Zongze WU

- Year 3 Ph.D. Student, Sport Science
- Faculdade de Desporto, Universidade de Porto
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Education

✧ Master of philosophy
Physical Education and Sport Studies, University of Macau, Macau, China Supervisor:
Prof. Zhaowei Kong, associate Dean of the Faculty of Education

✧ Bachelor of education
Sport Science, Harbin Sport University, Harbin, China
Weighted score: 92.05

Honors and awards

✧ Postgraduate
Excellent Graduation Honors, 2023

✧ Undergraduate
National Scholarship (six times, top 3%), 2014 - 2018
Excellent Trainee (Research Division of China Heilongjiang Snow Sports Training Center), 2018

Research skills

✧ Portable cardio-pulmonary system (Cortex & Cosmed), Cardio-pulmonary exercise system Centrifuge, Hypoxico altitude training systems, Xsens
✧ Data analysis: Spss, G*Power, GraphPad, Origin and RevMan

Publications

1. Physiological and Biomechanical Characteristics of Inline Speed Skating: A Systematic Scoping Review. Zongze Wu; Filipa Cardoso; David B. Pyne; Márcio Fagundes Goethel; Ricardo J. Fernandes. DOI: 10.3390/app15147994.
2. Acute Ketone Monoester Supplementation in Young Adults: Modulating Metabolic and Neurocognitive Functions Across Body Weights. Qian Yu; Ka Kit Wong; On Kei Lei; Paulo Armada-da-Silva; Zongze Wu; Jinlei Nie; Qingde Shi; Zhaowei Kong. DOI: 10.1139/apnm-2024 0229.
3. Cerebral oxygenation and cardiac output responses during short repeated-sprints exercise and modulatory effect of glucose ingestion. Paulo A. S. Armada-da-Silva; Hu Mingzhu; Wu Zongze; Wen Linjian; Feng Ruisen; Xinglin Zeng; Zhen Yuan; Zhaowei Kong. DOI: 10.1101/2022.12.05.519099.

Services

✧ Postgraduate
Postgraduate house tutor, 2020 - 2023
Teaching Assistant of the PE course, 2020 - 2023

✧ Undergraduate
President of the student union, 2016 - 2017

Hobbies

Skiing, skating, Baduanjin Qigong, Diabolo, Archery, squash, Flute

Research projects

✧ Postgraduate

Research Assistant at the Kinesiology Laboratory, 2021 - 2023

i) Preliminary experiment of the effect of ketone ester supplementation diet on brain plasticity in overweight/obese adults: a neurophysiological and resting functional magnetic resonance study. (2021, Publication no. 3)

Contribution: In charge of testing the maximal oxygen consumption, blood acid, blood glucose, 6s-24s training test, and collecting physioflow data.

Results: Our findings suggest that short sprint exercise increases O_2Hb, HHb, and tHb levels during exertion in parallel with cardiac output. However, in addition to the transient increase in cerebral hemoglobin, a progressive decline in cerebral oxygen saturation occurs during repeated sprints. Glucose ingestion does not alter cerebral hemoglobin responses to sprint exercise but appears to be associated with faster recovery of O_2Hb.

ii) The effect of High-Intensity Interval Training and moderate-intensity continuous training with a ketogenic diet on physical and psychological changes in obese adults. (2021 - 2023, Publication in preparation)

Contribution: In charge of recruiting subjects, arranging test time, part of the high-intensity interval training and moderate-intensity continuous training test, and collecting pre- and post-VO_2max data and Stroop test data.

Results: Our findings indicate that training with a ketogenic diet had a positive impact on weight loss in overweight and obese young adults. The weight loss from moderate-intensity continuous training with a low-carbohydrate diet was higher than that of the low-carbohydrate diet without exercise and the low-carbohydrate diet with high-intensity interval training groups. However, muscle loss was the largest in the ketogenic diet with the moderate-intensity continuous training group.

iii) The effect of ketone ester supplementation diet on brain plasticity in overweight/obese adults: a neurophysiological and resting functional magnetic resonance imaging study. (2022 – 2023, Publication no. 2)

Contribution: In charge of subjects' recruitment, blood glucose, blood ketone, and part of the Transcranial magnetic stimulation test.

✧ Undergraduate

i) Tester of the national ice hockey team cross-major-selection for the 2022 Beijing Winter Olympic Games (The only undergraduate student in the test group) (Harbin, Jilin, Shenyang City), 2018

ii) Team inspector of the national student fitness standard test (Ji'nan City, Shandong Province), 2017

iii) Sit in on the international seminar on the winter sports of kinematics (Harbin City), 2016

iv) Team inspector of the national student fitness standard test (Hohhot City, Inner Mongolia Province), 2015

v) Member of the university summer practice (Heilongjiang province sports injury rehabilitation hospital), 2015

(updated 2026/01/21)