

Brandon J. Dykstra, PhD

Associate Professor of Kinesiology
Chair, Department of Kinesiology
Taylor University
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EDUCATION

- Ph.D. Human Bioenergetics July, 2019
Human Performance Laboratory
Ball State University, Muncie, IN
Cognate: Physiology
Advisor: Anthony D. Mahon
Dissertation: *Metabolic Flexibility during Exercise in Overweight/Obese Children vs. Lean Children*
- M.S. Exercise Physiology July, 2015
Human Performance Laboratory
Ball State University, Muncie, IN
Thesis: *Maximal Fat Oxidation Rate and Fat_{max} in Boys and Girls at Two Different Maturity Levels*
- B.A. Physical Education – Exercise Science May, 2012
Calvin College, Grand Rapids, MI
Minor: Business

PROFESSIONAL APPOINTMENTS

- Associate Professor of Kinesiology, Taylor University August, 2024 – Present
- Assistant Professor of Kinesiology, Taylor University January, 2019 – August, 2024

TEACHING EXPERIENCE

- Taylor University January, 2019 – Present
EXS 353 – Physical Fitness Assessment
EXS 318 – Therapeutic Exercise and Pharmacotherapy
EXS 274 – Introduction to Exercise Testing
HPH 310 – Cardiorespiratory Physiology and Chronic Disease
KIN 300 – Marathon
KIN 100 – Living Well
- Ball State University Fall, 2018
EXSC 293 – Foundations of Physiology and Exercise

RESEARCH POSITIONS

Doctoral Candidate
Doctoral Research Fellow
Graduate Research Assistant

June, 2017 – July, 2019
August, 2015 – June, 2017
August, 2013 – July, 2015

PUBLICATIONS

(* denotes undergraduate student)

- Kendall, B.; Clarke, E.*; **Dykstra, B.** Acute percussive massage device use does not improve anaerobic performance. *International Journal of Strength and Conditioning*. In press.
- Kendall, B.; Layton, A.*; Daniels, E.*; Ward, A.*; King, D.; **Dykstra, B.** (2024). Effects of cardiorespiratory fitness on changes in secretory immunoglobulin A following a graded maximal exercise test. *Gazzetta Medica Italiana*, 183(7-8), 602-606.
- Deiwert, D.D.; **Dykstra, B.**; Guilkey, J.P.; Heidorn, C.E.; Erichsen, J.; Kuzmaul, D.; Mahon, A.D. (2024). Oxygen uptake efficiency slope in 8- to 12-year-old boys and girls. *The Journal of Sports Medicine and Physical Fitness*, 64(7), 624-630.
- Dykstra, B.**; Griffith, G.; Renfrow, M.; Mahon, A.; Harber, M. (2024). Cardiorespiratory and muscular fitness in children and adolescents with obesity. *Current Cardiology Reports*, 26(5), 349-357.
- Haworth, J.; Lopatin, T.; Daniels, E.*; **Dykstra, B.**; Kendall, B.; Goble, D. (2024). Verbal encouragement provokes significant increases in maximal volitional dynamic postural sway. *Journal of Motor Behavior*, 56(3), 322-329.
- Dykstra, B.**; Kuzmaul, D.; Mahon, A.D. (2023). Metabolic flexibility during exercise in overweight/obese children vs. lean children. *Pediatric Exercise Science*, 35(2), 92-98.
- Guilkey, J.P.; **Dykstra, B.**; Erichsen, J.; Heidorn, C.; Mahon, A.D. (2022). Effect of maturation on parasympathetic modulation during exercise and recovery. *Scandinavian Cardiovascular Journal*, 56(1), 13-22.
- Heidorn, C.E.; **Dykstra, B.**; Conner, C.; Mahon, A.D. (2021). Carbohydrate drink use during 30-minutes of variable-intensity exercise has no effect on exercise performance in premenarcheal girls. *Pediatric Exercise Science*, 33(2), 65-69.
- Dieringer, S.T.; McIntosh, C.E.; Mahon, A.D.; Pistor, C.M.; **Dykstra, B.J.**; Erichsen, J.M.; McIntosh, D.E. (2020). Physical fitness and fundamental motor skill performance in children with autism spectrum disorder attending a summer day camp: a pilot study. *Palaestra*, 34(2), 27-31.
- Erichsen, J.M.; **Dykstra, B.**; Hidde, M.; Mahon, A.D. (2017). Ratings of perceived exertion and physiological responses in children during exercise. *International Journal of Sports Medicine*, 38(12), 897-901.

Guilkey, J.P.; **Dykstra, B.**; Erichsen, J.; Mahon, A.D. (2017). Heart rate response and variability following maximal exercise in overweight children. *Pediatric Exercise Science*, 29(3), 341-349.

PRESENTATIONS

(* denotes undergraduate student)

Noah, M.*, E. Clarke*, B. Layton*, D. King, B. Kendall, **B. Dykstra**. Secretory immunoglobulin A response to acute exercise does not change across a competitive track season. Midwest Chapter of the American College of Sports Medicine Meeting, Grand Rapids, MI, October 16-18, 2024.

Schultz, M.*, E. Clarke*, A. Layton*, D. King, **B. Dykstra**, B. Kendall. Changes in secretory immunoglobulin A levels over a competitive collegiate cross country season. Midwest Chapter of the American College of Sports Medicine Meeting, Grand Rapids, MI, October 16-18, 2024.

Anderson, A.*, C. Robbins*, I. Hunt*, S. Culham*, B. Kendall, **B. Dykstra**, M. Renfrow. Undergraduate-led clinical pediatric weight management in the rural Midwest. The Annual Meeting of the Obesity Society, Dallas, TX, October 14-17, 2023.

Clarke, E.*, C. West*, C. Robbins*, D. King, D. Kaluka, B. Kendall, **B. Dykstra**. Secretory immunoglobulin A in response to marathon training and recovery. Midwest Chapter of the American College of Sports Medicine Meeting, Indianapolis, IN, October 13-14, 2023.

Jeanette, O.*, C. Robbins*, A. Layton*, B. Layton*, D. King, D. Kaluka, **B. Dykstra**, B. Kendall. The effects of rest, moderate intensity, and high intensity exercise on secretory immunoglobulin A levels in collegiate cross-country runners. Midwest Chapter of the American College of Sports Medicine Meeting, Indianapolis, IN, October 13-14, 2023.

Renfrow, M., **B. Dykstra**, I. Hunt*, S. Culham*, A. Anderson*. Clinical pediatric weight management in rural Indiana: a pilot study. The Annual Meeting of the Obesity Society, San Diego, CA, November 1-4, 2022.

Deiwert, D., **B. Dykstra**, J. Guilkey, C. Heidorn, J. Erichsen, D. Kuszmaul, A. Mahon. Oxygen uptake efficiency slope in preadolescent boys and girls. Midwest Chapter of the American College of Sports Medicine Meeting, Indianapolis, IN, October 21-22, 2022.

Hunt, I.*, S. Culham*, A. Anderson*, **B. Dykstra**, M. Renfrow. Undergraduate pediatric weight management in rural Indiana: a pilot study. Midwest Chapter of the American College of Sports Medicine Meeting, Indianapolis, IN, October 21-22, 2022.

Layton, A.*, E. Daniels*, A. Ward*, D. King, **B. Dykstra**, B. Kendall. The relationship between cardiorespiratory fitness, body mass index, and changes in salivary immunoglobulin A (SIgA) following maximal exercise. Midwest Chapter of the American College of Sports Medicine Meeting, Indianapolis, IN, October 21-22, 2022.

Sommers, S.*, S. Snyder*, C. Siefert*, B. Kendall, **B. Dykstra**. The effect of percussion massage gun use on repeated sprint performance in collegiate athletes. Midwest Chapter

- of the American College of Sports Medicine Meeting, Indianapolis, IN, October 21-22, 2022.
- Hunt, I.* , S. Culham*, **B. Dykstra**, M. Renfrow. Clinical pediatric weight management in rural Indiana: a pilot study. Christian Society for Kinesiology, Leisure, and Sport Studies Meeting, Waco, TX, June 8-11, 2022.
- Kregel, M.* , E. Daniels*, J. Haworth, T. Lopatin, D. Goble, **B. Dykstra**, B. Kendall. Verbal encouragement promotes large increases in maximal volitional postural sway. American College of Sports Medicine Meeting, San Diego, CA, May 31-June 4, 2022.
- Ward, A.* , E. Daniels*, A. Layton*, D. King, **B. Dykstra**, B. Kendall. The effects of cardiorespiratory fitness on secretory immunoglobulin A (SIgA). American College of Sports Medicine Meeting, San Diego, CA, May 31-June 4, 2022.
- Hunt, I.* , **B. Dykstra**, M. Renfrow. Clinical pediatric weight management in rural Indiana: a case study. Christian Society for Kinesiology, Leisure, and Sport Studies Meeting, Nashville, TN, June 14-16, 2021.
- Dykstra, B.**, D. Kuzmaul, A. Mahon. Metabolic flexibility during exercise in overweight/obese children vs. lean children. American College of Sports Medicine Meeting, Virtual, June 1-5, 2020.
- Kuzmaul, D., **B. Dykstra**, A. Mahon. Carbohydrate effect on post-exercise performance in prepubescent girls. American College of Sports Medicine Meeting, Virtual, June 1-5, 2020.
- Dykstra, B.**, D. Kuzmaul, A. Mahon. Metabolic flexibility during exercise in overweight/obese children vs. lean children. Midwest Chapter of the American College of Sports Medicine Meeting, Oak Brook, IL, November 8-9, 2019.
- Kuzmaul, D., **B. Dykstra**, A. Mahon. Carbohydrate effect on post-exercise performance in prepubescent girls. Midwest Chapter of the American College of Sports Medicine Meeting, Oak Brook, IL, November 8-9, 2019.
- Heidorn, C., **B. Dykstra**, C. Conner, A. Mahon. Carbohydrate effect on post-exercise performance in prepubescent girls. American College of Sports Medicine Meeting, Orlando, FL, May 28-June 1, 2019.
- Mahon, A., **Dykstra, B.** Symposium: Pediatric exercise metabolism. Midwest Chapter of the American College of Sports Medicine Meeting, Grand Rapids, MI, November 8-9, 2018.
- Heidorn, C., **B. Dykstra**, C. Conner, A. Mahon. Carbohydrate effect on post-exercise performance in prepubescent girls. Midwest Chapter of the American College of Sports Medicine Meeting, Grand Rapids, MI, November 8-9, 2018.
- Mahon, A.D., J.P. Guilkey, **B.J. Dykstra**, J.M. Erichsen, C.E. Heidorn. Cardiac vagal activity in boys and men at rest, during the onset of exercise and during recovery. Pediatric Work Physiology Meeting, Katerini, Greece, October 3-8, 2017.

- Dykstra, B.**, M. Hidde, J. Erichsen, A. Mahon. Metabolic flexibility in lean children: effect of parental BMI. American College of Sports Medicine Meeting, Denver, CO, May 30-June 3, 2017.
- Dykstra, B.**, J. Guilkey, J. Erichsen, C. Heidorn, A. Mahon. Heart rate variability during rest, exercise, and recovery from maximal exercise in boys. Indiana Physiological Society Annual Conference, Indianapolis, IN, February 18, 2017.
- Dykstra, B.**, M. Hidde, J. Erichsen, A. Mahon. Metabolic flexibility in lean children: the effect of parental BMI. Midwest Chapter of the American College of Sports Medicine Meeting, Fort Wayne, IN, November 4-5, 2016.
- Erichsen, J., **B. Dykstra**, M. Hidde, and A. Mahon. Ratings of perceived exertion and physiological responses in boys and girls during exercise. North American Society for Pediatric Exercise Medicine Meeting, Knoxville, TN, August 10-13, 2016.
- Dykstra, B.**, M. Hidde, J. Erichsen, A. Mahon. The use of exercise as a stimulus for a shift in fuel preference for the evaluation of metabolic flexibility in children. North American Society for Pediatric Exercise Medicine Meeting, Knoxville, TN, August 10-13, 2016.
- Mahon, A.D., S. Dieringer, C.E. McIntosh, **B.J. Dykstra**, J.M. Erichsen, and D.E. McIntosh. Relationships between physical fitness and motor skill performance in children with Autism Spectrum Disorder. North American Society for Pediatric Exercise Medicine Meeting, Knoxville, TN, August 10-13, 2016.
- Dykstra, B.**, Guilkey, J.P., Erichsen, J., Mahon, A.D. Maximal fat oxidation and fatmax in boys and girls at two different maturity levels. American College of Sports Medicine Meeting, Boston, MA, May 31-June 4, 2016.
- Dykstra, B.**, Guilkey, J.P., Erichsen, J., Mahon, A.D. Maximal fat oxidation rate and fatmax in boys and girls at two different maturity levels. Midwest Chapter of the American College of Sports Medicine Meeting, Fort Wayne, IN, November 5-7, 2015.
- Erichsen, J.M., **Dykstra, B.J.**, Guilkey, J.P., Mahon, A.D. Comparison of two methods for the identification of maximal fat oxidation and fatmax. Midwest Chapter of the American College of Sports Medicine Meeting, Fort Wayne, IN, November 5-7, 2015.
- Mahon, A.D., **Dykstra, B.J.**, Guilkey, J.P., Erichsen, J.M. Anthropometric and physiologic correlates of maximal fat oxidation in children and adolescents. Pediatric Work Physiology Meeting, Utrecht, Netherlands, September 9-13, 2015.
- Dykstra, B.**, Guilkey, J., Warmoth, P., Mahon, A.D. Ratings of perceived exertion during incremental and steady-state exercise. Midwest Chapter of the American College of Sports Medicine Meeting, Merrillville, IN, November 7-8, 2014.
- Guilkey, J., Overstreet, M., **Dykstra, B.**, Mahon, A.D. Influence of aerobic fitness on parasympathetic modulation at rest in children. Midwest Chapter of the American College of Sports Medicine Meeting, Merrillville, IN, November 7-8, 2014.

GRANT APPLICATIONS

Taylor University – Women’s Giving Circle <i>Relationship between Cortisol and Secretory Immunoglobulin A after Exercise in Competitive Runners</i> Requested: \$5000; Funded: \$5000	October, 2023
Taylor University – Women’s Giving Circle <i>Impact of Exercise Duration and Intensity on Secretory Immunoglobulin A in Collegiate Cross Country Runners</i> Requested: \$10,000; Funded: \$4,550	October, 2022
Taylor University – Women’s Giving Circle <i>Live Well, Pediatric Weight Management – Phase II</i> Requested: \$10,000; Funded: \$5,000	October, 2022
Taylor University – Faculty Mentored Undergraduate Scholarship <i>Live Well: Development and Evaluation of a Clinic-Based Weight Management Program – Phase II</i> Requested: \$6900; Funded: \$7390	February, 2022
Taylor University – Women’s Giving Circle <i>Recruitment Enhancement for Live Well</i> Requested: \$5000; Funded: \$1800	October, 2021
Taylor University – Faculty Mentored Undergraduate Scholarship <i>Live Well: Development and Evaluation of a Clinic-Based Weight Management Program</i> Requested: \$6900; Funded: \$7700	April, 2021
Taylor University – Women’s Giving Circle <i>The Effect of Exercise Intensity on Markers of Cognition in Children</i> Requested: \$5000; Funded: \$5000.	November, 2020
Taylor University – Faculty Mentored Undergraduate Scholarship <i>The Effect of Exercise Intensity on Markers of Cognition in Children</i> Requested: \$3200; Funded: \$3445	May, 2020
Ball State University ASPIRE Program – Graduate Research Grant <i>The Effect of BMI on Metabolic Flexibility during Exercise in Children</i> Requested: \$1000; Funded: \$1000	November, 2018
North American Society for Pediatric Exercise Medicine – Marco Cabrera Student Research Award <i>The Effect of BMI on Metabolic Flexibility during Exercise in Children</i> Requested: \$1460; Not Funded	February, 2018
North American Society for Pediatric Exercise Medicine – Marco Cabrera Student Research Award	February, 2017

Metabolic Flexibility during Exercise in Overweight/Obese Children vs. Lean Children

Requested: \$1500; Not Funded

Ball State University ASPIRE Program – Hollis Fund November, 2016

The Effect of Exercise on Measures of Executive Function in Children with ADHD

Requested: \$500; Funded: \$500

Midwest Chapter of the American College of Sports Medicine December, 2014

Maximal Fat Oxidation Rate and Fat_{max} in Boys and Girls at Two Different Maturity Levels

Requested: \$500; Funded: \$500

Gatorade Sports Science Institute November, 2014

Maximal Fat Oxidation Rate and Fat_{max} in Boys and Girls at Two Different Maturity Levels

Requested: \$3500; Not Funded

INSTITUTIONAL AND PROFESSIONAL SERVICE

Chair, Kinesiology Department, Taylor University July, 2020 – Present

University Assembly, Taylor University September, 2022 – Present

Safety Committee, Taylor University August, 2019 – Present

Faculty Development and Candidate Interview Committee, Taylor University October, 2021 – August, 2024

University Assessment Council, Taylor University August, 2020 – May, 2023

Board of Directors, Midwest Chapter of the American College of Sports Medicine May, 2016 – January, 2017
Student Representative

Grade Appeals Committee, Ball State University July, 2016 – July, 2017
Graduate Student Member

AWARDS

Burnworth Teaching Award – Taylor University May, 2024

Outstanding Doctoral Oral Presentation – November, 2015
Midwest Chapter of the American College of Sports Medicine

Graduate Student Research Award – December, 2014
Midwest Chapter of the American College of Sports Medicine

AFFILIATIONS

Member, American College of Sports Medicine

Member, American College of Sports Medicine - Midwest Chapter

Member, American Physiological Society