

(Online): 2384-0544 https://www.ksep-es.org

Volume 32 • Number 3 • August 2023

Published on 31 August 2023

Aim and Scope

The Korean Society of Exercise Physiology (KSEP; http://www.ksep.kr) was founded in 1988 and currently has around 2,000 members. The Exercise Science (Exerc Sci), an official journal of the KSEP, was first issued in 1992 and currently has published 28 volumes. The aim of the Exerc. Sci. is to scientifically show the "scientific and clinical value of exercise in health and disease control", provide evidence for this, consequently promote the development of elite sports, and improve the health of the general public. Therefore, Exerc Sci focuses on evidence-based scientific research of multidisciplinary studies, including physiology, biochemistry, nutrition, metabolism, genetics, immunology, medicine, rehabilitation, growth and development, training, anthropometry, and epidemiology related sport, physical activity, and exercise. The types of manuscripts include research articles, reviews, short/rapid communications, and case reports in the field of exercise science. For internationalization, we operate a separate "full English journal homepage" and a "submission evaluation system". The Exerc Sci is an international, double-blind peerreviewed and open access journal published quarterly (February 28, May 31, August 31, and November 30). Full texts are freely available from https://www.ksep-es.org. The Exerc Sci is also partially supported by The National Research Foundation of Korea (NRF).

Publisher: Ho-Seong Lee Editor-in-Chief: Hyuntae Park

Published by The Korean Society of Exercise Physiology

Department of Exercise and Medical Science, Graduate, Dankook University, Cheonan Campus, 119 Dan-daero, Dongnam-gu, Cheonan, 31116, Chungcheongnam-do, Korea

 $TEL: +82-10-9248-6161, FAX: +82-41-550-3838\ E-mail: hoseh28@dankook.ac.kr$

Editorial Office

Department of Healthcare and Science, Dong-A University, 37 Nakdong-daero 550beon-gil, Saha-gu, Busan 49315, Korea Tel:+82-51-200-7517, Fax:+82-51-200-7905 E-mail: editor@ksep-es.org

Printed by Academya Publishing Co.

#2003, Daerung Technotown 15-cha, 401 Simin-daero, Dongan-gu, Anyang 14057, Korea

Tel: +82-31-389-8811, Fax: +82-31-389-8817, E-mail: journal@academya.co.kr

Copyright © 2023 Korean Society of Exercise Physiology

- (E) It is identical to the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/by-nc/4.0/).
- @ This paper meets the requirements of KS X ISO 9706, ISO 9706-1994 and ANSI/NISO Z.39.48-1992 (Permanence of Paper).
- 'This journal was supported by the NRF (National Research Foundation of Korea) Grant funded by the MOE (Ministry of Education) (NRF-2022S1A8A1094862)



ISSN(Print): 1226-1726 ISSN(Online): 2384-0544

CONTENTS

Volume 32 Number 3 August, 2023

Editorial

231 Ongoing Changes in Exercise Science for Further Challenges Ji-Seok Kim

Review Articles

- 233 Effects of Resistance Training Intensity on Arterial Stiffness in Healthy Adults Jee-Soo Son, Ruda Lee, Moon-Hyon Hwang
- 242 Effects of Regular Aerobic Exercise Interventions on Decreased Cerebral Blood Flow-Induced Mild Cognitive Impairment Dong-Hyun Lee, Soon-Chang Sung, Kwang-Seok Hong
- 255 Effects of Resistance Exercise on Older Individuals with Sarcopenia: Sex Differences in Humans Ki-woong Noh, Sok Park

Original Articles

- 266 Effects of Respiratory Muscle Exercise on Blood Pressure Response by Sympathetic Nervous System Activation Jung-Min Han, Kyung-Wan Baek, Jong-Hwa Won, Ji-Seok Kim
- 275 The Relationship between Features of Foot Posture, Thickness of Intrinsic Foot Muscles and Dynamic Postural Stability Gyucheol Shin, Taeyoung Kim, Seoyoung Pyi, Woochan Chun, Sookyoung Park
- 286 Different Effects of Single-leg Stance Exercise and Bridging Exercise with Core Stability Exercise on Older Adults Balance Brissa Isabel Salsabila, Farid Rahman, Yenny Lindoyo
- 295 Prediction Models of Blood Glucose Change During Aerobic Exercise Using Machine Learning Techniques
 Okimitsu Oyama, Seonggyu Choi, Changgeun Oh, Eunchan Kim, Dong-Hyuk Park, Minsuk Oh, Dae-hyun Park, Hye-Kyoung Seo, jungsun Han,
 Dongiae Jeon, Seong-Hyok Kim, Justin Y Jeon
- 304 Effects of Resistance Exercise and Fermented Soybean Intake on Protein Expression Markers Related to Browning of White Adipose Tissue in Diet-induced Obese Rats
 - Yunwook Kim, Gyuho Lee, Jaewoo Yoon, Kijin Kim
- 314 Development of Handball Academy Korea Physical Fitness Test Model for Youth Handball Players Min-Ki Kim, Jong Chul Park, Jee Hwan Ahn, Soo Hyun Park



CONTENTS

Volume 32 Number 3 August, 2023

- 322 Effects of Isotonic Core Exercise with Weight Loss on Low Back Pain, Core Strength and Balance in Obese Middle-Aged Women Woo-Jung Lee, Yun-Hwan Lee, Ji-Eun Lee, Ho-Seong Lee
- 331 Validation of 6-Minute Walk Test and Development of VO₂max Prediction Equation in the Elderly Soyoung Park, Seungho Ryu, On Lee
- 339 Association between Weight Loss and Hand-Grip Strength with Cause-Specific Mortality in Middle-Aged and Older Adults
 Inhwan Lee
- 347 Effects of Exercise Sequence and Circadian Rhythms on Molecular Mechanisms of Muscle Hypertrophy and Mitochondrial Biogenesis in Obese Rat Yeong-Hyun Cho, Ji-Young Lee, Tae-Beom Seo



목차

제32권 3호 2023년 8월

편집인의 글

231 Ongoing Changes in Exercise Science for Further Challenges Ji-Seok Kim

종설

- 233 저항성 트레이닝 강도가 건강한 성인의 동맥경직도에 미치는 영향 손지수, 이루다, 황문현
- 242 규칙적인 유산소 운동 중재가 뇌혈류 감소에 따른 경도인지장애에 미치는 영향 이동현, 성순창, 홍광석
- 255 Effects of Resistance Exercise on Older Individuals with Sarcopenia: Sex Differences in Humans Ki-woong Noh, Sok Park

원저

- 266 호흡근 운동이 교감신경 활성화에 의한 혈압 반응에 미치는 영향 한정민, 백경완, 원종화, 김지석
- The Relationship between Features of Foot Posture, Thickness of Intrinsic Foot Muscles and Dynamic Postural Stability Gyucheol Shin, Taeyoung Kim, Seoyoung Pyi, Woochan Chun, Sookyoung Park
- Different Effects of Single-leg Stance Exercise and Bridging Exercise with Core Stability Exercise on Older Adults Balance Brissa Isabel Salsabila, Farid Rahman, Yenny Lindoyo
- 295 머신러닝 기법을 활용한 유산소 운동 중 혈당 변화 예측 모형 낙기광, 최성규, 오창근, 김은찬, 박동혁, 오민석, 박대현, 서혜경, 한정선, 전동재, 김성혁, 전용관
- 304 Effects of Resistance Exercise and Fermented Soybean Intake on Protein Expression Markers Related to Browning of White Adipose Tissue in Diet-induced Obese Rats

Yunwook Kim, Gyuho Lee1, Jaewoo Yoon, Kijin Kim

314 청소년 핸드볼 선수를 위한 핸드볼 아카데미 체력평가 모델 개발 김민기, 박종철, 안지환, 박수현



목차

제32권 3호 2023년 8월

- 322 체중감량을 병행한 등장성 코어 운동이 비만중년여성의 요통, 코어 근력 및 균형에 미치는 영향이 이우중, 이윤환, 이지은, 이호성
- 331 노인의 6분걷기 검사 타당도 검증 및 최대산소섭취량 추정식 개발 박소영, 류승호, 이온
- 339 중·고령자의 체중감소 및 악력과 원인별 사망과의 연관성 이인환
- 347 Effects of Exercise Sequence and Circadian Rhythms on Molecular Mechanisms of Muscle Hypertrophy and Mitochondrial Biogenesis in Obese Rat

Yeong-Hyun Cho, Ji-Young Lee, Tae-Beom Seo