



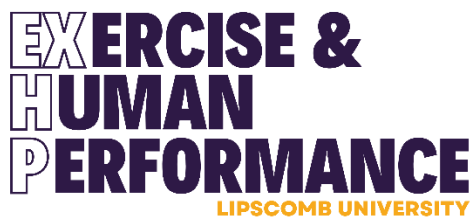
2025 Midwest Chapter of The American
College of Sports Medicine Annual Meeting

Short Program

Amway Grand Plaza Hotel
Grand Rapids, Michigan
October 15-17, 2025

Thank You To Our Exhibitors

Silver Level



Thank You To Our Graduate Fair Members

Gold Level



NORTHERN ILLINOIS UNIVERSITY

**Department of Kinesiology
and Physical Education**

College of Education



Silver Level

University of Wisconsin
Eau Claire

**Master of Science in
Exercise Physiology**



MIAMI UNIVERSITY

COLLEGE OF EDUCATION, HEALTH & SOCIETY

Department of Kinesiology, Nutrition and Health



HEALTH PROFESSIONS

**MASTER OF SCIENCE IN
EXERCISE PHYSIOLOGY**

CENTRAL MICHIGAN UNIVERSITY



RIPON
— COLLEGE —



**UNIVERSITY
of MARY**

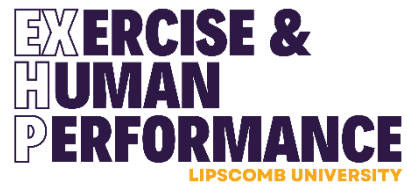
Calvin  *Kinesiology*



**SHERMAN COLLEGE
of CHIROPRACTIC**

**MASTER OF SCIENCE
EXERCISE PHYSIOLOGY**

 **John Carroll**
UNIVERSITY



Bronze Level



ST. CATHERINE
UNIVERSITY



NORTHERN MICHIGAN
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Continuing Education Credit (CEC)

ACSM CEC Certificate

Participant Name

Midwest Chapter of the American College of Sports Medicine

Provider Name

2025 Midwest Chapter of the American College of Sports Medicine
Annual Meeting (Grand Rapids, Michigan)

Course Title

Approved Provider Number: #650390

CECs: 12.0

Kevin D. Ballard

Lead Program Administrator Signature





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Member-At-Large, Year 1



Dr. Matthew Kilgas
Member-At-Large, Year 1



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Special Events

Wednesday (10/15/2025)

2:00 pm – 4:00 pm	Board of Directors Meeting (Pearl Room)
5:30 pm – 7:30 pm	Registration (Center Concourse)
6:00 pm – 7:30 pm	Health Initiatives on Campus Showcase (Center Concourse)
7:30 pm – 10:00 pm	MWACSM Social (Imperial Ballroom)

Thursday (10/16/2025)

8:00 am – 12:00 pm	Registration (Center Concourse)
8:00 am – 12:00 pm	Graduate School Fair (Center Concourse)
8:00 am – 5:00 pm	Exhibitor Fair (West Concourse)
12:00 pm – 2:00 pm	Keynote Presentation and Lunch (Ambassador Ballroom)
2:00 pm – 3:30 pm	Badge Pick-Up (Center Concourse)
3:20 pm – 3:35 pm	Movement is Medicine Activity Break (Grandview, Pearl, and Haldane Rooms)
4:30 pm – 5:30 pm	Leadership & Mentoring Program Speed Mentoring Event (Ambassador Ballroom)
8:00 pm – 10:30 pm	Quiz Bowl (Ambassador Ballroom)

Friday (10/17/2025)

10:00 am – 12:00 pm	Business/Awards Meeting, Brunch, and Keynote Presentation (Ambassador Ballroom)
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Thursday (10/16) Morning Sessions

Symposium #1

8:00 am – 8:50 am

EXERCISE IS MEDICINE-ON CAMPUS: STRENGTHENING IMPACT THROUGH MENTORSHIP

Cassandra Ledman, Whitney Morelli, Isaac Wedig, Devon
Mosquera, Jeremy Steeves, John Durocher, Christopher Schwartz
(Grandview Room)

Moderator: Emerson Sebastião

Session Overview: This session will introduce attendees to the structure and goals of the Midwest ACSM Exercise is Medicine-On Campus (EIM-OC) Mentorship Program, how it works, who it's for, and how to get involved as a mentee or mentor. Additionally, we will highlight the inaugural grantees and showcase the successes, lessons learned, and future directions of this new program. Panelists will include program participants, including representatives from both the mentee and mentor institutions. Panelists will share how they have developed and implemented EIM-OC initiatives at their institutions with guidance from experienced mentors. The panel will include a diverse group of mentees and mentors who represent a range of institution types and project scopes, from campus-wide referral programs to community-engaged interventions. A live Q&A and moderated discussion will allow for audience interaction, including questions about joining or mentoring in the EIM-OC program. Finally, additional resources from the national ACSM EIM-OC program on how to get started will be shared as well.

The panel will include EIM-OC Representatives from the following schools:

Mentee schools: Northern Michigan University, Oakland University, Xavier University

Mentor Schools: Purdue University, St. Ambrose University, Purdue Northwest University



Cassandra Ledman, MS, FCEPA, ACSM-CEP, NBC-HWC
Clinical Associate Professor, Department of Health and
Kinesiology, Purdue University



Whitney Morelli, PhD

Assistant Professor in the Department of Physical Medicine and Rehabilitation and core faculty member of the Cancer Center at the Medical College of Wisconsin



Isaac Wedig PhD, CSCS

Assistant Professor, School of Health and Human Performance, Northern Michigan University



Devon Mosquera, MS, AT, ATC

Coordinator, Fitness Programs & Services, Oakland University



Jeremy Steeves, PhD, ACSM-EP, FACSM
Associate Professor, Program Director, Exercise Science,
Department of Sport Science & Management, Xavier University



John Durocher, PhD, ACSM-EP,
Nils K. Nelson Professor of Integrative Human Health at Purdue
University Northwest



Christopher Schwartz, PhD
Associate Professor, Department of Health Science, St. Ambrose
University

Symposium #2

8:00 am – 8:50 am

EXERCISE ONCOLOGY: APPLYING EVIDENCE TO CLINICAL CARE

Leah Luhring, FACSM (Pearl Room)

Moderator: Malloree Rice



Leah is a Master's prepared Exercise Physiologist with 3 years of experience at the University of Cincinnati Health in the cardiopulmonary rehabilitation and cancer wellness program. Leah holds the American College of Sports Medicine ACSM-EP certification. She is currently a member of ACSM Cancer SIG.

Session Overview: As cancer care evolves, so too does the role of exercise in improving patient outcomes across the continuum of diagnosis, treatment, and survivorship. This session will explore the critical role of clinical exercise professionals in supporting individuals with cancer through personalized, evidence-based interventions. Objectives include how to apply current guidelines for cancer exercise prescription and adapt programs for unique clinical considerations such as bone

metastases, lymphedema, peripheral neuropathy, cardiotoxicity, and cognitive impairment. Emphasis will be placed on translating research into real-world practice, ensuring safety, and optimizing functional recovery at every stage-from rehabilitation to post-treatment rehabilitation.

Learning Objectives:

1. Describe the cancer care continuum and its implications for exercise prescription,
2. Apply evidence-based exercise guidelines and create individualized exercise program
3. Identify and manage common treatment-related considerations
4. Recognize the role of exercise professionals within the interdisciplinary oncology care team

Symposium #3

8:00 am – 8:50 am

HYBRID TRAINING: USING SCIENCE TO BE GOOD (NOT NECESSARILY GREAT) AT MULTIPLE ACTIVITIES

Nicholas Mortensen (Haldane Room)

Moderator: Daniel Carl



Dr. Nicholas Mortensen is an Assistant Professor of Kinesiology at Michigan State University, where he oversees the Strength and Conditioning Concentration within the Applied Sport Sciences Master's program. His research focuses on strength and conditioning protocols across different disciplines and abilities, as well as suitable nutrition strategies to enhance performance and recovery. He is a Certified Strength and Conditioning Specialist (CSCS) through the National Strength and

Conditioning Association. Additionally, he has experience working in various strength and conditioning, corporate wellness, and clinical health fitness settings.

Session Overview: Hybrid (concurrent) training often blends aerobic and resistance training sessions within weekly exercise routines. However, there is ongoing debate about the most effective approach and whether practitioners should implement this style with their clients. In this presentation, you will learn how to effectively utilize hybrid training to achieve various athletic performance and health-related goals. Additionally, you will discover how to apply appropriate short- and long-term training and recovery strategies for effective periodization programming utilizing both objective and subjective metrics to inform your training decisions.

Learning Objectives:

1. Describe what hybrid training is and how it can be used across all populations/ skill levels
2. Apply the most effective ways to design and periodize hybrid athlete programs to maximize adaptations and recovery needs

Symposium #4

9:00 am – 9:50 am

CLINICIANS AS EDUCATIONAL INNOVATORS IN UNDERGRADUATE INSTITUTIONS

Scott Fenstermacher (Grandview Room)

Moderator: Emily Post



Scott Fenstermacher completed his Bachelor of Science in Exercise Science at Taylor University and his Doctor of Physical Therapy at the University of Delaware. He is a board-certified specialist in geriatric and orthopedic physical therapy with ten years of clinical experience. He is currently an Assistant Professor in the Kinesiology department at Taylor University and a co-director of the Invitation Health and Wellness Program.

Session Overview: An increasing number of undergraduate students in Exercise Science and Kinesiology are pursuing careers in healthcare related fields such as physical therapy, occupational therapy, nutrition, or athletic training, which demand the completion of rigorous graduate level educational requirements. Innovative educational programs during their undergraduate coursework, provided by faculty members with clinical experience in these fields, can provide immersive learning opportunities that improve the educational experience for these students and develop requisite skills such as professionalism, communication, and critical thinking to facilitate their success in future graduate coursework and clinical experiences. These programs also have potential to provide distinct institutional benefits, such as student recruitment, campus community wellness, and research opportunities. The purpose of this symposium is to overview unique, innovative programs developed at Taylor University led by a licensed physical therapist who transitioned to a tenure track teaching faculty position within the Kinesiology department of a liberal arts undergraduate institution. This talk will describe the

programs which have been successfully implemented as well as the strengths and challenges of this transition for the educational experience of the students, department, and institution.

Learning Objectives:

1. Following this session, attendees should be able to identify key considerations and opportunities for clinicians transitioning from clinical practice to faculty roles in higher education.
2. Following this session, attendees should be able to describe innovative undergraduate educational programs that clinicians are uniquely positioned to develop and lead within Exercise Science and Kinesiology curricula.
3. Following this session, attendees should be able to evaluate the educational and institutional impact of clinician-led programming, including benefits and challenges for students, academic departments, and the institution.

Symposium #5

9:00 am – 9:50 am

THE IMPORTANCE OF DIAGNOSTIC AND THERAPEUTIC EXERCISE INTERVENTION FOR ATHLETIC PATIENTS FOLLOWING ACUTE CARDIOPULMONARY EVENT

Brenna Geier, Mira Shekaran (Pearl Room)

Moderator: Sandy Knecht



Brenna Geier is a dedicated Exercise Physiologist at Ann & Robert H. Lurie Children's Hospital of Chicago, bringing over five years of experience working with both adult and pediatric populations. She specializes in exercise diagnostic testing and consultations, with additional experience in cardiopulmonary rehabilitation. Brenna leads the hospital's preventive cardiology exercise program, where she plays a key role in both patient care and program development. Passionate about delivering high-quality, personalized care, she is committed to helping young patients build strong foundations for lifelong heart health.



Mira Shekaran is an Exercise Physiologist at Ann and Robert H. Lurie Children's Hospital of Chicago, specializing in pediatric care. With over three years of experience, she has worked extensively with patients who have complex congenital heart disease, heart transplants, and cardiomyopathies and a variety of pulmonary diagnoses. Mira leads program development for both inpatient and outpatient cardiac and pulmonary rehabilitation,

ensuring comprehensive treatment plans for her patients. She also has experience with exercise diagnostic testing and exercise consultation services.

Session Overview: The utility of diagnostic exercise testing and therapeutic exercise intervention (DET&EI) is well known for patients with cardiopulmonary symptoms or congenital or acquired heart disease. In asymptomatic or athletic patients, DET&EI may be overlooked following a cardiac event or intervention, resulting in an increased risk for arrhythmia, deconditioning, and poor psychological outcomes. This session will utilize case studies to demonstrate the importance of DET&EI in athletic patients. We will show how DET&EI allows exercise physiologists to assess important clinical changes, improve exercise self-efficacy and communicate directly with the clinical team to guide patient progress. By using a 1-on-1 rehabilitation model, exercise programming is tailored specifically to patient goals while monitoring hemodynamics, symptoms, and telemetry. In individualized settings, physiologists are better able to ascertain the patient's perception of their condition, anxieties surrounding return to physical activity, and demonstrate patient improvements with training. This practice enables patients to safely and confidently resume their prior, physically active lifestyles. This practice allows patients to safely and confidently return to their prior, physically active lifestyles. Overall, this session will highlight the value and need for incorporating DET&EI services into the management and care of athletic patients following a cardiopulmonary event.

Learning Objectives:

Following this session participants will be able to:

1. Understand the importance of DET&EI in athletic or asymptomatic patients
2. Create personalized, monitored exercise programming with the goal of return to sport
3. Assess the value of DET&EI pertaining to patient outcomes

Symposium #6

9:00 am – 9:50 am

ANABOLIC RESISTANCE AND CARDIAC DYSFUNCTION FOLLOWING EXERCISE IN GROWTH-RESTRICTED MICE

David Ferguson, FACSM (Haldane Room)

Moderator: Lydia Caldwell



David Ferguson's research focuses on the effects of early life growth-restriction on chronic disease risk. Children who are malnourished in early life have a higher incidence of chronic disease in adulthood. The goal of his laboratory is to investigate the molecular mechanisms in a mouse model that occur due to growth-restriction and propose therapeutic countermeasures to increase functional and decrease mortality rates. Ferguson's research has been funded by private industry, the American Heart Association and the National Institutes of Health. His work has been published in *Medicine and Science in Sport and Exercise*, *Journal of Physiology* and *Nature*.

Session Overview: Early-life growth restriction (GR) affects over 160 million children globally each year and is linked to increased risk of chronic disease, frailty, and reduced physical capacity in adulthood. This session presents findings from two complementary studies using murine models to explore how GR-induced during gestation or postnatal development impacts physiological and molecular responses to exercise. We examine both voluntary physical activity (wheel running) and structured eccentric exercise (downhill running) to assess adaptations in skeletal and cardiac muscle. Results reveal that GR mice exhibit anabolic resistance, impaired mTOR signaling, and maladaptive cardiac remodeling, particularly in females. These findings suggest that early nutritional environments program long-term exercise responsiveness and may contribute to health disparities. This work has implications for designing targeted interventions in populations at risk for early-life undernutrition and highlights the importance of considering developmental history in exercise science and public health strategies.

Learning Objectives:

1. Describe how early-life growth restriction alters skeletal and cardiac muscle development and function across the lifespan.
2. Explain the molecular mechanisms-such as mTOR signaling and MuRF1 expression-that underlie anabolic resistance in growth-restricted mice.
3. Compare the physiological outcomes of different exercise modalities (eccentric vs. voluntary) in growth-restricted versus control mice.
4. Discuss the translational implications of growth restriction on exercise responsiveness and chronic disease risk in undernourished populations.

Symposium #7
10:00 am – 10:50 am

**LEVERAGING AI TO ENHANCE CASE-BASED LEARNING
AND SIMULATED PATIENT INTERACTIONS IN HEALTH
SCIENCES EDUCATION**

Kyle Timmerman, FACSM, Jon Stavres (Grandview Room)

Moderator: Jeremy Steeves



Kyle Timmerman, PhD, FACSM is a Professor and Interim Chair in the Department of Kinesiology, Nutrition, and Health (KNH) at Miami University. His work has been funded by the NIH and corporate entities. His research has focused on 1) anti-inflammatory effects of exercise, 2) muscle protein metabolism, and, more recently, 3) active transport. He has published 53 journal articles. His work has been cited more than 8,000 times.



Jon Stavres, PhD is an Assistant Professor in the Department of Kinesiology, Nutrition, and Health (KNH) at Miami University. His research focuses on cardiovascular and autonomic control in humans, with a particular emphasis in cardiometabolic disease. His work has been funded by the NIH, AHA, and other foundational entities. He received his PhD from Kent State University and completed his postdoctoral training at the Penn State Heart and Vascular Institute (HVI).

Session Overview: Artificial intelligence (AI) offers transformative opportunities for interactive learning in health sciences education. This session will explore two AI-assisted pedagogical strategies designed to enhance student learning and engagement in exercise science and dietetics. First, we describe

how AI tools like ChatGPT can be used to generate structured, adaptable case studies aligned with course objectives. These AI-created cases facilitate critical thinking, clinical reasoning, and the development of personalized interventions while reducing instructor workload. Second, we will demonstrate how ChatGPT can serve as a dynamic, virtual patient. By prompting the AI to simulate individual patient responses, students engage in realistic clinical conversations that mirror real-world variability and decision-making. This approach supports the development of soft skills, including communication and empathy, while reinforcing core course concepts. In addition, AI can be leveraged to generate grading rubrics tailored to the learning objectives of each case, enhancing transparency for students and simplifying assessment for faculty. Both

strategies provide scalable, high-quality learning experiences adaptable to diverse teaching formats. The session will include examples, implementation tips, and discussion of preliminary classroom outcomes.

Learning Objectives:

1. Describe two AI-assisted approaches to case-based learning in health sciences education.
2. Identify the benefits and limitations of using AI to generate case studies and simulate virtual patients.
3. Apply strategies for integrating AI tools into their curriculum to enhance student engagement and learning outcomes.
4. Discuss the role of AI in promoting scalable and personalized teaching practices across instructional modalities.

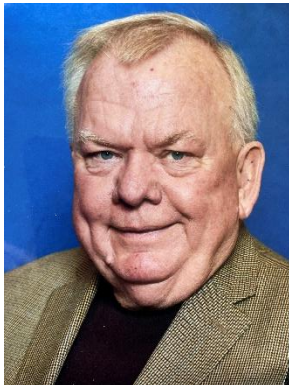
Symposium #8

10:00 am – 10:50 am

STRENGTH IN MOTION: THE IMPACT OF KARATE ON INDIVIDUALS LIVING WITH PARKINSON'S DISEASE

Terry Dibble (Pearl Room)

Moderator: Garrett Griffith



Terry currently works as a Special Instructor in the School of Health Sciences, Human Movement Sciences Department. He is responsible for the practicums and internships for the Undergraduate and Graduate students in the Exercise Science Program. Terry has a Master's Degree in Exercise Science (1991) and Psychology (2023). Terry has taught at Oakland University since 1998, in the School of Health Sciences. He is currently working on his PhD in Human Movement Sciences in the School of Health Sciences. His dissertation is investigating the impact on dual motion activity (Karate) on fall risk, stability, and walking speed.

Session Overview: There has been a significant increase in the prevalence of Parkinson's Disease in the United States as well as world-wide. Determining what works for primary, secondary, and tertiary prevention is critical. Finding non-medicinal methods to treat Parkinson's is also very critical to minimize the motor and non-motor signs and symptoms of this disease. Research has studied different forms of physical activity to enhance the quality of life for Parkinson's Patients, such as boxing and dance. A case study was completed to investigate the impact of Karate on the balance, stability, and Life Satisfaction of individuals living with Parkinson's Disease. We pretested 7 individuals, provided a 10 week, 2 times per week exercise intervention and then post tested them. There will be a 3 month and 6 month follow up starting in July. This study is unique in that the focus is on a Martial Art training program, which has limited research within this population, and using a validated tool to objectively measure balance and stability (BTracks™). This session will examine the results of a 10-week Karate training session on individuals who live with Parkinson's Disease. A discussion related to the assessment using the BTracks™ Unit to assess balance and stability will be presented. Grip Strength, stride length, and life satisfaction were also measured and will be discussed in the session. This research supports the importance of physical activity for individuals with Parkinson's Disease.

Learning Objectives:

Following the presentation, the attendees will be able to:

1. Understand the benefit of dual task activities.
2. Gain an appreciation for the motor and non-motor symptomology of Parkinson's Disease patients and the history of the disease.
3. Recognize the importance of challenging the participants beyond what they believe they can accomplish.

Symposium #9

10:00 am – 10:50 am

MAKING WEIGHT THE RIGHT WAY: WEIGHT REDUCTION AND NUTRITION RECOMMENDATIONS FOR WRESTLERS

Andrew Jagim (Haldane Room)

Moderator: Alex Claiborne



Dr. Jagim is the Director of Sports Medicine Research at Mayo Clinic Health System in La Crosse, Wisconsin. His research focuses on how nutrition and exercise-related strategies influence the performance and health of athletes. This work has led to 130 publications in peer-reviewed journals and presentations at numerous national conferences. Dr. Jagim is also a certified strength and conditioning specialist through the National Strength and Conditioning Association and a certified sports nutritionist. He works closely with high school and collegiate wrestlers regarding performance nutrition strategies and weight management efforts.

Session Overview: This presentation will provide a summary of the weight certification process used to determine minimal wrestling weights in the United States at both the high school and collegiate level for men's and women's wrestling. Additionally, the presentation will highlight known health risks associated with excessive or frequent weight cycling in wrestling such as excessive fluid loss, low energy availability and female athlete triad. Lastly, the presentation will provide recommendations on evidence-based strategies for safe and effective weight-reduction strategies to help wrestlers ""make weight"" for competition.

Learning Objectives:

1. Know the steps involved in the weight certification process for men's and women's wrestling at the high school and collegiate levels.
2. Understand the health and safety concerns of excessive weight cutting and frequent weight cycling in wrestling.
3. Know the evidence-based guidelines for safe and effective weight-reduction strategies as part of a wrestler's weight management strategy.

Symposium #10

11:00 am – 11:50 am

LEVERAGING GENERATIVE AI TO CREATE OPEN EDUCATIONAL RESOURCES

Matthew Kilgas (Grandview Room)

Moderator: Steve Elmer



Dr. Matthew Kilgas is an Associate Professor in the School of Health and Human Performance at Northern Michigan University (NMU) and the 2025–2027 NMU Teaching and Learning Scholar. His research focuses on exercise-based interventions to restore musculoskeletal function and improve performance in clinical and athletic populations. An active advocate for open education, Dr. Kilgas is leading the development of two OER textbooks and exploring the use of generative AI to support instructional design. He teaches graduate and undergraduate courses in exercise physiology, chronic disease management, and research methods.

Session Overview: This session explores the potential use of generative AI in the creation of Open Educational Resources (OER). OER are teaching materials that can be retained, reused, revised, remixed, and redistributed due to their license. During the 2021-2022 academic year, college students spent up to \$1,240 per year on books; this cost led 63 percent of students to decide not to purchase a textbook. OER may help reduce this financial barrier by providing access to free or low-cost instructional materials. Additionally, the use of OER allows instructors to customize course materials, better aligning them with learning objectives. OER are in the public domain; therefore, instructors can use generative AI to assist in writing, revising, and formatting, accelerating the development of OER. This session will highlight Northern Michigan University's successful OER initiative and showcase how generative AI was used to assist in the creation of a personal well-being textbook built with LibreTexts. Furthermore, we will detail a proposed study that utilizes surveys and focus groups to investigate students' perceptions of course material affordability. This research aims to inform future OER development, with a focus on understanding the diverse experiences of students, including those who are Pell or TIP eligible or facing housing insecurity, to ensure equitable access and improved outcomes for all.

Learning Objectives:

1. Define Open Educational Resources (OER) and explain how open licensing enables instructors to use this content.
2. Demonstrate how generative AI tools can support the creation, revision, and formatting of OER.
3. Describe how OER contributes to equitable access by reducing financial barriers to course materials.

Symposium #11

11:00 am – 11:50 am

DYSAUTONOMIA AND SPORTS-RELATED CONCUSSION

Robert Baker, FACSM (Pearl Room)

Moderator: Nicholas Mortensen



Dr. Baker received his Medical Degree and Doctorate (PhD) from the University of Illinois, Urbana-Champaign. He has been a Certified Athletic Trainer since 1986. He completed residency in Family Medicine at MSU-Kalamazoo Center for Medical Studies. In 1999, he completed a fellowship in Sports Medicine at Michigan State University. Currently, Dr. Baker is the Director of the Primary Care Sports Medicine Fellowship at Western Michigan University School of Medicine Clinics. He is the Team Physician for Western Michigan University and Professor of Clinical Medicine at Michigan State University and Western Michigan University, Homer Stryker, MD School of Medicine.

Session Overview: Dysautonomia has garnered much attention in the last years since COVID. Postural orthostatic tachycardia syndrome (POTS) is becoming a much more common diagnosis in athletes. This session will be clinically directed with an illustrative case in an athlete. The role of dysautonomia in prolonged sports related concussion symptoms. Comparisons will be made regarding POTS and persistent concussion symptoms. Techniques for diagnosis and implications for treatment of dysautonomia will be presented. Special consideration of measurement of heart rate variability HRV will also be presented, with discussion of mobile devices.

Learning Objectives:

1. To compare post-concussion recovery among the neurological domains of symptom evaluation, cognition, balance, ocular-motor, and autonomic nervous system [using the surrogate of heart rate variability (HRV)] and with the clinical determination that an athlete has recovered.
2. To describe the neurological effects of concussion within these domains and any association among the domains affected by postural orthostatic tachycardia syndrome (POTS).
3. To describe longitudinal patterns of recovery from concussion within these domains.

Overview of Student Presentations

9:00 am – 10:00 am Poster Session #1 (Crown Foyer)

10:00 am – 11:00 am Poster Session #2 (Crown Foyer)

11:00 am – 12:00 pm Oral Session #1 (Haldane Room)

Moderator: Terence Moriarty



Thursday (10/16) Afternoon Sessions

Keynote Presentation and Lunch

12:00 pm – 2:00 pm

**EXERTIONAL HEAT STROKE: A PUBLIC HEALTH CRISIS
IN A WARMING WORLD-EXPLORING CURRENT EFFORTS
TO MITIGATE THE RISKS**

Douglas Casa, PhD, FACSM, ATC, FNAK, FNATA (Ambassador
Ballroom)



Dr. Casa is a Board of Trustees Distinguished Professor and Chief Executive Officer of the Korey Stringer Institute in the Department of Kinesiology at the University of Connecticut. Dr. Casa earned his bachelor's degree in biology from Allegheny College in 1990; his master's degree in athletic training from the University of Florida in 1993; and his doctorate in exercise physiology from the University of Connecticut in 1997.

Dr. Casa will identify and describe current best practices for exertional heat stroke prevention, recognition, treatment, and return to activity. He will compare accuracy of various temperature assessment devices in exercising individuals and acceptable cooling modalities to use in the event of exertional heat stroke. He will also discuss strategies for implementing policies to keep laborers, warfighters, and athletes safe during sport and physical activity. Dr. Casa will share a compilation of resources available in order to provide employers evidence of gaps in their current policy and procedures for dealing with possible cases of exertional heat stroke.

Professional Presentations

Symposium #12

2:30 pm – 3:20 pm

CARDINAL FIT: ELEVATING THE CURRICULUM WITH AN INTEGRATED EXERCISE IS MEDICINE-ON CAMPUS PROGRAM

Marilyn Skarbek (Grandview Room)

Moderator: Jon Stavres



Marilyn holds a BS degree in Nutrition and a MS degree in Exercise Physiology with a specialization in Preventive and Rehabilitative Cardiovascular Health. She is certified as a Clinical Exercise Physiologist (ACSM-CEP) and as a Strength and Conditioning Specialist (NSCA-CSCS). She is an Associate Professor of Exercise Science at North Central College and the owner of MGS Health Partners, a clinical exercise physiology practice. She has worked with multiple populations including generally healthy individuals, athletes, and those with chronic disease. She has authored a textbook for exercise science students and has been quoted in exercise related publications.

Session Overview: An Exercise is Medicine - On Campus program has the potential to significantly elevate your academic program! Integrating EIM-OC programming into your curriculum can enhance rigor and add distinctiveness to your curriculum, improve student learning outcomes, drive student enrollment, and support student and faculty research. Learn how a college successfully integrated a hands-on, client serving EIM-OC program into the curriculum and how the integration has supported students, faculty, and the community. Attendees will receive information on how to utilize their new or existing EIM-OC initiative to provide exercise and wellness related services to clients and how to integrate those services with academic programming to support student learning. Tips on navigating barriers, resource management, and curriculum development will be included.

Learning Objectives:

1. Identify opportunities within a new or existing EIM-OC program to serve the campus community.
2. Identify areas in a curriculum that can successfully support integration with an EIM-OC initiative.
3. Determine how to effectively utilize EIM and institutional resources to support integration of EIM programming in the curriculum.

Symposium #13
2:30 pm – 3:20 pm

**FROM THE CLASSROOM TO CLINICAL IMPACT:
EXPLORING CEP CAREERS TODAY AND TOMORROW**
Cassandra Ledman, Sandy Knecht, Malloree Rice, David Running
(Pearl Room)
Moderator: Brian Rider



Cassandra Ledman, MS, ACEM-CEP, NBC-HWC, is a Clinical Associate Professor at Purdue University, where she teaches undergraduate and graduate courses in Clinical Exercise Sciences and Health and Wellness Coaching. She led Purdue's program to NBHWC accreditation and chairs the university's Exercise is Medicine® On Campus initiative. Cassandra is actively involved in the Midwest Chapter of ACSM, serving as Membership Committee Co-Chair, EIM-OC Committee Member, and former Board member. She is also President-Elect of the Clinical Exercise Physiology Association (CEPA), where she leads advocacy efforts for accreditation and professionalization. Her

academic and research interests focus on experiential learning, professional identity formation, and preparing students to optimize patient outcomes through evidence-based CEP, HWC and lifestyle medicine approaches in preventive care and chronic disease management.



Sandy Knecht, MS, ACEM-CEP, is a master's prepared Clinical Exercise Physiologist with over 25 years' experience in cardiopulmonary exercise testing in pediatric and adult congenital patients. She is currently a Senior Clinical Exercise Physiologist and the Internship Coordinator at Cincinnati Children's Hospital. Sandy holds the American College of Sports Medicine ACSM -CEP certification with the RCEP distinction and the AACVPR's CCRP certification. Sandy is active in several professional organizations and is currently serving on the Midwest ACSM (MWACSM) board of directors as the co-chair of the clinical committee, Clinical Exercise Physiology Association (CEPA) as a member of the credentials committee and North American Society for Pediatric Exercise Medicine (NASPEM) as the clinical position on the board of directors. She

also holds committee positions with ACSM's CCRB, EIM pediatric committee, and the SHI Youth Sports & Health committee. Previously, she has held positions as the Member-At-Large with both MWACSM and CEPA and a member of CEPA's registry committee. Sandy has ongoing involvement in research projects, publications, and our cardiopulmonary lab's educational and internship programs.



Malloree Rice, MS, ACSM - CEP, CCRP is a Master's prepared Clinical Exercise Physiologist with 9 years of experience in cardiopulmonary exercise testing and cardiopulmonary rehabilitation. She is currently a Clinical Exercise Physiologist and Internship Coordinator at the University of Cincinnati Health in the cardiopulmonary rehabilitation and cancer wellness program. Malloree holds the American College of Sports Medicine ACSM -CEP certification with the RCEP distinction and is a Certified Cardiac Rehabilitation Professional through American Association of Cardiovascular and Pulmonary Rehabilitation. She is currently a member of Clinical Exercise Physiology Association (CEPA) credentials committee and Cardiovascular Credentialing International Certified Cardiographic Technician (CCT) Exam committee. Malloree has served as the clinical member at large for the Clinical Exercise Physiology Association and President of the Ohio Association of

Cardiovascular and Pulmonary Rehab.



David Running, ACSM-CEP, is an ACSM CEP with 14 years of experience in Exercise Testing, Cardiac Rehabilitation, and Pulmonary Rehabilitation. He is currently the Manager and Internship Coordinator at University of Michigan Health- West Cardiovascular Rehabilitation. David has been a member of ACSM since 2012 when he received his CEP. David is currently a member of the Clinical Exercise Physiology Association. He is also part of the Student Advisory Committee with the MSCVPR, as well as a Member of the GVSU Exercise Science Advisory Committee. David has worked in Cardiac Rehab at UM West since the program's beginning in 2017.

Session Overview: This interactive panel discussion is designed for students and early-career professionals seeking to establish and advance their careers in clinical exercise physiology. Featuring panelists from CEPA leadership, academia, and clinical practice, the session offers a multi-perspective view on the evolving opportunities in the field. Recent efforts advocate for the clinical exercise physiologists, including the characterization of practice patterns, salary trend analyses, and collaborative initiatives to expand clinical autonomy, will serve as the foundation for discussion. Attendees will gain a comprehensive overview of CEP career pathways, highlighting key competencies, professional growth strategies, and advocacy efforts spanning various healthcare settings and patient populations.

Panelists from Cincinnati Children's Hospital, University of Michigan Health, UC Health & Purdue University will discuss:

- Career development in CEP-certifications, credentialing, and specialization opportunities.

- Salary trends and employment considerations-factors influencing professional stability and advancement.
- Navigating the healthcare landscape-how CEP professionals can integrate into various clinical settings.
- Strengthening autonomy and impact-strategies for advocating for CEP roles within interdisciplinary healthcare teams.
- Professional networking and mentorship-leveraging connections to propel career progression.

Learning Objectives:

1. Understand the foundational factors influencing success as a clinical exercise physiologist.
2. Identify pathways for both personal career advancement and broader contributions to the field.
3. Recognize the unique roles and diverse clinical populations served by clinical exercise physiologists.
4. Explore effective strategies for networking, advocacy, and securing professional opportunities.

Symposium #14

2:30 pm – 3:20 pm

RELATIVE ENERGY DEFICIENCY IN SPORT: CLINICAL RECOGNITION, CONSEQUENCES, AND INTERVENTION STRATEGIES

Jill Moschelli, FACSM (Haldane Room)

Moderator: James Sackett



Dr. Jill S. Moschelli, MD, MBA, FACSM, FAAFP, is a board-certified family and sports medicine physician, fellowship-trained in primary care sports medicine. She serves as Program Director of the MSU Primary Care Sports Medicine Fellowship and Associate Professor at Michigan State University. A team physician for USA Women's Ice Hockey and MSU Athletics, she is active in leadership roles with ACSM and AMSSM. Dr. Moschelli is a published researcher, national presenter, and advocate for female athlete health, with extensive experience in academic medicine, clinical education, and elite athletic event coverage.

Session Overview: Relative Energy Deficiency in Sport (RED-S) is a critical yet often underrecognized clinical condition that affects athletes across all levels and disciplines. Rooted in an imbalance between dietary energy intake and energy expenditure, RED-S has wide-ranging physiological and psychological consequences, including impaired metabolic rate, menstrual function, bone health, immunity, cardiovascular health, and mental well-being. This session will explore the current evidence on the pathophysiology, clinical presentation, and consequences of RED-S, drawing from both emerging research and case-based applications. Practical intervention

strategies—including return-to-play guidance, nutritional rehabilitation, and multidisciplinary management—will also be discussed. This topic is timely and highly relevant, as RED-S continues to impact athletic performance, health outcomes, and long-term well-being, and it demands greater awareness and evidence-based clinical action among exercise professionals, clinicians, and educators alike.

Learning Objectives:

Following this session, attendees will be able to:

1. Identify key clinical signs, symptoms, and risk factors associated with Relative Energy Deficiency in Sport (RED-S).
2. Understand the short- and long-term physiological and psychological consequences of RED-S in athletes of all genders.
3. Apply evidence-based strategies for screening, diagnosis, and interdisciplinary management of RED-S.
4. Develop effective return-to-play and prevention protocols that consider nutritional, medical, and sport-specific factors.

3:20 pm – 3:35 pm

MOVEMENT IS MEDICINE ACTIVITY BREAK

EIM-OC team members will lead the audience through some light stretching, mindful breathing, and a few select qigong/yoga poses (Grandview, Pearl, and Haldane Rooms)

Professional Presentations

Symposium #15

3:40 pm – 4:30 pm

HACKING UP A LUNG? IMPACT OF AEROBIC EXERCISE ON IMMUNE FUNCTION

Bradley Kendall, Brandon Dykstra, FACSM (Grandview Room)

Moderator: Robert Baker



Bradley Kendall is an associate professor of kinesiology at Taylor University. His teaching interests include neuromuscular physiology, strength and conditioning, and research methods. Over the past 5 years, his scholarly pursuits have included immune function in response to exercise, exercise and its impact on cognition, and implications of diabetes on postural control. He earned a BA from Bethel University, MS from Western Michigan University, and PhD from the Wayne State University.



Brandon Dykstra is an associate professor of kinesiology at Taylor University. His teaching interests include cardiorespiratory physiology, exercise assessment, and endurance training. Over the years, his scholarly pursuits have included immune function in response to exercise, pediatric exercise metabolism, and pediatric autonomic function. He earned a BA from Calvin College and an MS and PhD from the Human Performance Laboratory at Ball State University.

Session Overview: Research on exercise and immune function dates back to the late 19th century. However, by the early 2000s, research supported that the immune system appeared to be more impacted following acute exercise compared to chronic exercise. For example, following acute exercise, individuals appear to

experience some degree of altered immunity for a period of time referred to as the 'open window' hypothesis. However, over the past two decades, a number of studies have continued this work to better understand (1) if exercise modality impacts immune response to exercise, (2) how intensity and duration alter immune function in response to acute exercise, (3) if training status and fitness level impacts the changes following exercise, and (4) potential physiologic explanations for the connection between exercise and immune function. The purpose of this symposium is to (1) give a general description of standard methods of assessing the relationship between exercise and immune function, (2) discuss the history and findings of early work on exercise and immune function and (3) explain more recent work on how exercise intensity, duration, and individual characteristics impact immune response following exercise. The findings will be summarized to provide practical application, both for competitive and recreational exercisers. Along the way, the remaining knowledge gaps will be highlighted.

Learning Objectives:

1. Attendees will learn the history of exercise and immunology research.
2. Attendees will learn the current state of knowledge regarding the interaction between exercise and immune function.
3. Attendees will learn which questions remain to be answered and the trajectory of exercise and immune function research.

Symposium #16
3:40 pm – 4:30 pm

BUILDING BETTER MUSCLE: STRENGTH, SIZE, AND THE SCIENCE BEHIND MUSCLE QUALITY

Dakota Deiwert, Youngjun Lee (Pearl Room)

Moderator: Adam Coughlin



Mr. Deiwert is a Ph.D. candidate and research assistant at Indianapolis University Indianapolis. His current research interests are the underpinnings of muscle quality, how it may be altered in individuals with obesity and/or type 2 diabetes, and how to improve muscle quality with resistance training in these individuals.



Mr. Lee is a Ph.D. candidate in Biomedical Engineering at Purdue University. His research focuses on the use of artificial intelligence and radiomics to analyze musculoskeletal health, particularly bone quality under chronic disease conditions. He has applied advanced imaging techniques and machine learning algorithms to improve non-invasive assessment of bone changes and composition. His work aims to enhance early detection and monitoring of musculoskeletal deterioration, especially in vulnerable populations such as those with chronic kidney disease or diabetes.

Session Overview: Muscle quality (MQ) combines strength and size into a single outcome of overall function and is calculated as the strength of a muscle group(s) divided by the size of the associated muscle(s) for a given movement. Factors that can increase MQ include resistance training (RT), while aging and obesity are known to decrease MQ. Most recently, there is a focus on maintaining high MQ during weight loss from drug therapies like Ozempic. Mr. Deiwert will summarize basic tenets of muscle quality and highlight its modifiers, with specific emphasis on sex, adiposity, age, and the interaction of these factors with resistance training results. Mr. Lee will focus on the assessment of muscle size and describe innovative analytic approaches to enhance measurement efficiency and accuracy. His portion will cover imaging-based methods like image segmentation and how new computational tools can provide detailed non-invasive insights into muscle composition. These strategies allow MQ evaluation across diverse populations and can complement traditional strength testing by offering detailed structural information. Overall, the goal of this session is to discuss the measurement and translatability of MQ as a key measure of muscle health in healthy and special populations.

Learning Objectives:

1. Identify the variables needed to calculate muscle quality.

2. Identify best practices for strength testing and assessment of muscle size from imaging.
3. Understand what factors modify muscle quality towards improvement (like RT) or impairment (like aging or excess adiposity).

Symposium #17

3:40 pm – 4:30 pm

METABOLIC SYNERGY: HOW OBESITY & DIABETES FUEL CANCER - AND EXERCISE IS THE ANTIDOTE

Craig Broeder, FACSM (Haldane Room)

Moderator: Craig Berry



Craig E. Broeder, Ph.D., FACSM, FNAASO, is Founder and CEO of Exercising Nutritionally, LLC, a clinical research company advancing evidence-based preventive wellness and human performance. A fellow of the American College of Sports Medicine and past president of MWACSM, he has led research on nutrition and exercise across populations from children to elite athletes. He served as lead physiologist for Red Bull's international endurance projects, featured on 60 Minutes Sports, ESPN, Outside Magazine, and the Red Bull Channel. In 2009, he established the ACSM "Kay and Craig Broeder Preventive Exercise & Nutrition is Medicine Cancer Fund."

Session Overview: Obesity and type 2 diabetes are powerful, modifiable drivers of several cancers-including breast, colorectal, endometrial, liver, and pancreatic. These metabolic disorders fuel tumor development through chronic inflammation, hyperinsulinemia, elevated IGF-1, and disrupted adipokine and sex hormone signaling. This talk explores the molecular mechanisms that connect these conditions and highlights how exercise serves as a potent preventive and adjunctive therapy. Drawing from current clinical translational research, a comparison how endurance and resistance training impact insulin sensitivity, inflammation, immune function, and tumor biology. Endurance training activates mitochondrial and AMPK pathways that lower insulin and systemic inflammation, while resistance training builds lean mass, enhances glucose disposal, and counters treatment-related sarcopenia. The presentation emphasizes combined training as the most effective approach to breaking the obesity-diabetes-cancer cycle, with evidence-based exercise prescriptions for prevention, survivorship, and improved clinical outcomes.

Learning Objectives:

1. Describe the molecular mechanisms by which obesity and type 2 diabetes promote cancer development, including roles of hyperinsulinemia, IGF-1 signaling, chronic inflammation, and adipokine dysregulation.
2. Differentiate the specific molecular effects of endurance versus resistance training on cancer-related pathways, including AMPK activation, mTOR signaling, myokine release, and modulation of systemic inflammation.
3. Analyze current research evidence on how each exercise modality influences cancer risk, treatment response, and survivorship outcomes in metabolically compromised populations.

4. Design evidence-based exercise prescriptions that integrate both endurance and resistance modalities to address the metabolic-oncologic interface and improve patient-centered cancer outcomes.

Symposium #18

4:40 pm – 5:30 pm

RESEARCH CAREERS AND OPPORTUNITIES IN CLINICAL EXERCISE PHYSIOLOGY

Garett Griffith, FACSM, Steve Elmer (Grandview Room)

Moderator: Judi Juvancic-Heltzel



Dr. Garett Griffith is an Assistant Professor at Northwestern University, where he directly oversees clinical exercise physiology-based research studies in patient populations including Parkinson's disease, cystic fibrosis, and more. Dr. Griffith has worked with grant-sponsored and industry-funded research studies, and has overseen student and early career research staff in various research settings.



Dr. Elmer is a faculty member in the Doctor of Physical Therapy Program at St. Catherine University. He teaches courses in kinesiology, exercise physiology, and research methods. His research goals are to find better ways to restore musculoskeletal function, maintain health, and improve performance in healthy and clinical populations. Specifically, his research is focused on three key areas: 1) mechanics of skeletal muscle contraction, 2) coordination of locomotor tasks, and 3) exercise interventions to improve physical conditioning and mobility. Applications for his research range from basic aspects of muscle contraction to applied human performance in a variety of settings including injury, rehabilitation, ergonomics, and sport.

Session Overview: A degree in clinical exercise physiology confers a breadth of clinical and analytical skills which position clinical exercise physiologists as highly capable members of clinical research teams. The exercise testing, prescription, and consultation experience held by students graduating from these programs can allow them to play integral roles in the

development of exercise-based clinical research protocols, implementation of those protocols, and training of research coordinators, principal investigators, and other members of the clinical research study team. Further, there is a need for translation of these research findings into clinical practice through updates to and development of exercise-based guidelines. This session will highlight completed and ongoing exercise-based research studies, in which clinical exercise physiologists played central parts in the study team. Further, we will showcase skills and provide strategies that clinical exercise physiologists can use to advance the body of literature which provides support for exercise-based interventions. Additionally, the session will showcase how clinical exercise physiologists have the knowledge, skills, and abilities to improve research workflow and serve as an integral part of the research team.

Learning Objectives:

Following this presentation, attendees will be able to:

1. Understand how exercise-based research studies can inform guidelines in clinical populations, using examples in Parkinson's disease and cystic fibrosis.
2. Identify what knowledge, skills, and abilities they have which are directly transferrable to research settings.
3. Understand how research opportunities exist in their current environment, and how they can use research to open new professional pathways.

Symposium #19

4:40 pm – 5:30 pm

EXPLORING HEALTH BEHAVIORS AMONG COLLEGIATE ATHLETES

Emily Van Wasshenova (Pearl Room)

Moderator: Gabrielle Dillon



Dr. Emily Van Wasshenova is an assistant professor at Oakland University in Rochester, Michigan. She leads the Health Behavior and Promotion Research Lab, focusing on understanding and promoting physical activity and other health behaviors using theory-driven approaches. She is also the faculty director of the Community Health Engagement and Empowerment Research (CHEER) Lab, which provides undergraduate students with research skills training and opportunities to engage in real-world health research and service through faculty-led research projects. Dr. Van Wasshenova also serves as the Communication Chair for MWACSM.

Session Overview: Collegiate athletes' health behaviors have significant implications for their athletic performance, current well-being, and long-term health. This session will review the current literature and present original research exploring the health behaviors of NCAA Division I student-athletes (n=159), with a focus on differences between those in lean sports, where body leanness is emphasized for performance, and non-lean sports. Our findings offer insight into the patterns of health behaviors, including nutrition, supplement use, disordered eating, screen time,

alcohol and drug use, aggression, and sexual behavior. We will also discuss ongoing work exploring how health behaviors might serve as a proxy for identifying athletes who may benefit from mental health referrals, an important approach given increasing attention to athlete mental health. This presentation will help attendees understand athletes' health behaviors and strategies for supporting athlete wellness on campus and foster connections among institutions for future projects.

Learning Objectives:

1. Describe health behaviors prevalent among student-athletes and how these differ by sport team (lean and non-lean sports) and gender.
2. Discuss the relationship between specific health behaviors and mental health in student-athletes.
3. Identify strategies for supporting athlete wellness on campus.

Overview of Student Presentations

2:30 pm – 3:30 pm	Oral Session #2 (Heritage Hill) <i>Moderator: Zachary Sievert</i>
2:30 pm – 3:30 pm	Poster Session #3 (Crown Foyer)
3:30 pm – 4:30 pm	Oral Session #3 (Heritage Hill) <i>Moderator: Alex Claiborne</i>
3:30 pm – 4:30 pm	Poster Session #4 (Crown Foyer)



Friday (10/17) Morning Sessions

Professional Presentations

Symposium #20

8:00 am – 8:50 am

FIREFIGHTER READINESS: ANALYZING RECRUIT TRAINING & SAFETY MEASURES

Dan Carl, FACSM, Alyson Saxton (Grandview Room)

Moderator: Alex Montoye



Daniel L. Carl, Ph.D., FACSM is an Exercise Physiologist and Professor in the Department of Rehabilitation, Exercise and Nutrition Sciences at the University of Cincinnati. He is a Past-President of MWACSM including service as Secretary and Member-at-Large. He is a Fellow of the American College of Sports Medicine including National service as Chair of the Certification-related Content Advisory Committee. Dan is the current UC Past-Chair of Faculty and serves as Program Director of Health Sciences. He conducts research in Stroke Rehabilitation (NIH/NICHD R01HD093694) HIT Stroke Trial, and in collaboration with the Cincinnati Fire Department on Firefighter Health, Wellness and Safety.



Alyson Saxton is an undergraduate student at the University of Cincinnati studying in the Health Sciences program with an emphasis in the Pre-Physician Assistant track. Alyson is a member of the Health Science Club and an Ambassador for the Pre-Professional Advising Center. Alyson's research involvement with the Cincinnati Fire Department serves as her Senior Capstone requirement.

Session Overview: The National Fire Protection Association (NFPA) reported that in 2022, an estimated 65000 firefighter injuries occurred in the line of duty with the vast majority being cardiac or musculoskeletal related. A high mortality rate (45%) has been identified due to sudden cardiac death in firefighters associated with cardiovascular (CV) disease and low levels of physical fitness. The physical nature and emotional stress combine

to strain the CV system raising the risk of a sudden cardiac event. These numbers are elevated when the subsequent 24-hours post fire suppression are included. In addition, non-fatal on-duty CV events are also elevated, being estimated as high as 17-fold greater than SCD. Both fatal and non-fatal CV events are directly related to underlying CV risk factors such as smoking, hypertension, obesity and aerobic fitness levels. Although some injuries and illnesses cannot be eliminated, fire departments are expected to have safety measures in place to decrease risk. The first such safety measure is the training program recruits complete prior to advancing to active duty. This presentation will include analysis of two consecutive recruit training classes for enhancement of their training protocols and take an initial look at measures of stress associated with their participation in the recruit training program.

Learning Objectives:

1. Understand the need for physical fitness and overall cardiovascular health in firefighters.
2. Describe the need for physical agility in maintaining effectiveness in active-duty firefighters.
3. Describe the role that recovery plays in enhancing firefighter health and wellness.

Symposium #21

8:00 am – 8:50 am

EXERCISE DURING PREGNANCY: INFLUENCE ON MATERNAL AND CHILD HEALTH OUTCOMES

Alex Claiborne (Haldane Room)

Moderator: Heather Betz



Dr. Claiborne is an Assistant Professor in the Department of Kinesiology, Nutrition, and Health at Miami University, where he received his M.S. in 2018. He trained under Dr. Todd Trappe at Ball State University, where he obtained his Ph.D. in Human Bioenergetics in 2022. He received his postdoctoral training with esteemed researcher in the field of exercise during pregnancy, Dr. Linda May, at East Carolina University. Dr. Claiborne joined the faculty at Miami in the summer of 2025, and plans to continue work focused on exercise metabolism and energy balance in pregnant and non-pregnant individuals.

Session Overview: Exercise training during pregnancy is a popular modality to accentuate the health of pregnant individuals and their offspring. Evidence has long shown that exercise is safe during pregnancy, and interest in the practice is growing, as a wealth of benefits to maternal and child health outcomes have been discovered more recently. Still, there is currently a lack of attention in 3 specific areas: 1) safe and efficacious exercise dosage, 2) delineation of health effects between mother and child, and 3) cellular responses underlying child health. The proposed session aims to attend to the differences seen in maternal and child health outcomes, with the latter explained in part by infant cellular studies on mesenchymal stem cells (MSCs) harvested from the umbilical cord at delivery. Specifically, the order of presentation for the influence of exercise on health outcomes will be: 1) maternal weight status and metabolic health, indicated by fasted blood lactate measurement, 2) neonatal morphological and physical condition

at birth, and 3) infant body composition at 1-month of age, with a cellular insight into the deposition of triglycerides in adipogenic infant MSCs. The influence of exercise during pregnancy on maternal and child health outcomes will be presented as 1) exercise versus control, and 2) an exercise dose-response, to give preliminary insight into how varying levels of exercise might contribute to health.

Learning Objectives:

1. Exercise during pregnancy manages maternal weight status and metabolic health.
2. Higher doses of exercise improve neonatal outcomes at birth.
3. Exercise during pregnancy moderates infant adiposity at 1 month of age.

Symposium #22

9:00 am – 9:50 am

GROWING EVIDENCE: USING CLINICAL INSIGHTS TO ADVANCE RESEARCH

Lucie Silver, Megan Holmes, Karin Pfeiffer, FACSM, Irene McKenzie (Grandview Room)

Moderator: Brian Parr



Lucie Silver is the Registered Clinical Exercise Physiologist at Health Optimization Services (HOS), working with families pursuing healthier lifestyles.



Megan Holmes is Professor and Director of the Physical Activity and Wellness at Mississippi State University, where she leads research focused on physical activity, child health, and rural health disparities.



Irene McKenzie is a Pediatric Nurse Practitioner with a diverse background across multiple pediatric specialties. She currently practices in HOS at Helen Devos Children's hospital, with a clinical focus on pediatric behavioral health and obesity.



Karin Pfeiffer is a Red Cedar Distinguished Professor in Kinesiology and Director of the Institute for the Study of Youth Sports at Michigan State University. Among other research areas, she conducts interventions to increase physical activity in children and adolescents.

Session Overview: Pediatric obesity remains a pressing public health challenge in the US. The American Academy of Pediatrics (AAP) released its first comprehensive Clinical Practice Guideline in 2023 for the Evaluation and Treatment of Children and Adolescents with Obesity. This session will explore how these guidelines are being implemented in real-world clinical settings by multidisciplinary treatment teams. This session will also discuss how those teams experience this work (e.g., challenges and opportunities) and facilitate collaboration across specialties. A Clinical Exercise Physiologist at Helen DeVos Children's Hospital will be a key presenter. She will not only provide critical insights to clinic life relevant to the session but also provide student attendees exposure to a possible career path as an allied health professional. This session will round out by discussing how clinical data can be harnessed to drive collaborative research and innovation in pediatric obesity treatment. Clinical data reflect the complexity of real-life patients and provide a living record of patient journeys, making findings more generalizable and a viable avenue for making treatment more personalized. An overview of collaborative research efforts (e.g., data registries, implementation science, etc.) will be discussed. Specific attention will be given to the ongoing partnership of the presenters and preliminary findings from these efforts.

Learning Objectives:

1. Demonstrate an understanding of the 2023 AAP Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents with Obesity.

2. Demonstrate an understanding of the exercise physiologist's role in a multi-disciplinary care team approach and day-to-day operations of care team members, specifically focusing on real-world application of the AAP guidelines from first-hand clinical perspectives, highlighting the challenges and opportunities in day-to-day pediatric obesity management.
3. Identify strategies for integrating clinical care and research to build a learning health system that continuously improves pediatric obesity treatment through data-driven insights.

Symposium #23

9:00 am – 9:50 am

BEYOND MUSCLE: DIETARY PROTEIN AND CARDIOMETABOLIC HEALTH IN ATHLETES

Christopher Kotarsky (Haldane Room)

Moderator: Katharine Spillios



Dr. Christopher Kotarsky, PhD, CSCS, is an Assistant Professor in the Department of Rehabilitation, Exercise and Nutrition Sciences at the University of Cincinnati. His research examines how dietary protein, energy balance, and exercise impact muscle health and cardiometabolic risk across the lifespan. With a focus on both athletic and aging populations, his work addresses issues like sarcopenia, metabolic syndrome, and obesity. Dr. Kotarsky has published on topics ranging from plant-based protein in collegiate athletes to time-restricted eating and lean mass preservation in physically inactive adults.

Session Overview: This session takes a closer look at how dietary protein, specifically its source, relates to cardiometabolic health and body composition in collegiate athletes. Drawing on data from Division III male and female athletes, we'll explore patterns in protein intake (animal vs. plant), energy availability, and their associations with fat-free mass and broader health markers. We'll also consider how these relationships may vary by sex, and why that matters when supporting athlete health. While centered on young adults, the discussion touches on how early nutrition patterns, particularly protein quality and energy balance, may shape long-term trajectories in muscle preservation and cardiometabolic resilience, with relevance for aging and sarcopenia risk. Rather than offering blanket recommendations, this session encourages a nuanced understanding of protein quality, quantity, and energy balance, especially in a population often left out of nutrition research. For coaches, dietitians, and professionals working with young athletes, the goal is to highlight emerging questions, challenge assumptions, and share observations that can inform evidence-aligned practice.

Learning Objectives:

1. Identify how protein source and energy availability relate to fat-free mass and cardiometabolic health in collegiate athletes.
 2. Discuss the potential long-term implications of protein intake patterns on aging-related muscle loss and overall health across the lifespan.
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Overview of Student Presentations

8:00 am – 8:50 am	Oral Session #4 (Gerald R. Ford Ballroom) <i>Moderator: Adam Coughlin</i>
8:00 am – 9:00 am	Poster Session #5 (Crown Foyer)
9:00 am – 9:50 am	Oral Session #5 (Gerald R. Ford Ballroom) <i>Moderator: Kayla Dingo</i>
9:00 am – 10:00 am	Poster Session #6 (Crown Foyer)

Business/Award Meeting, Brunch, and Keynote Presentation

10:00 am – 12:00 pm	INTEGRATIVE OMICS: MOLECULAR DRIVERS OF EXERCISE BENEFITS Monica Hubal, PhD, FACSM (Ambassador Ballroom)
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Dr. Hubal is an Associate Professor in the Department of Kinesiology at Indiana University Indianapolis. She is dual-trained in exercise physiology and genetic medicine, making her a key inter-disciplinary expert in molecular exercise science and cardiometabolic research. Dr. Hubal graduated from Richard Stockton University with a B.S. with honors in biology in 1995 and received her M.S. in kinesiology from Texas A&M University in 1999. She earned her doctorate in exercise science from the University of Massachusetts at Amherst in 2006.

The research field of exercise ‘omics has evolved rapidly due to advances in methods, increased data availability and an increased understanding that most traits are highly complex. Exercise scientists have adopted genomic, epigenomic, transcriptomic, proteomic and other approaches to understand variability in complex traits like exercise response. While technologies have advanced within individual ‘omics, analytic approaches need to highlight integration of different data scales to fully understand the complex changes that happen with exercise. Dr. Hubal will present a basic tutorial about exercise ‘omics, how it is studied, and why integration across different levels is vital to understanding exercise. She will then present data from a robust integrative ‘omics study, highlighting the impacts of exercise amount and intensity on molecular changes, including significant sex differences in how males and females respond to exercise.