

INFORMED CONSENT FORM

Title: The Effects of Combined Transcranial Direct Current Stimulation and Pneumatic Compression on Selected Recovery Parameters After a 10K Run

NCT Number: Pending

Ethics Committee Approval Number: 2025-17/11

Date: 16 December 2025

Population: Adult male athletes

You are invited to participate in a research study conducted at the Faculty of Sport Sciences, Bursa Uludağ University entitled “The Effects of Combined Transcranial Direct Current Stimulation and Pneumatic Compression on Selected Recovery Parameters After a 10K Run”

Before deciding to participate, it is important that you understand the study procedures, potential benefits, risks, and overall process. This form is designed to inform you about all aspects of the study. If you have any questions, please consult the research staff. You may also discuss this with your family or physician before making a decision.

Participation is voluntary. You may refuse to participate or withdraw at any time without providing a reason. Withdrawal will not result in any loss of rights. If new information arises that may affect your decision, it will be communicated to you.

Principal Investigator: Prof. Dr. Ramiz Arabaci

Co-Investigators: Prof. Dr. Ufuk Şekir, Dr. Ali Kamil Güngör, Arş. Gör. Hilal Oruç Kaya

Purpose of the Study: This study aims to examine the effects of different recovery methods (low-dose brain electrical stimulation and pneumatic leg massage) on the body after a 10-kilometer run. It investigates whether these methods accelerate recovery and affect perceived fatigue.

Procedures and Duration: A total of 35 male volunteers will participate. Each participant will be involved for approximately 6 weeks, attending 6 sessions. Each session lasts about 2.5 hours. Participants are requested to limit caffeine, eat three meals daily, and sleep 8 hours per night.

Weeks 1-2

Screening Visit: Conducted at the Bursa Uludağ University athletics track. Measurements of weight, body fat, and height will be taken. Inclusion criteria will be assessed, including a Cooper test (distance covered in 12 minutes). GPS watch and heart rate monitor will be worn. A 20-minute warm-up precedes the test. Data on time, speed, distance, and heart rate will be collected. Researchers Hilal Oruç Kaya and Prof. Dr. Ramiz Arabacı will supervise.

Familiarization Session: Three days after screening, participants will experience the procedures and tests at the Faculty of Sport Sciences. Participants will run 10 km and experience two recovery interventions:

- **tDAS:** Transcranial Direct Current Stimulation, a low-level electrical brain stimulation causing only mild tingling, painless.
- **PK:** Pneumatic Compression boots applying intermittent pressure to legs, comfortable and painless.

Each intervention will last 20 minutes.

Cognitive and physical assessments post-intervention include:

- Computerized Attention Test (Stroop Test)
- Maximum Isometric Voluntary Contraction (MIVC) using EMG sensors
- Jump Test, with demonstration and guidance from researchers

Weeks 3-6:

Participants will attend four experimental sessions once per week, running 10 km followed by one of four recovery methods:

- Brain stimulation only (tDAS)
- Leg massage only (PK)
- Combined tDAS + PK
- Passive rest (control)

Measurements before, immediately after, and post-intervention include heart rate, GPS, attention tests, jump tests, and EMG-based muscle strength.

Location

Screening: Athletics track at Bursa Uludağ University.

All other procedures: Laboratory at the Faculty of Medicine, Sports Medicine Department.

Duration:

Total study :12 months.

Individual participation: approximately 6 weeks, 6 visits, mornings 08:00-11:00.

Potential Benefits

Participants may gain insight into personal recovery strategies and receive feedback on physical performance and physiological responses.

Potential Risks

- tDAS: mild tingling, itching, warmth, temporary headache, fatigue, dizziness or nausea (rare).
- PK: temporary pressure, mild skin redness or warmth.
- EMG: electrodes are safe, single-use, painless.

Withdrawal Criteria

Participants may withdraw voluntarily at any time. Investigators may also withdraw participants for safety, protocol violation, or new medical/psychological conditions.

Costs

All study-related costs covered by Bursa Uludağ University BAP.

Travel reimbursement: 1020 TL for 6 visits.

Water will be provided; meals not included.

Confidentiality

All data will be used for research purposes only and kept confidential.

Consent: I have read and understood the information provided in this form. I have had the opportunity to ask questions and voluntarily agree to participate in this study.

Participant Name: _____

Signature: _____

Date: _____

Person Providing Information: _____

Signature: _____

Date: _____