



Pedagogická  
fakulta  
Faculty  
of Education

Jihočeská univerzita  
v Českých Budějovicích  
University of South Bohemia  
in České Budějovice

Etická komise Pedagogické fakulty  
Ethics Board of the Faculty of  
Education

## **Informed consent for research: Respiratory Pattern Change in Runners by Respiratory Tract Restriction Using a Respirator**

The Ethics Committee of The Faculty of Education Of the University of South Bohemia, Approval Number: EK031/2023

**Document Date: November 30, 2023**

**NCT** – si not assigned yet



Dear Sir, Dear Madam,

in accordance with the The Ethics Committee of The Faculty of Education Of the University os South Bohemia (Approval Number: EK031/2023), Universal Declaration of Human Rights, European Union Regulation No. 2016/679 and Act No. 110/2019 Coll. – on the processing of personal data and other generally binding legal regulations (as well as in particular the Declaration of Helsinki, adopted on 18. World Health Assembly in 1964, as amended (Fortaleza, Brazil, 2013); [The Act on Health Services and the Conditions of Their Provision](#) (in particular the provisions of Section 28 (1) of Act No. 372/2011 Coll.) and [Convention on Human Rights and Biomedicine](#) No. 96/2001, The researchers contact the participants to request cooperation and to agree to the participation of the participant (participation of the participant's parents) in research aimed at verifying the impact of commercially used dietary supplements on performance. The results will serve not only as a basis for further deepening of knowledge in this area, but also for the participant's needs.

Principal investigator of the project: PhDr. Petr Bahenský, Ph.D; Possibility of contact in case of any questions (pbahensky@pf.jcu.cz, tel.: 604525876).

Co-investigator: Mgr. David Marko, Mgr. Miroslav Krajcigr, doc. PhDr. Renata Malátová, PhD.

Research location (workplace): Laboratory of Functional Stress Diagnostics – Department of Physical Education and Physics of the University of South Bohemia.

**Brief summary of the research proposal: " Respiratory Pattern Change in Runners by Respiratory Tract Restriction Using a Respirator (working title)**

**The main objective of the research:**

1. The aim of the project is to obtain basic information about spirometric and spiroergometric data and breathing pattern, through examination of breathing at rest and under exercise, assessment of the involvement of different respiratory sectors while ensuring a high level of dynamic work without and with a respirator.

**What about OEP diagnostics?**

2. Through markers attached to the chest, abdomen and back, the movement of the trunk during breathing is monitored. According to the algorithms, the involvement of individual sectors in the breathing pattern and breathing parameters are calculated.

**Description of the research process:**

1. The project participants will take part in testing and measurement in the laboratory twice, stress testing on a treadmill associated with OEP diagnostics, lactate sampling. Once with the use of a respirator and once without a respirator. Both tests are completely identical, except for the use of a respirator.
2. The test itself includes 2-5 minutes of warm-up, then a stepped test to submaximum; Trunk movements are monitored at all times, spiroergometric parameters and oxygen saturation are recorded. At the end of the test, the lactate value is measured for selected participants (if there are doubts about achieving the necessary load level – 90% HRmax).

These are therefore both invasive and non-invasive methods. The invasive method (blood sampling to determine the level of lactate) will be performed by a trained specialist from the index finger of the left hand. The puncture will be made with special single-use needles (Vitrex Sterilance Press II) to detect lactate, which is safe and commonly used in stress diagnostics. The puncture depth is 1.8 mm. From the leaked drop of blood, the level of lactate in the blood will be determined with a lactate paper. Sampling will take place in the third and fifth minute after the completion of each load test. Before each collection, the finger will be treated with a disinfectant with a minimum alcohol content (0.5%). The total resistance on the exercise bike is a maximum of 14 minutes. During the test, the participant has the option to interrupt the test at any time with a pre-arranged signal, namely by raising the hand.

The results of both examinations of measurements can be obtained on the basis of a written request for their submission. However, it is necessary to point out that the application must be submitted within 3 days after testing. After this time, the data will be anonymized and it will not be possible to submit it. A request for the submission of test results can be submitted after the testing is completed or via e-mail (pbahensky@pf.jcu.cz). The data obtained will be anonymized, processed, securely stored and published in anonymous form in bachelor's and master's theses, or in professional journals, monographs and presented at conferences.

**Giving Informed Consent to Participate in the Research Study "Respiratory Pattern Change in Runners by respiratory tract restriction using a respirator." (working title)**

The content of this form is the consent of the parents of the participant or participant to participate in a research study conducted to obtain information on the influence of commercially used supplementation on current changes in performance and physiological indicators. Participants declare that they have been acquainted with the conditions of participation in the research "Respiratory pattern change in runners by respiratory tract restriction using a respirator." and participants and parents of the participants agree to participate in this research.

Participants agree to provide the following personal data: date of birth. However, Participants reserve the right to ensure that all the data will be subject to confidentiality obligations on the part of the investigator and will be anonymized within three days of being handed over. Participants also acknowledge that it is possible to cancel the participation in the research at any time at their sole discretion.

**Legal representative or adult participant:**

Participants or their parents confirm by their signature that they have read this form and give their consent to participation in the research study described above.

**Underage participant:**

Of the day..... Name and surname of the legal representative ..... Name and surname of the child .....  
Signature.....

**Adult participant:**

Of the day..... Name and surname .....  
Signature.....

This informed consent is made in two copies, one of which is received by the legal representative, the other by the solver. For the needs of other entities involved in the diagnosis, a copy of this document is provided (confirmed by the researcher).