

Karen R. Kelly, PhD

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Education

2007: Ph.D. Kinesiology, Department of Kinesiology, University of Southern California

2001: M.S. Exercise Physiology, Exercise and Nutritional Science Department, San Diego State University

1996: B.S. Biology, Department of Biology, University of California, San Diego, 1992-1996
Minors: Psychology, Dept of Psychology & Theatre Design, Dept of Theatre

Professional Experience

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| 2010-present | Research Physiologist, Department of Warfighter Performance, Naval Health Research Center, San Diego, CA. |
| 2013-present | Adjunct Research Faculty, Graduate School-Department of Biological Sciences, University of Southern California, Los Angeles |
| 2011-present | Adjunct Assistant Professor, Graduate School-Department of Exercise and Nutritional Sciences, San Diego State University, San Diego, CA |
| 2010 | Member of Translational Research in Energetics and Cancer Group, CASE Western Reserve University, Cleveland, OH |
| 2010 | Heart transplant research team, Department of Cardiovascular Medicine, Cleveland Clinic. |
| 2007- 2010 | Post-Doctoral Research Fellow, Department of Pathobiology, Lerner Research Institute, Cleveland Clinic, Cleveland OH and Department of Nutrition, School of Medicine, CASE Western Reserve, Cleveland. |
| 2001-2007 | Research in the Lipid Metabolism Division of the Metabolic Regulation Lab, Department of Kinesiology, USC under the supervision of Dr. Lorraine Turcotte. |
| 2006-2007 | Adjunct Professor, Nutrition, Riverside Community College-Norco, Norco, CA |
| 2003 | Adjunct Professor, Nutrition for Fitness and Sport, Rio Hondo Community College, Rio Hondo, CA. |
| 2002-2003 | Adjunct Professor, Introduction to Human Anatomy (lecture and lab), University of California, Los Angeles, CA |
| 1999-2001 | Research Assistant, Exercise Physiology, Department of Exercise and Nutritional Sciences, San Diego State University. |

- 2001-2007 Teaching Assistant, Advance Exercise Physiology (senior level) and Exercise Physiology for non-majors, Department of Kinesiology, University of Southern California
- 2000-2001 Teaching Assistant, Exercise Physiology, Department of Exercise and Nutritional Sciences, San Diego State University
- 2000-2001 Teaching Assistant, Human Anatomy, Department of Biology, San Diego State University
- 2000 Research Assistant, Exercise Physiology, Department of Exercise and Nutritional Science, San Diego State University.
- 2000 Research Assistant Volunteer, Olympic Training Center, San Diego.

Professional Committees/Working Groups

- 2017 Nominated at the JPC-5 Musculoskeletal injury prevention working group chair for 2018
- 2017 Scientific committee for the International Congress on Soldier Physical Performance Meeting
- 2017 Abstract reviewer/scientific reviewer for MHSRS- Musculoskeletal Injury section
- 2017- present Science Review Board member- NHRC
- 2017-present Technical Team of, RTG HFM-283- Reducing Musculo-Skeletal Injuries (NATO)
- 2015-present Science Advisor/Subject Matter Expert Warfighter Performance Sustainment working group - Military Operational Medicine- JPC-5
- 2015-present Office of Navy Research-Code 34, SBIR proposal reviewer
- 2014-present Science Advisor/Subject Matter Expert- Environmental Extreme Physiology Working Group, Military Operational Medicine- JPC-5
- 2014-present U.S. Army Natick Soldier Center Scientific Review Committee
- 2014 Co-chair Occupational Performance, Women in Combat Symposium, Defense Health Headquarters
- 2014 Subject Matter Expert- Hydration Status Monitoring Advanced Development Efforts- U.S. Army
- 2014 Scientific Advisory Committee-3rd International Congress on Soldiers' Physical Performance, Boston MA
- 2012-present Reviewer for Medicine and Science Sport and Exercise Journal
- 2011-2012 Program Sponsor Representative, Joint Position Committee 5, Military Operational Medicine Research Program, U.S. Army, Ft. Detrick, MD.

Briefs (not including program reviews)

- 2017 Defense Advisory Committee on Women in Combat, Arlington VA
- 2017 Admiral Burkhart- Director 21st Century Sailor Office (N17)
- 2017 Admiral Schafer- Liaison Officer to the Defense Health Agency
- 2016 Lt Gen Berger, Commanding General 1 MEF-Camp Pendleton, CA
- 2016 Warrior Resilience Science Review-ONR Code 30- Arlington VA
- 2015 SES Drs. John Pezik and Terry Allard ONR-Code 30 and 34 Department Heads regarding Mental Skills Training in Basic RECON, USMC, Arlington VA
- 2015 Women in Service Review update meeting. SES OSD Juliet Beyler, MG Haas (SOCOM), BG Smith (USMC), SES David Brinkley (Army), RDML Sweredoski (Navy), BG Kelly (Air Force) 28 May, Joint Special Operations University-Tampa FL.
- 2015 SES SECNAV Dr. Mark Jacobson regarding Women in Service, 9 April via Telcon.
- 2015 Professional staffers for House and Senate Arms Committee regarding Women in Service, 7 April, Capitol Hill, Washington DC
- 2015 General Cleveland, USASOC regarding Physical Standard Validation for Army SF and Rangers
- 2015 Special Operations Command SMG Thetford regarding Women in Service, WARCOM, Coronado, CA
- 2015 Chief of Staff of the Army (CSA) Strategic Studies Group, 18 February, NHRC, Pt. Loma, CA
- 2014 SES Julie Beylor regarding Women in Service, September, SOCOM HQ, Tampa FL.

Invited Speaker

- 2017 Load Carriage Symposium- International Congress on Soldier Physical Performance, Melbourne, Australia
- 2017 Military Health Science Research Symposium, Kissimmee, FL
- 2017 Canadian Special Forces Human Performance Meeting, Ottawa, Canada
- 2016 Blue Sky think session on Gut Microbiome and Hypothermia Prevention, Institute for Human and Machine Cognition, Pensacola, FL
- 2014 3rd International Congress on Soldiers' Physical Performance, Boston, MA
- 2014 Women in Combat Symposium, Defense Health Headquarters, Falls Church, VA
- 2013 Southwest Chapter Meeting, American College of Sports Medicine, Newport Beach, CA
- 2013 Military Health Science Research Symposium, Ft. Lauderdale, FL
- 2012 U.S. Army- Return to Duty workshop, Ft. Detrick, MD (September)

- 2012 Military Health Science Research Symposium, Ft. Lauderdale, FL
- 2010 National Obesity Society Meeting, presentation of abstract, San Diego, CA
- 2010 Featured Science Session-Energy Balance, Obesity and Incretin Hormones, American College of Sports Medicine Annual Meeting and World Conference on Exercise is Medicine, Baltimore, MD
- 2010 Translational Research in Energetics and Cancer Group, CASE Western Reserve University, Cleveland, OH
- 2009 Invited speaker, Cleveland Clinic Obesity Research Day, Cleveland, OH
- 2008 Invited speaker, Cleveland Clinic Obesity Research Day, Cleveland, OH
- 2009 Guest Lecturer, Cleveland Clinic Lerner College of Medicine of CASE Western Reserve University, Molecular Medicine program
- 2008 Guest Lecturer, Cleveland Clinic Lerner College of Medicine of CASE Western Reserve University, Molecular Medicine program

Publications and Reports

1. Sessoms, P, Gobrecht, M., Niederberger, B.,; Sturdy, J., Collins, J., Dominguez, J., Jaworski, R. and **Kelly, KR**. Effect of a Load Distribution System on Mobility and Performance during Simulated and Field Hiking while under Load. *In Review Ergonomics Journal*.
2. Jensen, A., Niederberger, B., Devaney, J.; Jaworski, R., Turcotte, LP, and **Kelly, KR**. TNF- α stress response is reduced following load carriage training. *In command review*
3. **Kelly, KR**, Laird, M. Niederberger, B. and Jameson, JT. Fitness and Body Composition as Predictors of Musculoskeletal Injury Risk (FITRISK), Mil Med. *In process*.
4. **Kelly, KR** and Jameson, JT. Physiological adaptation to kinetic training environments in elite military men. *In process*.
5. Jameson, JT and **Kelly, KR**. Resiliency Training Strategies and Evaluation of Cognitive Performance: Translation to Performance in Highly Kinetic Training Environments. *In process*.
6. Berry, D, Rodríguez-Soto, A., Su, J., Gombatto, S., Shahidi, B, Palombo, L., Chung, C, Jensen, A., **Kelly, KR** and Ward, S. Lumbar muscle structure predicts operational postures in active-duty Marines. *In Review J Ortho Sport Phys Ther*
7. Mulya, Anny, **Kelly, KR**., Haus, J., Solomon, T; Barkoukis, H., Rocco, M. and Kirwan, J Exercise Training Induced Improvement in Skeletal Muscle PGC-1 α Mediated Fat Metabolism is Independent of Dietary Glycemic Index. *Obesity Journal, In Press 2017*.
8. Berry, D, Rodríguez-Soto, A., Su, J., Gombatto, S., Shahidi, B, Palombo, L., Chung, C, Jensen, A., **Kelly, KR** and Ward, S. Lumbar Spine Postures in Marines During Simulated Operational Positions. *Journal of Orthopedic Research. 2017 Jan 4. doi: 10.1002/jor.23510. [Epub ahead of print]*

9. Kullman, E., **Kelly, K.**, Haus, J., Fealy, C., Scelsi, A., Pagadala, M., Flask, C., McCullough, A. and Kirwan, J. Short-Term Aerobic Exercise Training Improves Gut Peptide Regulation in Nonalcoholic Fatty Liver Disease. *Journal of Applied Physiology*, 120(10)1159-1164, 2016.
10. Jensen, A., Niederberger, B., Devaney, J.; Jaworski, R., Turcotte, LP, and **Kelly, KR**. No effect of inflammatory cytokine gene polymorphisms on exercise-induced inflammation in U.S. Marine Corps' School of Infantry. Submitted to *European Journal of Applied Physiology and Nutrition*, In Review
11. Jensen, A., Palombo, L., Niederberger, B., Turcotte, LP, and **Kelly, KR**. Exercise training with blood flow restriction increases muscular strength and does not change IGF-1 in fit military warfighters *Growth Hormone and IGF Research*. 27: 33-40, 2016.
12. Nindl, B, Jones, B., Van Arsdale, S., **Kelly KR**. and Kraemer, W. Operational Physical Performance and fitness in Military Women: Physiological, musculoskeletal Injury and Optimized Physical Training Considerations for Successfully Integrating Women Into Combat-Centric Military Occupations. *Military Medicine*, 181 (1 Suppl): 50-62, 2016.
13. **Kelly, KR.**, Knapik, J., Zambraski, E. and East, W. Role of Fitness and Nutrition in Military Readiness. President's Council on Exercise. *In Preparation*
14. **Kelly, KR**, Koturri, S., Russell, C. and Jameson, Jason. Performance Metrics during Close Quarters Combat (CQC) Training. *In Preparation*
15. **Kelly, KR** and Jameson, J. Preparing for Combat, Readiness for the Fight: Physical Performance Profile of Female US Marines, *Journal of Strength and Conditioning Research*, Epub Nov 20, 2015.
16. Sprouse, C. Tosi, L., Gordish-Dressman, H., Abdel-Ghani, M. Panchapakesan, K., Niederberger, B., Devaney, J., **Kelly, KR**. CKMM Polymorphism Is Associated with Physical Fitness Test Scores In Military Recruits. *Military Medicine*, 180, 9:1001, 2015.
17. Jameson, J., Pappa, L., McGuire, B., **Kelly, KR**. Performance Differences between Male and Female Marines on Annual Physical Fitness and Combat Proxy Tasks: Identifying the gap. In Command Review
18. Berry, D, Rodríguez-Soto, A., Su, J., Gombatto, S., Shahidi, B, Palombo, L., Chung, C, Jensen, A., **Kelly, KR** and Ward, S. Lumbar Spine Postures in Marines During Simulated Operational Positions. *Journal of Orthopedic Research In Review*.
19. Rodríguez-Soto, A., Berry, D., Jaworski, R., Jensen, A., Niederberger, B., Chung, C., Quadir, A., Kelly, KR and Ward, S. The Effect of Training on Lumbar Spine Kinematics and Intervertebral Disc Degeneration in Active-Duty Marines, *Ergonomics* 2016 Nov 28:1-9. [Epub ahead of print].
20. Rodríguez-Soto, A., Berry, D., Palombo, LP, Valek, BS, **Kelly, KR** and Ward, S. The Effect of Load Magnitude and Distribution on Lumbar Spine Posture in Active-Duty Marines, *Spine*, 2016 Jun 15. [Epub ahead of print]
21. Sessoms, P., Gobrecht, M., Niederberger, B., Collin, JD, Sturdy, J., Dominguez,., Jaworski, R., **Kelly, KR**. Effect of a Load Distribution System on Mobility and Performance During Simulated Hiking While Under Load. In Review, *International Personal Armor System Symposium Invited Paper*-August, 2016.
22. Marzano, S., Austin, KG and **Kelly, KR**. Exercise as an Alternative Non-pharmacological Strategy for Cluster D Symptoms of Post-traumatic Stress Disorder: A Review. *Mil Med*, In Review.
23. **Kelly, KR.**, Jameson, JT, Russell, C., Demuro, C., Koturri, S. El-Kara, L. and Johnson, CJ. Mental skills training to Enhance Warfighter Performance. Sponsor Report delivered to ONR-Code 30, November, 2015.

24. **Kelly, KR**, Sessoms, P., Sturdy, J., Niederberger, B. Henson, C. and Dominguez, J. Independent Evaluation of the ETOWL software program. Sponsor Report delivered to ONR-Code 30 May, 2015.
25. **Kelly, KR** and Jameson, J. Navy Sea, Air and Land (SEAL) and Special Warfare Combatant-craft Crewman (SWCC) Physical Standards Validation Report. Sponsor Report delivered to WARCOM June 2015
26. **Kelly KR** and Jameson, JT. Army Special Forces Physical Standards Validation Report. Sponsor Report delivered to USASOC September 2015.
27. **Kelly, KR** and Jameson, JT. Army Rangers Physical Standards Validation Report. Sponsor Report delivered to USASOC, September 2015.
28. **Kelly, KR.**, Koturri, S Russell, C. Demuro, C. and Johnson, D Individual Performance Metrics during Close Quarters Combat (CQC) Training. Sponsor Report delivered to WARCOM June 2015
29. **Kelly KR**, Koturri, S Russell, C. Demuro, C. and Johnson, D. Efficacy of Sensory-Motor Training on Combat Marksmanship Cognition in U.S. Special Operations Forces. Sponsor Report delivered to WARCOM April 2015.
30. Austin, KG, Jameson, JT and **Kelly, KR**. Development of Military Occupational Specialties Physical Assessments in Support of the Women in Service Restrictions Review-Phase III. Sponsor Report delivered to TECOM. September 2015
31. **Kelly KR**, Sessoms, P, Niederberger, B., Sturdy, J., Henson, C. and Dominguez, J. Independent Evaluation of ETOWL Software. Sponsor Report-ONR, delivered March 2015.
32. **Kelly KR**, Niederberger, B., and Palombo, L. Field Evaluation of Infantry Combat Equipment Torso Protective Equipment (PPE) Prototype for the U.S. Marines Corps- Sponsor Report delivered to MARCORSSYSCOM- ICE December 2014
33. **Kelly KR**, Sessoms, P, Niederberger, B., and Dominguez, Laboratory Evaluation of Infantry Combat Equipment Torso Protective Equipment (PPE) Prototype for the U.S. Marines Corps. Sponsor Report delivered to MARCORSSYSCOM- ICE delivered July 2014.
34. Jameson, J., Cox, B., and **Kelly, KR**. Hell Week Validation. Tech Report #14-46 , Naval Health Research Center, San Diego 2014.
35. Jameson, J and **Kelly, KR**. Analysis in Support of the Women in the Service Restrictions Review–Phase II. Technical Report. Naval Health Research Center, San Diego 2014.
36. Jaworski, R., Jensen, A., Niederberger, B, Congalton, R. and **Kelly, KR**. Changes in Combat Task Performance Under Increasing Loads in Active Duty Marines. *Military Medicine*, 108,3:179-186, 2015
37. **Kelly, KR**, Jaworski, R., Niederberger, B. and Jensen A. Combat Injury Trends in US Marines, Technical Report #13-46. Naval Health Research Center, San Diego 2013.
38. Jameson, J and **Kelly, KR**. Analysis in Support of the Women in the Service Restrictions Review–Phase I. *Technical Report*. Naval Health Research Center, San Diego 2013.
39. Haus, JM, Solomon TPJ, **Kelly KR**, Fealy, C, Louis, E., Scelsia, A., McCulla, A., Flask, C.; Kirwan, JP. Improved Hepatic Lipid Composition Following Short-term Exercise in Non-alcoholic Fatty Liver Disease”. *Journal of Clinical Endocrinology and Metabolism*, Jul;98(7):E1181-8 2013.
40. Rodríguez-Soto, A., Jensen, A., Jaworski, R., Frank, L., Ward, S. and **Kelly, KR**. Load-Carrying Lumbar Spine Kinematics in Active-Duty Marines, *Spine Journal*, Jun 1;38(13):E783-91 2013.

41. **Kelly, KR** and Turcotte, LP AMP-regulated kinase and calcium/calmodulin-dependent kinase II co-regulate fatty acid uptake and oxidation in L6 muscle cells. *Recent Res. Devel. Physiol.*, 5(2012): 15-26 ISBN: 978-81-308-0489-7.
42. **Kelly KR.**, Navaneethan S., Solomon, TPJ, Haus, JM., Cook, M., Barkouskis, H., and Kirwan, J.P. Altered adipokine secretion is related to change in fat distribution following lifestyle intervention in older obese humans. *Medicine and Science in Sport and Exercise*: 46 (5): 92-926, 2014.
43. Mulya A., Malin S, Haus, JM, Solomon TPJ, **Kelly KR.**, Barkoukis, H., and Kirwan, J.P. Upregulation of PGC-1 α and fat transport/oxidation genes in muscle is linked to improved insulin sensitivity following a lifestyle intervention in obese humans, *American Journal of Physiology, Endocrinology and Metabolism*. In Review.
44. Kullman, E , **Kelly, KR**, Haus, JM, Fealy, C, Scelsi, A., Lu, Lan, Pagadala, M., McCullough, A., Flask, C. and Kirwan JP. Short-term Aerobic Training Improves Satiety Hormones in Non-Alcoholic Fatty Liver Disease Patients, *Obesity*, In Review
45. Malin, S., Niemi, N.; Solomon, TPJ, Haus, JM.; **Kelly, KR.**, Filion, J.; Rocco, M.; Kashyap, SR.; Barkoukis, H.; and Kirwan JP. Exercise training with a high or low glycemic diet reduces metabolic syndrome severity in older adults. *Annals of Nutrition and Metabolism* 61:135-141, 2012
46. Kashyap, SR., **Kelly, KR.**, Abdul-Ghani, M., Schauer, PS, and Kirwan, JP. Glucose Homeostasis and β -Cell Function in Patients with Type 2 Diabetes 1-Year after Bariatric Surgery, *American Journal of Physiology-Endocrinology and Metabolism*, In Review
47. **Kelly, K.R.** ,Blaszczak A., Haus, J., Patrick-Melin, A., Felay, C. , Solomon, T.P., Kalinski, MI, Kirwan, JP. 7-Days of aerobic exercise increases high molecular weight adiponectin and improves fat oxidation in obese adults, *Medicine and Science in Sport and Exercise*, 44 (1): 69-74, 2012.
48. Appachi, S., **Kelly, KR.**, Schauer, PS, Kirwan, JP., Hazen, S., Gupta, M. and Kashyap, SR. Reduced Cardiovascular Risk Following Bariatric Surgeries is Related to a Partial Recovery from Adiposopathy. *Obesity Surgery*, In Press, May 28, 2011.
49. **Kelly, K.R.**, Haus, J.M , Solomon, T.P., Patrick-Melin, A.J, Cook, M., Rocco, M, Barkoukis, H., and Kirwan, J.P. Reduced TNF- α and Improved Glucose Tolerance After a Low Glycemic Diet and Exercise Intervention in Obese Adults, *Journal of Nutrition*, 141(6):1089-94, 2011
50. Solomon, T. P., Haus, J.M., **Kelly, K.R.**, and Kirwan, J.P Improved pancreatic beta-cell function in type 2 diabetic patients after lifestyle-induced weight loss is related to glucose-dependent insulinotropic polypeptide. *Diabetes Care*, 33 (7):1561-1566, 2010
51. Solomon, T. P., Haus, J.M., **Kelly, K.R.**, Cook, M., Filion, J., Watanabe, R.M., Kashyap, S.R. and Kirwan, J.P.. A low-glycemic index diet combined with exercise reduces insulin resistance, postprandial hyperinsulinemia, and glucose-dependent insulinotropic polypeptide responses in obese prediabetic humans, *American Journal of Clinical Nutrition*, 92(6):1359-68, 2010
52. **Kelly, K.R.**, Abbott, M.J. and Turcotte, L.P. Short-term AMPK activation enhances insulin-sensitive FA uptake and increases the effects of insulin on FA oxidation in L6 muscle cells *Experimental Medicine and Biology*, 235 (4):514-521 2010.
53. Navaneethan, S., **Kelly, K.R.**, Sabbagh, F., Schauer, P., Kirwan, J.P, and Kashyap, S.R. Urinary albumin excretion, HMW adiponectin and insulin sensitivity in type 2 diabetic patients undergoing bariatric surgery *Obesity surgery* 20(3):308-15, 2010

54. Kashyap, S.R., Daud, S., **Kelly, K.R.**, Win, H. Brethaur, S., Kirwan, J.P. and Schauer, P. Acute Effects of Gastric Bypass versus Gastric Restrictive Surgery on β -Cell Function and Insulinotropic Hormones in Severely Obese Patients with Type 2 Diabetes *Journal of International Obesity*. 34(3):462-71, 2010
55. **Kelly, K.R.** , Brooks L.M, Solomon, T.P.J., O'Leary, V.B., Kashyap, S.R. and Kirwan J.P.. The glucose-dependent insulinotropic polypeptide (GIP) and glucose-stimulated insulin response to exercise training and diet in obesity. *Am J Physiol Endocrinol and Metabol* 296:E1269-1274, 2009.
56. **Kelly, K.R.**, Williamson, D.L., Fealy, C.E., Kriz, D.A., Krishnan, R.K. Loomis, J.L., and Kirwan, J.P. Acute Altitude-Induced Hypoxia Stimulates Glucose Uptake and Decreases Leptin in Humans *Metabolism*, 59(2), 200-205, 2009.
57. **Kelly, K.R.**, O'Leary, V.B, Kashyap, S.R., Schauer, P., Chand, B. and Kirwan, J.P. Retinol binding protein 4 (RBP4) protein expression is increased in omental adipose tissue of severely obese patients. *Obesity*, 18(4):663-6, 2009
58. Haus, J.M., Kashyap, S.R., Kasumov, T., Zhang, R., **Kelly, K.R.**, DeFronzo, R.A, and Kirwan, J.P. Plasma ceramides are elevated in obese subjects with Type 2 diabetes and correlate with the severity of insulin resistance. *Diabetes* 58:337-343, 2009.
59. Solomon, T. P., Haus, J.M., **Kelly, K.R.**, Cook, M., Riccardi, M., Rocco, M., Kashyap, S.R., Barkoukis, H. and Kirwan, J.P A randomized trial on the effects of a 7-day low glycemic diet and exercise intervention on insulin-resistance in older obese adults. *American Journal of Clinical Nutrition* 90: 1-8, 2009.
60. Patrick-Melin, A.J., Kalinski, M.I., **Kelly, K.R.**, Haus, J.M, Solomon, T. P and Kirwan, J.P. Potential role for exercise in the treatment of non-alcoholic fatty liver disease. *Ukrainian Biochemical Journal* 81 (5): 16-25, 2009
61. **Kelly, K.R.**, Sung, C.K., Abbott, M.J, and Turcotte. L.P. PI3K-dependent insulin regulation of LCFA metabolism in L6 muscle cells: Involvement of aPKC- ζ in LCFA uptake but not oxidation. *Journal of Endocrinology*, 198 (2):375-394. 2008

Abstracts (Truncated to the last 5 years-chronological):

1. **Kelly, K.R.**. Hwang, C., Kasumov, T, Huang, H. and Kirwan, J.P. Exogenous long chain ceramide prevent insulin-induced glucose uptake in C₂C₁₂ muscle cells independent of Akt signaling. Submitted to the American Physiological Society Experimental Biology Meeting, April, 2010.
2. **Kelly, K.R.**, Solomon, T.P. , Haus, J.M, Cook, M., Kashyap, S.R., Barkouskis, H. and Kirwan, J.P. Increased High Molecular Weight Adiponectin Following a Low Glycemic Diet and Exercise Intervention in Insulin Resistant Individuals. Submitted to the American Diabetes Association Annual Meeting, June, 2010
3. Kirwan, J.P., Solomon, T. P., Haus, J.M., **Kelly, K.R.**, Cook, M., Fillion, J., Watanabe, R.M., Kashyap, S.R and Barkoukis, H.. A Low Glycemic Diet and Exercise Intervention Reduces Insulin Resistance and Suppresses Compensatory Hyperinsulinemia Via an Incretin Related Mechanism. Submitted to the American Diabetes Association Annual Meeting, June, 2010
4. **Kelly, K.R.**, Solomon, T.P. , Haus, J.M, Cook, M., Dasarathy, S., Kashyap, S.R., Barkouskis, H. and Kirwan, J.P. Exercise combined with a low glycemic diet enhances GLP-1 regulation of appetite in obese adults. Accepted as an oral presentation, National Obesity Society meeting, 2010.
5. Haus, JM, Solomon, TP, Louis ES, **Kelly, KR**, Patrick-Melin, A., Fealy, C., Scelsi, AR., Lu, L., McCullough , AJ., Flask, CA., and Kirwan, JP Short-term aerobic exercise improves hepatic lipid composition, insulin sensitivity,

and circulating HMW adiponectin independent of weight loss in patients with non-alcoholic fatty liver disease, *Experimental Biology*, 2011

6. **Kelly, KR**, Blaszcak, A., Haus, JM, Patrick-Melin, A., Fealy, C., Solomon TP, Kalinski, M., and Kirwan, JP. 7-Days of aerobic exercise increase high molecular weight adiponectin and improves fat oxidation in obese adults, American College of Sports Medicine National Meeting, 2011
7. Kashyap, SR, **Kelly, KR**, Brethauer, S, Abdul-Ghani, A., Schauer, P and Kirwan JP. Longitudinal Effects of Roux-en-Y Gastric Bypass (RY) vs. Gastric Restrictive (GR) Surgery on Mixed Meal Tolerance, Beta Cell Function and Insulinotropic Hormones in Type 2 Diabetic Individuals. Obesity Society National Meeting
8. Kashyap, SR, **Kelly, KR**, Brethauer, S, Abdul-Ghani, A., Schauer, P and Kirwan JP “Reduced Cardiovascular Risk Following Bariatric Surgeries is Related to a Partial Recovery from "Adiposopathy””. American Diabetes Association National Conference, San Diego, CA
9. Rodríguez-Soto, A., Jensen, A., Jaworski, R., Frank, L., Ward, S. and **Kelly, KR**. Load-Carrying Lumbar Spine Kinematics in Active-Duty Marines. *Experimental Biology Conference*, San Diego, CA 2012
10. Rodríguez-Soto, A., Jensen, A., Jaworski, R., Frank, L., Ward, S. and **Kelly, KR**. Lumbar spine kinematics in Marines Carrying Heavy Loads. American College of Sports Medicine National Conference, San Francisco, 2012.
11. Louis, ES., **Kelly, KR**., Haus, JM, Fealey, C., Scelsi, AR., Pagadala, MR, and Kirwan, JP. Short-term aerobic exercise training beneficially alters PYY and GLP-1 in impaired glucose tolerant individuals. American College of Sports Medicine National Conference, San Francisco, 2012.
12. Jensen, A., Mayfield, J., Martinez, R., Niederberger, B., Jaworski, R. and **Kelly, KR**. Adipokine response to prolonged exercise in healthy young adults. Military Health Systems Research Symposium 2012.
13. **Kelly, KR**, Rodríguez-Soto, A., Jensen, A., and Jaworski, R. Lumbar spine kinematics in Marines Carrying Heavy Loads. Military Health Systems Research Symposium 2012. Oral Presentation.
14. **Kelly, KR**., Jensen, A., Niederberger, B., Congalton, R. and Jaworski, R. Changes in Performance Under Increasing Loads in U.S. Marines. Military Health Systems Research Symposium 2013. Oral Presentation.
15. **Kelly, KR** , Jensen, A., Niederberger, B., Congalton, R., and Jaworski, R.. Overall Stress Response is Reduced in U.S. Marines following Infantry Training. Military Health Systems Research Symposium, 2013.
16. Jensen, A., Niederberger, B., Congalton, R., Jaworski, R. and **Kelly, KR**. Polygenic profiling of U.S. Marines. Military Health Systems Research Symposium 2013.
17. Sprouse, C., Tosi, L., Lipof, J., Abdel-Ghani, M., Norrell, K., Rentas, V., Clifford, H., Leo, N., Choi, R., Gordish-Dressman, H., Hoffman, E., Devaney, J. and **Kelly, K.R**. CKMM Polymorphism Is Associated with Physical Fitness Test Scores In Military Recruits. American Society for Bone and Mineral Research Annual Conference. 2013.
18. Jensen, AE, Palombo, L, Niederberger, B, Turcotte, LP and **Kelly, KR**. Effect of Blood Flow Restriction on Insulin-Like Growth Factor Secretion During Low-Intensity Exercise. American College of Sports Medicine National Conference, 2014.
19. Palombo, L, Jensen, A. Niederberger, B, and **Kelly, KR**. The Effect of Blood Flow Restriction During Aerobic Exercise on Insulin-Like Growth Factor-1. Military Health Systems Research Symposium 2014

20. **Kelly, KR**, Niederberger, B., Gobrecht, M., Palombo, L., Jaworski, R. and **Kelly, KR**. Evaluation of Infantry Combat Equipment Torso Personal Protective Equipment (PPE) Prototype for US Marines Corps. Military Health Systems Research Symposium 2014
21. Niederberger, B., Jensen, A. Jaworski, R. and **Kelly, KR**. Combat Injury Trends in U.S. Marines: 2009–2011 OIF/OEF Military Health Systems Research Symposium 2014
22. **Kelly, KR.**, Jaworski, R., Berry, D., Rodríguez-Soto, A., Gombato, S. and Ward, S. Lumbar Spine Postures in Marines During Simulated Operational Conditions. Military Health Systems Research Symposium 2014
23. **Kelly, KR**, Jameson, J., Pappa, Leon and McGuire, B. Performance Differences on Combat Proxy Tasks in U.S. Marines: Are Females Ready for the Fight? International Congress on Soldiers' Physical Performance, Boston MA, 2014
24. **Kelly, KR**, Jameson, J., Pappa, Leon and McGuire, B. Evaluation of USMC Fitness Tests as Predictors of Success on Combat Proxy Tasks. International Congress on Soldiers' Physical Performance, Boston MA, 2014, oral presentation
25. Marzano, S., Congalton, R., Campbell, J. and **Kelly, KR**. Prescriptive Exercise Therapy Program to Reduce Hyperarousal in Residential Treatment Program for Active Duty Service Members Diagnosed with Post-Traumatic Stress Disorder: An Observational Pilot study. Military Health Systems Research Symposium 2014.
26. Sessoms, P, Sturdy, J., Wolf, A. and **Kelly KR**. Change in ground reaction forces of the Warfighter while walking for changes in torso personal protective equipment and load. Military Health Systems Research Symposium 2015
27. Niederberger, B., Palombo, L. Neugebauer, J, and **Kelly, KR**. Evaluation of Infantry Combat Equipment Torso Personal Protective Equipment Prototype for the U.S. Marine Corps: Field Testing. Military Health Systems Research Symposium 2015
28. Marzano, S., Bothwell, M. Campbell, J LCDR, **Kelly, KR**. Prescriptive Exercise Therapy Program to Reduce Hyperarousal in a Residential Treatment Program for Active-duty Service Members Diagnosed with Posttraumatic Stress Disorder: An Observational Pilot Study. . Military Health Systems Research Symposium 2015
29. Rodriguez-Soto, A. Berry, D. Palombo, L. Valaik, E. **Kelly, K.R** and Ward, S. The Effect of Load Magnitude and Distribution on Lumbar Spine Posture in Active-Duty Marines. Military Health Systems Research Symposium 2015
30. Palombo, L., Niederberger, B., **Kelly, KR**. The Effects of Increasing Weight on Cardiovascular Load During the Combat Fitness Test. Military Health Systems Research Symposium 2015
31. Marzano, S., Bothwell, M. Campbell, J LCDR , **Kelly, KR**. Association of Exercise Therapy and Heart Rate Variability in Active-Duty Service Members Diagnosed with Posttraumatic Stress: An Observational Pilot Study. Military Health Systems Research Symposium 2015.
32. Jameson, J.; Demuro, C., and **Kelly, K.** Training Resilience: A Research Framework for Developing Practical Solutions. Military Health Systems Research Symposium 2016
33. Niederberger, B., Palombo, L., Edwards, H., Sturdy, J., Sessoms, P., **Kelly, KR**. Load Distribution System Effect on Marksmanship as a Result of Fatigue following Hike Under Load Military Health Systems Research Symposium 2016

34. Sessoms, P., Sturdy, J., Demuro, C. Edwards, H., Markham, A., Service, K., **Kelly, KR.**, Dominguez, J. and Mackiewicz, J.. Survivability and Physical Performance Testing – A Human Centered Design Approach of Blast Injury Protection Systems for Combat Operations. Military Health Systems Research Symposium 2016
35. Sessoms, P., Gobrecht, M.,; Niederberger, B.,; Sturdy, J., Collins, J.,Dominguez, J., Jaworski, R. and **Kelly, KR.** Effect of a Load Distribution System on Mobility and Performance during Simulated and Field Hiking while under Load. Body Armor Symposium. Amsterdam, Netherlands, 2016.
36. Bergquist-Turori, D., Edwards, H., Hickmann, S. , Ives, B., Jameson, J. and , **Kelly, KR.** Performance on the Cognitive Marksmanship Assessment in Elite Military Men. Military Health Systems Research Symposium,2017.
37. **Kelly, KR.**, Laird, MD and Jameson, J. Prevalence of Musculoskeletal Injury and Relationship to Annual Fitness Scores in Marine Corps Recruits. Military Health Systems Research Symposium,2017.
38. **Kelly, KR** and Arrington, LJ. Caloric Estimate of SEAL Delivery Vehicle Operators During Unit Level Training. International Congress on Soldier Physical Performance. Melbourne, Australia, 2017.
39. **Kelly, KR** , Niederberger, BR, Sturdy, J. and Sessoms, P. Effect of a Load Distribution System on Mobility and Performance During Simulated and Field Hiking While Under Load. International Congress on Soldier Physical Performance. Melbourne, Australia, 2017.
40. **Kelly, KR.**, Arrington, LJ, Hargus, A Equival, K., and Jameson, J. Changes in androgen hormones during intense training in elite military men. International Congress on Soldier Physical Performance. Melbourne, Australia, 2017.

Awards

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| 2014 | Etters Emerging Top Scientist and Engineer of Year- Assistant Secretary of the Navy |
| 2014 | Scientist of the Year- Naval Health Research Center |
| 2013 | On the Spot Award- Naval Health Research Center |
| 2008 | F. Merlin Bumpus Junior Investigator Award in Clinical Research, Cleveland Clinic |
| 2007 | Charles Tipton Student Research Award, American College of Sports Medicine, National Chapter |
| 2006 | Caroline tum Suden/Frances A. Hellebrant Professional Opportunity Award, American Physiological Society |
| 2005 | Caroline tum Suden/Frances A. Hellebrant Professional Opportunity Award, American Physiological Society |
| 2004 | Student Research Award, American College of Sports Medicine, Southwest Chapter |
| 2004 | Award for Excellence in Teaching, Department of Kinesiology, USC |
| 2002 | Award for Excellence in Teaching, Department of Kinesiology, USC |

Academic Honors and Scholarships

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| 2006 | Final Year Dissertation Fellowship, College of Letters, Arts and Sciences, USC |
| 2002 | Norman James Student Research Award, American College of Sports Medicine, Southwest Chapter |
| 2001 | Women in Science and Engineering Fellowship, University of Southern California |
| 2000 | Phi Kappa Phi Honor Society Inductee, San Diego State University |

Accreditations

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| 1996-present | Certified phlebotomist |
| 1996-present | Advanced/Basic Life Support Certified (CPR)/First Aid |