



**Day-1** **October 04, 2023**

# **Keynote Presentations**



## **Neuromuscular electrical stimulation in astronautics**

**Nikola Babić, Marija**

**Trajkov Trajkov,**

**Lana Popović Maneski**

Academy of Applied Studies Belgrade, College of Health Sciences, Serbia

Neuromuscular electrical stimulation has the potential to address various effects experienced in astronautics, such as preventing muscle strength loss, cardiovascular and respiratory deconditioning, and reduced bone resorption under unloaded conditions. Current preventive approaches in this field include dietary interventions, hormone usage, and exercise regimes. Different rehabilitation techniques have been employed to modulate neuromuscular activity, including electrical stimulation (ES), neuromuscular electrical stimulation (NEMS), transcutaneous electrical neural stimulation (TENS), and functional electrical stimulation (FES).

In recent decades, terrestrial exercise conditions have increasingly incorporated the use of suits that enhance voluntary muscular contraction through electrical evoked potentials. Advancements in technology, such as smaller stimulators, multi-channel stimulation, wireless capabilities, dry electrodes, and adjustable impulses characteristics, could enhance the benefits and practicality of neuromuscular electrical stimulation in microgravity circumstances.

This narrative review article provides a comprehensive summation of the types and methods of neuromuscular electrical stimulation used to mitigate the negative effects of prolonged exposure to low gravity.

### **Biography:**

Nikola Babić started his voyage in practicing rehabilitation techniques at the age of 15 in Novi Sad, Serbia. Studying at the College of Health Studies, then at the Faculty of Special Education and Rehabilitation (University of Belgrade, Serbia) and at the First Faculty of Medicine and Psychology (University La Sapienza, Rome, Italy) led to the Master studies finished in Belgrade. In 2014 he enrolls PhD studies, first at the Faculty of Special Education and Rehabilitation, and later at the Biomedical Engineering and Technologies (University of Belgrade, Serbia), where the focus of studies felt on the field of functional electrical stimulation. Most of the student days were accompanied by always growing passion for the astronomy





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**Registrations & Opening Ceremony****08:00 – 09:00****Speaker****Presentation Title****Keynote Presentations:****09:00 – 09:30****Milada Krejčí**

College of Physical Education and Sport PALESTRA, Czech Republic.

Effects of sleep on physical therapy and resilience

**Paolo Flocco**

Osteopath, Physiotherapist, Adjunct Professor, La Sapienza University Italy.

Men. Phys - Reducing Sedentary Behavior and Increasing Physical Activity in People with Severe Mental Illness in an Acute Psychiatric Ward: A Research Protocol for a Randomized Controlled Trial

**09:30 – 10:00****Oral Presentations:****10:00 – 10:20****Manuel Rodríguez Aragón**

Department of Rehabilitation and Technology, Adamo Robot, Spain.

Rehabilitation treatment for post-covid-19 patients through robot-assisted thoracic massage – BREATHE

**Mostafa Bukhmseen**

Saudi Occupational Therapy Association (SOTA), Saudi Arabia.

Amputation in Kingdom of Saudi Arabia: Etiology, Characteristics and Clinical Status from a Large Tertiary Rehabilitation Center

**10:20 – 10:40****Group Photo****Networking & Coffee Break @ Foyer area****10:40 – 11:10****Roman Bednár**

Slovak Medical University, Slovakia.

The new Maheshwarananda's Modified Bhujangini Pranayama in the context of yoga breathing techniques

**11:10 – 11:30****Zuzana Kornatovska**

University of South Bohemia Czech Republic.

Problems of Selected Health Parameters in Athletes with Mental Disabilities

**11:30 – 11:50****Nikola Babic, Marija Trajkov, Lana Popović Maneski**

Academy of Applied Studies Belgrade, College of Health Sciences, Serbia.

Neuromuscular electrical stimulation in astronautics

**11:50 – 12:10**

Speaker	Presentation Title	
<b>Mihailo Nikolic, Nikola Babić,</b> <b>Nenad Nedović, Aleksandra Aleksić,</b> <b>Karlo Curnović</b> Academy of Applied Studies Belgrade, College of Health Sciences, Serbia.	Physiotherapy after Arthroscopic Treatment of Glenoid Labrum Tears - 3 cases serial	<b>12:10 – 12:30</b>
<b>Farhana Karachi</b> University of the Western Cape in South Africa.	Family and patient perception of physiotherapy care rendered to patients in the cardiothoracic intensive care unit	<b>12:30 – 12:50</b>
<b>Group Photo</b>		
<b>Networking &amp; Lunch @ Papillon Restaurant</b>		<b>12:50 – 14:00</b>
<b>Fatima Chehouri Nasser</b> President of Lebanese Occupational Therapists Syndicate, Lebanon & USA.	Comprehensive Treatment Approach of the Patient With Intramedullary Tumor of the Spine: A Case Report	<b>14:00 – 14:20</b>
<b>Virtual Presentation:</b>		
<b>Ana Maria Pozo Roman</b> Complejo Hospitalario de Segovia. Spain.	What can Rehabilitation Medicine do in breast cancer	<b>14:20 – 14:30</b>
<b>Poster Presentation:</b>		
<b>Chaojung Chen</b> Chang-Gung University, Taiwan	Efficacy on Physical Fitness, Skeletal Muscle Mass Index after Group-based Multicomponent Exercise Program Combined with Nutrition Intervention in Community-based Setting for Sub-health Status Middle-aged Adults in Taiwan	<b>14:30 – 14:50</b>
<b>Suhaib Rambo</b> Cardiff University, UK	The Neuromuscular activity differences of quadriceps and Hamstring muscles during the drop-vertical jump and 180-degree pivoting maneuver in active healthy adults: a quasi-experimental study	<b>14:50 – 15:10</b>

**End of Day 1...**



Speaker	Presentation Title	
<b>Keynote Presentations</b>		<b>09:00 – 09:30</b>
<b>Gordana Devecerski</b> Medical Faculty, University of Novi Sad, Serbia.	Therapeutic Approach to Low Back Pain	
		<b>09:30 – 10:00</b>
<b>Vesna Mandic</b> ASL Azienda Sanitaria Locale Roma 1, Italy.	Territorial organization of Medical Rehabilitation in Italy and Rome	
<b>Oral Presentations</b>		<b>10:00 – 10:20</b>
<b>Wesam Qurban</b> Department of Occupational Therapy, King Saud bin Abdulaziz University for Health Sciences, Saudi Arabia.	Enhancing Activities of Daily Living and Quality of Life: Exploring the Use of Cupping Therapy in Occupational Therapy for Carpal Tunnel Syndrome	
		<b>10:20 – 10:40</b>
<b>Jeton Tifeku</b> Director at Physio Clinic "JETONI" Professor at UNI-Universum International College, Kosovo.	The effect of physiotherapeutic treatment in children with myogenic Torticollis up to 1 year	
<b>Group Photo</b>		
<b>Networking &amp; Coffee Break @ Foyer area</b>		<b>10:40 – 11:10</b>
		<b>11:10 – 11:30</b>
<b>Denada Isaj</b> Alma Mater Studiorum Universita Di Bologna	The importance of timely therapeutic intervention for treating torticollis	
		<b>11:30 – 11:50</b>
<b>Danilo Vujicic,</b> <b>Nenad Nedovic,</b> <b>Aleksandra Aleksic,</b> <b>Angelka Pesterac-Kujundzic</b> <b>Biljana Brkic</b> <b>Stevan Jovanovic,</b> Academy of Applied Studies College of Health Sciences Belgrade, Serbia	Determining the percentage of fat and muscle tissue using the bioelectrical impedance method in the student population	

Speaker	Presentation Title	
		<b>11:50 – 12:10</b>
<b>Dmitry Skvortsov</b> Pirogov Russian National Research Medical University	Biofeedback gait training in patients in the early recovery period of cerebral stroke by target parameters of gait cycle	
		<b>12:10 – 12:30</b>
<b>Farhana Karachi</b> University of the Western Cape, South Africa.	Patient Perceptions of ICU Physiotherapy: "Your body needs to go somewhere to be recharged."	
<b>Virtual Presentation:</b>		<b>12:30 – 12:40</b>
<b>Obaid Eissa Almalki</b> National Guard Health Affairs in Saudi Arabia.	The awareness of healthcare staff towards post-stroke cognitive impairment	
		<b>12:40 – 12:50</b>
<b>Ana Maria Pozo Roman</b> Complejo Hospitalario de Segovia. Spain.	Global rehabilitative treatment model for breast cancer	
<b>Group Photo</b> <b>Networking &amp; Lunch @ Papillon Restaurant</b>		<b>12:50 – 14:00</b>
<b>Oral Presentations</b>		<b>14:00 – 14:20</b>
<b>Selin Ozen</b> Baskent University Faculty of Medicine, Ankara, Turkey	Comprehensive Treatment Approach of the Patient With Intramedullary Tumor of the Spine: A Case Report	
<b>Hands-on workshop</b>		<b>14:20 – 16:00</b>
<b>Paolo Flocco,</b> Osteopath, Physiotherapist, Adjunct Professor, La Sapienza University, Italy.	Blood Flow Restriction (BFR) - history and evolution	
<b>Awards Distribution &amp; Closing Ceremony</b>		<b>16:00 – 16:20</b>

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