

## Brandon J. Dykstra, PhD

Assistant Professor of Kinesiology  
Chair, Department of Kinesiology  
Taylor University  
Email: brandon\_dykstra@taylor.edu  
Phone: 765-998-5186

### 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

### 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 270 – Marathon  
KIN 100 – Fitness for Life
- Ball State University Fall, 2018  
EXSC 293 – Foundations of Physiology and Exercise

### RESEARCH POSITIONS

- Doctoral Candidate June, 2017 – July, 2019  
Doctoral Research Fellow August, 2015 – June, 2017  
Graduate Research Assistant August, 2013 – July, 2015

## PUBLICATIONS

(\* denotes undergraduate student)

- Kendall, B.; Layton, A.\*; Daniels, E.\*; Ward, A.\*; King, D.; **Dykstra, B.** Effects of cardiorespiratory fitness on changes in secretory immunoglobulin A following a graded maximal exercise test. *Gazzetta Medica Italiana*. In press.
- 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)

- 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. Kuzmaul, 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 Secretary Immunoglobulin A after Exercise in Competitive Runners</i> Requested: \$5000; Funded: Pending	September, 2023
Taylor University – Women’s Giving Circle <i>Impact of Exercise Duration and Intensity on Secretary 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 <i>Metabolic Flexibility during Exercise in Overweight/Obese Children vs. Lean Children</i> Requested: \$1500; Not Funded	February, 2017
Ball State University ASPIRE Program – Hollis Fund <i>The Effect of Exercise on Measures of Executive Function in Children with ADHD</i> Requested: \$500; Funded: \$500	November, 2016
Midwest Chapter of the American College of Sports Medicine <i>Maximal Fat Oxidation Rate and <math>Fat_{max}</math> in Boys and Girls at Two Different Maturity Levels</i> Requested: \$500; Funded: \$500	December, 2014
Gatorade Sports Science Institute <i>Maximal Fat Oxidation Rate and <math>Fat_{max}</math> in Boys and Girls at Two Different Maturity Levels</i> Requested: \$3500; Not Funded	November, 2014

#### INSTITUTIONAL AND PROFESSIONAL SERVICE

Co-Chair, Kinesiology Department, Taylor University	July, 2020 – Present
Faculty Development and Candidate Interview Committee, Taylor University	October, 2021 – Present
Safety Committee, Taylor University	August, 2019 – Present
University Assessment Council, Taylor University	August, 2020 – May, 2023
Board of Directors, Midwest Chapter of the American College of Sports Medicine Student Representative	May, 2016 – January, 2017
Grade Appeals Committee, Ball State University Graduate Student Member	July, 2016 – July, 2017

#### AWARDS

Outstanding Doctoral Oral Presentation – Midwest Chapter of the American College of Sports Medicine	November, 2015
Graduate Student Research Award – Midwest Chapter of the American College of Sports Medicine	December, 2014

## AFFILIATIONS

Member, American College of Sports Medicine

Member, American College of Sports Medicine - Midwest Chapter

Member, American Physiological Society