

4th Edition

Exercise, Biomechanics and Nutrition

**BOOK OF ABSTRACTS
2025**

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Preface

Polytechnic Institute of Setúbal is emerging as a reference in the supporting and diffusion of scientific advances in Sports Sciences across the International Congress: Exercise, Biomechanics and Nutrition in a commitment with the academic excellence of their students and the scientific community.

The fourth edition of the International Congress: Exercise, Biomechanics and Nutrition reflexes the success of this scientific-technical-informative initiative that makes to this event as one of the most important from Portugal and the Iberian Peninsula. This event selected an hybrid format that interspersed conferences of contrasted speakers with oral communications of Degree student and consolidated research groups. Assistants to this events that exceeded 240 participants attended to the last advances in 3 well differentiated areas as Biomechanics, Exercise and Sport Nutrition divided in 11 conferences.

Conferences were presented by prestigious researchers from 6 different universities of 5 different countries as Polytechnic Institute of Setúbal (Portugal), University of Salamanca, University of Sevilla (Spain), Federal Institute of Minas Gerais (Brazil), University of Jyväskylä (Finland) and University of Suffolk (UK).

However, the most important area of this Congress was the number and quality of the oral communication presented, 94 in total. In this sense, the International Congress: Exercise, Biomechanics and Nutrition is one of the Congress with a higher number of works presented by Graduate students that it is in combination with the results of contrasted research groups, some of the references at international level that include researchers from eight different countries as England, Brazil, Spain, Portugal, Colombia, Italy, Iran and Turkey. Readers have the opportunity of supervising all these oral communication from the abstract presented in this Book of Abstracts.

Since the Organizing and Scientific Committees want to congratulate to all the researchers and attendees who participated in this third edition of the International Congress: Exercise, Biomechanics and Nutrition. In addition, to the external readers we invite to participate in the fifth edition that will be organized by Polytechnic Institute of Setúbal in 2026.

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Congress Committees

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Congress Program

May 29, Thursday

10:00 – Opening Session – ESE Auditorium

Angela Lemos | President of the Polytechnic Institute of Setúbal

João Pires | Dean of ESE-IP Setúbal

Luis Leitao | Professor at the Science and Technology Department of ESE-IP Setúbal

10:30 – *Physical Activity, Exercise and Nutrition* – ESE Auditorium
Sedentary behaviors and prevention of musculoskeletal disorders in the working population. – **PhD Miguel Madruga, University of Salamanca, Spain**

11:20 – Sedentary behaviors and prevention of musculoskeletal disorders in the working population – **PhD Josué Prieto, University of Salamanca, Spain**

12:00 - Warming up: evidence and applications in sports training – **PhD João Ferreira-Junior, Federal Institute of Minas Gerais, Brazil**

13:30 – Lunch Break

14:00 – *Exercise and Biomechanics in sport* – ESE Auditorium
WORKSHOP: Biomechanics and Nutrition in Endurance Sports in the Natural Environment – **PhD Miguel Madruga and Josue Prieto, University of Salamanca, Spain**

16:00 – Recents Advances in Sports Injury Rehabilitation: The Role of Blood Flow Restriction – **MsT Christian Castilla, Rehab fitness coach/ S&C coach, Spain**

16:30 – Considerations for criteria and exercise selection following a hamstring injury in football – **MsT Paolo Perna, Sports Medicine and Physioterapist, University of Suffolk, UK**

17:30 – Sports Injury Rehabilitation Round Table with Paolo Perna and Christian Castilla moderated by Javier Pecci, University of Seville, Spain

18:00- 19:30 Abstract/Video Oral Presentations I

May 30, Friday

8:00 – Abstract/Video Oral Presentations II

13:00 – Lunch Break

14:00 – Resistance Training in the female athlete: Physiological considerations – **PhD
Std Vera Salmi, University of Jyväskylä, Finland**

15:00 – *Congress Closing Session*

Luis Leitão | Professor of Science and Technology Department at ESE-IP Setúbal

Raúl Dominguez | Professor in Sports at University of Seville

Abstracts

Dietary Supplement Use Among Amateur Bodybuilders in Türkiye: A Preliminary Report

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Introduction

Dietary supplements (DS) are of great interest among bodybuilders today due to their performance-enhancing and muscle development-supporting effects. However, unconscious use of these products can lead to adverse health consequences. Especially among amateur athletes, risk factors increase due to a lack of information, misdirection, and information from unreliable sources. This research aimed to examine the habits of sports supplement usage, frequency of use, preferred types of supplements, and motivation sources for these habits among amateur athletes in Türkiye.

Methods

This study evaluated the use of DS by amateur bodybuilders (n=36) who do sports in various sports centers in Istanbul, Türkiye. In this context, the athletes' sociodemographic data, physical training, DS usage pattern, and related parameters were questioned and recorded by face-to-face interviews. The obtained data were analyzed using the Jamovi (version 2.6.44) statistics program.

Results and Conclusions

The participants' average age was 22.8 ± 5.7 years, with an average height of 176.0 ± 7.5 cm and a body weight of 80.3 ± 15.4 kg. 86.1% of bodybuilders were male; 13.9% were female. Half of the participants reported being familiar with the regulations regarding DS use. The most frequently consumed supplements among participants were creatine monohydrate (44.4%), whey protein (33.3%), and caffeine (27.8%). These were followed by omega-3 (25.0%), magnesium (22.2%), glutamine (22.2%), sports drinks (19.4%), sports bars (19.4%), meat protein (19.4%), vitamin D (16.7%), vitamin C (16.7%), and carnitine (16.7%). Other reported supplements included zinc (13.9%), arginine (13.9%), ZMA (13.9%), pre-workout products (13.9%), carbohydrate powders (11.1%), iron (11.1%), beta-alanine (11.1%), citrulline (11.1%), and green tea (11.1%). The primary reasons for purchasing dietary supplements were to enhance sports performance (41.7%) and to improve physical appearance (36.1%). Most participants reported buying supplements online (52.8%) and at pharmacies (11.1%). This pilot study shows that DS use is common among amateur bodybuilders in Türkiye. The findings highlight the requirement for greater awareness and reliable sources of information about DS regulations to ensure safe use. The study is funded by the TUBITAK 2209A program.

Keywords: bodybuilding, dietary, sports, supplements