hall E
12:30 pm

◆ 9:00 am - 10:30 am 1900/188 **Cutaneous Endothelial Dependent and Independent Vascular Responsiveness after Prolonged Head-Down Bed Rest**

David A. Low¹, David M. Keller², Kenichi Kimura¹, Scott L. Davis², Jonathon E. Wingo¹, Jeff Hastings², Craig G. Crandall, FACSM². ¹*Institute for Exercise and Environmental Medicine, Dallas, TX.* ²*University of Texas Southwestern Medical Center at Dallas, Dallas, TX.*

Email: davidlow@texashealth.org

◆ 9:00 am - 10:30 am 1901/189 **Skin Surface Cooling Improves Orthostatic Tolerance After Prolonged Head-Down Bed Rest**

David M. Keller¹, David A. Low², Scott L. Davis¹, Kenichi Kimura², Jonathan Wingo², Jeff Hastings¹, Craig G. Crandall, FACSM¹. ¹*University of Texas Southwestern Medical Center at Dallas, Dallas, TX.* ²*Presbyterian Hospital of Dallas, Dallas, TX.*

Email: DavidKeller@TexasHealth.org

◆ 9:00 am - 10:30 am 1902/190 **Effects of 14 Days of Microgravity on Rat Fast Hindlimb Muscles**

Mark D. Schuenke¹, David W. Reed¹, William J. Kraemer, FACSM², Wesley C. Hymer³, Robert S. Staron¹. ¹*Ohio University, Athens, OH.* ²*University of Connecticut, Storrs, CT.* ³*Center for Cell Research, The Pennsylvania State University, University Park, PA.*

Email: mschuenke@hotmail.com

◆ 9:00 am - 10:30 am 1904/192 **Effects of Hypoxic Breathing and Heat Exposure during Head Down Tilt Cycling on Cardiovascular and Metabolic Responses**

Dae Taek Lee, Yong Seok Seo, Youngnam Kang, Jee Eun Son, Kil Koo Kang. *Kim Chang Kew Exercise Physiology Laboratory, Kookmin University, Seoul, Republic of Korea.*

Email: dtlee@kookmin.ac.kr

◆ 9:00 am - 10:30 am 1905/193 **Effect of Intensive Interval Training During Unloading on the Muscle Oxygenation Kinetics**

Yasuro Furuichi¹, Hisashi Takakura¹, Kazumi Masuda¹, Koji Ishida², Keisho Katayama², Motohiko Miyachi³, Hiroshi Akima². ¹*Kanazawa University, Kanazawa, Japan.* ²*Nagoya University, Nagoya, Japan.* ³*National Institute of Health and Nutrition, Tokyo, Japan.*
Email: yasuro_2@hotmail.co.jp

◆ 9:00 am - 10:30 am 1906/194 **Contribution of Hindlimb Myogenic Reactions to Push-Pull Gravitational Stress in Conscious Dogs**

Brett J. Wong, Don D. Sheriff. *The University of Iowa, Iowa City, IA.* (Sponsor: Christopher T. Minson, FACSM)
Email: brett-wong@uiowa.edu

8:00 am - 10:00 am Current Issue C-09. Influence of Nutritional Supplements on Exercise Heat Tolerance and Hydration Status 260

185 Chair

Douglas J. Casa, FACSM. *University of Connecticut, Storrs, CT.*

◆ 8:00 am - 8:05 am Introduction and Overview

Douglas J. Casa, FACSM. *University of Connecticut, Storrs, CT.*

◆ 8:05 am - 8:30 am 186 Creatine

Douglas J. Casa, FACSM. *University of Connecticut, Storrs, CT.*

◆ 8:30 am - 8:55 am 187 Glycerol

Stavros A. Kavouras. *Harokopio University, Athens 17671, Greece.*

◆ 8:55 am - 9:20 am 188 Caffeine

Lawrence E. Armstrong, FACSM. *University of Connecticut, Storrs, CT.*

◆ 9:20 am - 9:45 am 189 Ephedra and Related Stimulants

Randy Eichner, FACSM. *University of Oklahoma, Norman, OK.*

◆ 9:45 am - 10:00 am Overall Discussion

1:00 pm - Symposium D-04. Recent Advances in Baroreflex Control of Blood Pressure During Exercise in Humans 265
3:00 pm

◆ 2:20 pm - 2:45 pm 213. Effects of heat stress on baroreflex regulation of blood pressure
Craig G. Crandall, FACSM. *Institute for Exercise and Environmental Medicine, Dallas, TX.*

◆ 1:00 pm - Special Event D-05. Beijing and Beyond...Environmental 338
3:00 pm Issues for the Olympian and Paralympian (Olympic and
Paralympic Sports Med. Issues Committee)

◆ 214. Chair
Andrew L. Pipe, FACSM. *University of Ottawa Heart Institute, Ottawa, ON, Canada.*

◆ Introduction and Overview
Andrew L. Pipe, FACSM. *University of Ottawa Heart Institute, Ottawa, ON, Canada.*

1:00 pm - 2:30 pm Free Communication/Slide D-14. Hydration and Dehydration 262
in Sport

◆ 724. Chair
Luis F. Aragon-Vargas, FACSM. *University of Costa Rica, San Jose, Costa Rica.*

◆ 1:00 pm - 1:15 pm 725. **Youth Hydration Knowledge, Habits, and Self-Reported Environmental Symptoms During Summer Football Camp**
Douglas J. Casa, FACSM¹, Brendon P. McDermott¹, Susan W. Yeargin¹, Matthew S. Ganio¹, Sarah L. Myers¹, Neal R. Glaviano¹, Robert A. Huggins¹, Nora R. Decher¹, Elizabeth A. Stover².
¹University of Connecticut, Storrs, CT. ²Gatorade Sports Science Institute, Barrington, IL.
Email: douglas.casa@uconn.edu

◆ 1:15 pm - 1:30 pm 726. **Knowledge And Habits Of Adolescents Regarding Hydration And Heat Illness During Preseason High School Football**
Rebecca M. Lopez, Susan W. Yeargin, Douglas J. Casa, FACSM, Brendon P. McDermott, Matthew S. Ganio, Rebecca L. Stearns, Julie A. Blowers, Sarah B. Chow, Marc D. Warchol, Jeffrey M. Anderson, Lawrence E. Armstrong, FACSM, Carl M. Maresh, FACSM. *University of Connecticut, Storrs, CT.*
Email: Rebecca.Lopez@uconn.edu

◆ 1:30 pm - 1:45 pm 727. **Prevalence of Dehydration in Young Soccer Players During a Summer Soccer Camp**
Yiannis P. Kotsis¹, Stavros A. Kavouras¹, Yiannis E. Tsekouras¹, Giorgos P. Pidoulas², Aristomenis Sotiropoulos³, Mihalis G. Makrillos¹, Labros S. Sidossis¹. ¹Harokopio University Athens, ATHENS, Greece. ²Thessaly University, Trikala, Greece. ³University of Athens, ATHENS, Greece.
Email: kotsis@hua.gr

THURSDAY,
MAY 31, 2007
5:45 pm -
7:15 pm

ENVIRONMENTAL PHYSIOLOGY INTEREST GROUP (EPIG) MEETING

Social (beverages and snacks provided), business meeting, and a presentation
by our 2007 EPIG Graduate Student Research Award winner! Sponsored by
HQ Inc., Palmetto, FL.

Ernest
Morial
Convention
Center
#253

Friday, June 01, 2007

7:30 am - Free Communication/Poster E-34. Physiological Responses in Emergency Services / FireFighters Hall E
12:30 pm

◆ 9:00 am - 10:30 am 2273/186 **The Validity of Gastrointestinal Pill Temperature for Emergency Services Personnel**

David M. Wilkinson, James M. Carter, Victoria L. Richmond, Mark P. Rayson. *Optimal Performance Ltd, Bristol, United Kingdom.*

Email: david@optimalperformance.co.uk

◆ 9:00 am - 10:30 am 2274/187 **Infrared Ear Thermometers Do Not Accurately Measure Core Temperature in Fire Fighters During Recovery**

J. M. Kellawan. *University of Victoria, Victoria, BC, Canada.*

Email: mkellawa@uvic.ca

◆ 9:00 am - 10:30 am 2276/189 **Critical WBGT And Associated Strain For Hooded Ensembles**

Candi D. Ashley, Thomas E. Bernard. *Univ. of South Florida, Tampa, FL.*

Email: ashley@tempest.coedu.usf.edu

◆ 9:00 am - 10:30 am 2277/190 **Evaluations Of New Protective Uniforms Must Include Heat Strain During MOPP 1 To Determine Heat Tolerance During MOPP 4**

Tom M. McLellan. *DRDC Toronto, Toronto, ON, Canada.* (Sponsor: Dr. Ira Jacobs, FACSM)

Email: tom.mclellan@drdc-rddc.gc.ca

8:00 am - Current Issue E-05. Mineral Loss During Exercise and Heat Exposure: Is There a Need to Alter Dietary Requirements? 354
10:00 am

304 Chair
Craig A. Horswill. *Gatorade Sports Science Institute, Barrington, IL.*

◆ 8:00 am - 8:05 am Introduction and Overview

Craig A. Horswill. *Gatorade Sports Science Institute, Barrington, IL.*

◆ 8:05 am - 8:30 am 305 Trace Minerals: Methodological Considerations for Accuracy

Henry Lukaski, FACSM. *USDA, Grand Forks, ND.*

◆ 8:30 am - 8:55 am 306 Sweat Electrolyte Losses: What Have We Learned from Laboratory and Field Studies of Athletes?

Susan M. Shirreffs, FACSM. *Loughborough University, Loughborough, United Kingdom.*

◆ 8:55 am - 9:20 am 307 Impact of Sustained work on Sweat Electrolyte and Mineral Losses: Implications for Dietary Requirements
Scott J. Montain, FACSM. *USARIEM, Natick, MA.*

◆ 9:20 am - 9:45 am 308 Young Athletes in the Field: Do They Have Unique Requirements?
Elizabeth Stover. *Gatorade Sports Science Institute, Barrington, IL.*

1:00 pm - 3:00 pm Featured Science Session F-01. CNS Contributions to Elusive Homeostasis During Prolonged Exercise in the Heat 354

335 Chair
Jeff Zachwieja, FACSM. *Gatorade Sports Science Institute, Barrington, IL.*

◆ 1:00 pm - 1:10 pm Introduction and Overview
Jeff Zachwieja, FACSM. *Gatorade Sports Science Institute, Barrington, IL.*

◆ 1:10 pm - 1:35 pm 336 Keynote-Metabolic and Cerebral Changes During Thermal Stress
Lars Nybo. *University of Copenhagen, Copenhagen, Denmark.*

◆ 1:35 pm - 1:50 pm 337 The Blood-Brain Barrier and Exercise: Effect of Hyperthermia and Hypohydration
Phillip Watson, FACSM. *Loughborough University, Leicestershire, United Kingdom.*

◆ 1:50 pm - 2:05 pm 338 Brain and Central Hemodynamics During Exercise with and without Thermal Stress
Jose Gonzalez-Alonso. *Centre for Sports Medicine & Human Performance, Brunel University, United Kingdom.*

◆ 2:05 pm - 2:20 pm 339 Nutritional Countermeasures to Counteract Central Fatigue During Exercise with Thermal Stress
Samuel N. Cheuvront, FACSM. *USARIEM, Natick, MA.*

◆ 2:20 pm - 2:45 pm 340 Keynote-Central Fatigue: What we know and what's next?
J. Mark Davis, FACSM. *University of South Carolina, Columbia, SC.*

1:00 pm - 3:00 pm Symposium F-07. Wheelchair Athletes with a Spinal Cord Injury: Testing, Training and Optimizing Performance (Supported by the Olympic and Paralympic Sports Med. Issues Committee) 265

◆ 2:20 pm - 2:45 pm 369 Physiology and Thermoregulation during Wheelchair Sports
Michael J. Price. *Coventry University, Coventry, United Kingdom.*

1:00 pm - 6:00 pm Free Communication/Poster F-22. Body Core Temperature and Thermoregulation Hall E

◆ 2:00 pm - 3:30 pm 2364/43 **Core Body Temperatures of Ultra Runners during a 217 km Run in Extreme Heat**
James M. Manning, FACSM¹, Holger Finkernagel², Uli Finkernagel², Gordon Schmidt, FACSM¹, Dan Heil, FACSM³, Doug Svolos¹, Frank Bellino¹, Pat Mahady¹, Don Van Allen¹. ¹*William*

Paterson University, Wayne, NJ. ²Institute for Medical Performances, Bad Berleburg, Germany.
³Montana State University, Bozeman, MT.
Email: manningj@wpunj.edu

◆ 2:00 pm - 3:30 pm 2365/44 **Prediction Models for Core Temperature During Heat Stress Vary with Exercise Intensity**

David W. DeGroot, W. Larry Kenney, FACSM. *Pennsylvania State University, University Park, PA.*

Email: dwd141@psu.edu

◆ 2:00 pm - 3:30 pm 2366/45 **Thermoregulation In Women With Polycystic Ovary Syndrome**

Nina Stachenfeld, FACSM¹, Hugh S. Taylor². ¹*The John B. Pierce Laboratory, New Haven, CT.*

²*Yale University School of Med., New Haven, CT.*

Email: nstach@jbpierce.org

◆ 2:00 pm - 3:30 pm 2367/46 **Intense Exercise in the Heat Produces a Higher Rectal Temperature in Endurance-Trained than Untrained Counterparts.**

Juan D. Coso¹, Emma Estévez¹, Nassim Hamouti¹, Juan F. Ortega², Ricardo Mora-Rodríguez¹.

¹*University of Castilla La Mancha, Toledo, Spain.* ²*University El Bosque, Bogotá, Colombia.*

(Sponsor: Luis Fernando Aragon-Vargas, FACSM)

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◆ 2:00 pm - 3:30 pm 2368/47 **Core Temperature in NFL Linemen and Backs in Full Pads versus Shorts and Shells during Pre-season Practices**

Sandra Fowkes Godek¹, Arthur R. Bartolozzi², Richard Greene², Richard Burkholder³. ¹*West Chester University, West Chester, PA.* ²*Pennsylvania Hospital, Philadelphia, PA.* ³*Philadelphia Eagles, Philadelphia, PA.*

Email: sfowkesgod@wcupa.edu

◆ 2:00 pm - 3:30 pm 2370/49 **Sustained Impairments In Cutaneous Vasodilation and Sweating In Grafted Skin During Whole-Body Heating**

Scott L. Davis¹, Manabu Shibasaki², Jian Cui², David A. Low², David M. Keller¹, Jonathan E. Wingo², Kenichi Kimura², Obiora B. Chukwumah², Gary F. Purdue¹, Karen J. Kowalske¹, Craig G. Crandall, FACSM¹. ¹*University of Texas Southwestern Medical Center at Dallas, Dallas, TX.*

²*Institute for Exercise & Environmental Medicine, Dallas, TX.*

Email: Scott.Davis@UTSouthwestern.edu

3:15 pm - Free Communication/Slide F-48. Responses at Altitude
4:45 pm

264

◆ 3:15 pm - 3:30 pm 920 **Weapon Disassembly/Reassembly Performance Is Related To Acute Mountain Sickness And Not Hypoxemia At 4300 M**

Sarah Elliott, Stephen Muza, Charles Fulco, Beth Beidleman, Michael Tapia, Erik Lloyd, Juli Jones, Allen Cymerman. *USARIEM, Natick, MA.* (Sponsor: Michael N. Sawka, FACSM)

Email: sarah.elliott@amedd.army.mil

◆ 3:30 pm - 3:45 pm 921 **Cardiorespiratory Responses to Resistance Exercise under Hypoxia in Healthy Subjects**

Cristiane Matsuura¹, Paulo Sergio C. Gomes¹, Mark Haykowsky², Yagesh Bhamhani².

¹*Universidade Gama Filho, Rio de Janeiro, Brazil.* ²*University of Alberta, Edmonton, AB, Canada.*

Email: crismatsuura@yahoo.com.br

◆ 3:45 pm - 4:00 pm 922 **GXT Responses in Altitude Acclimatized Cyclists during Sea Level Simulation**

Michael D. Brothers, Kristin Hilger, John M. Carson, Luisa Sullivan, William C. Byrnes, FACSM.
University of Colorado, Boulder, CO.

Email: michael.brothers@colorado.edu

◆ 4:00 pm - 4:15 pm 923 **No Correlation between Pulmonary Artery Pressure and Markers of Pulmonary Interstitial Fluid Accumulation at Altitude**

Christoph Dehnert¹, Andrew Luks², Guido Schendler¹, Elmar Menold¹, Marc M. Berger¹, Damian M. Bailey³, Heimo Mairbäurl¹, Erik R. Swenson², Peter Bärtisch¹. ¹*University Hospital Heidelberg, Heidelberg, Germany.* ²*VA Puget Sound Health Care System, University of Washington, Seattle, WA.* ³*University of Glamorgan, Pontypridd, United Kingdom.*

◆ 4:15 pm - 4:30 pm 924 **Proteinuria After Sprint And Endurance-type Exercise At Moderate Altitude**

Maurie J. Luetkemeier, Jeffrey A. LaPorte, John E. Davis. *Alma College, Alma, MI.*

Email: luetkemeier@alma.edu

◆ 4:30 pm - 4:45 pm 925 **The Magnitude of Physiological Response to Altitude is Associated with Individual Variation in DHEA-S Levels**

Chia-Hua Kuo. *Taipei Physical Education College, Taipei, Taiwan.* (Sponsor: John L. Ivy, FACSM)

Email: kuochiahua@gmail.com

Saturday, June 02, 2007

7:30 am -
11:00 am

Free Communication/Poster G-12. Altitude and Hypoxia

Hall E

◆ 9:30 am - 11:00 am 2454/1 **Effect of Arterial Oxygenation on Fatigability of Isolated Quadriceps Muscle**

Keisho Katayama¹, Amann Markus², David F. Pegelow², Anthony J. Jacques², Jerome A. Dempsey, FACSM². ¹*Nagoya University, Nagoya, Japan.* ²*University of Wisconsin-Madison, Madison, WI.*

Email: katayama@htc.nagoya-u.ac.jp

◆ 9:30 am - 11:00 am 2455/2 **VO_{2max} Is In Part Limited By VE_{Max} During Exercise In Moderate Acute Hypobaric Hypoxia**

Takeshi Ogawa¹, Jose Antonio Lopez Calbet², Keiji Hayashi¹, Naoto Fujii¹, Takeshi Nishiyasu¹. ¹*University of Tsukuba, Tsukuba, Japan.* ²*University of Las Palmas de Gran Canaria, Las Palmas de Gran Canaria, Spain.*

Email: ogawa@lbnp.taiiku.tsukuba.ac.jp

◆ 9:30 am - 11:00 am 2456/3 **Maximal Exercise In Altitude Native Balti**

Stefano Mazzoni¹, Maria Assunta Lenotti², Mauro Marzorati¹, Claudio Marconi¹. ¹*I.B.F.M. - C.N.R., Segrate (MI), Italy.* ²*Dispensario Medico Lorenzo Mazzoleni, Askole, Pakistan.* (Sponsor: Bruno Grassi, FACSM)

Email: stefano.mazzoni1@unimi.it

◆ 9:30 am - 11:00 am 2457/4 **Cerebral and Muscular Oxygenation/Blood Volume Responses to Resistance Exercise under Normoxia and Hypoxia in Healthy Subjects**

Paulo S. Gomes¹, Cristiane Matsuura¹, Yagesh Bhambhani². ¹*Universidade Gama Filho, Rio de Janeiro, Brazil.* ²*University of Alberta, Edmonton, AB, Canada.*

Email: gomespsc@ yahoo.com.br

8:00 am - Colloquium G-03. An Overview of the Heat, Cold and Fluids Position 356
8:50 am Stands

439 Speaker
Linda S. Pescatello, FACSM. *University of Connecticut, Storrs, CT.*

440 Speaker
John W. Castellani, FACSM. *U.S. Army Research Institute of Environmental Medicine, Natick, MA.*

441 Speaker
Lawrence E. Armstrong, FACSM. *University of Connecticut, Storrs, CT.*

442 Speaker
Michael N. Sawka, FACSM. *U.S. Army Research Inst. of Environmental Medicine, Natick, MA.*

443 Speaker
Nancy R. Rodriguez, FACSM. *University of Connecticut, Storrs, CT.*

9:00 am - Free Communication/Slide G-39. Hydration and Exercise 263
10:45 am

◆ 9:45 am - 10:00 am 954 **Hydration during Exercise in Warm, Humid Conditions: Effect of a Caffeinated Sports Drink**

Jennifer L. Trilk¹, Mindy L. Millard-Stafford, FACSM², Kirk J. Cureton, FACSM¹, Jonathan E. Wingo¹, Gordon L. Warren, FACSM³, Maxime Buyckx⁴. ¹*University of Georgia, Athens, GA.* ²*Georgia Institute of Technology, Atlanta, GA.* ³*Georgia State University, Atlanta, GA.* ⁴*The Coca-Cola Company, Atlanta, GA.*

Email: jltrilk@uga.edu

9:00 am - Clinical Case Slide G-42. Football - Medical Issues 341
11:00 am

◆ 10:00 am - 10:20 am 1153 **Exertional Heat Illness - Football**

Charles C. Emerson, Lindsey E. Eberman, Michelle A. Cleary, Dawn M. Minton, Julie L. Frymyer. *Florida International University, Miami, FL.*

Email: clearym@fiu.edu

Updated.