## Heterotopic Ossification – Problems in Clinical Diagnosis and Rehabilitation Treatment

**Manuel Bucur, Remus Relu Glogojeanu, Ileana Bucur**

**Abstract:**
The formation of normal trabecular bone in soft tissues represents the appearance of heterotopic ossification, with multiple clinical and functional consequences, such as pain, limited range of motion, skin alterations, decreased range of motion, and a general low quality of life.
Heterotopic ossification usually appears in a traumatic context or under prolonged immobilization, causing differential diagnosis problems and requiring an early prophylactic or curative treatment, often under the coordination of a multidisciplinary team.

**Keywords**: heterotopic ossification, trauma, malfunction, rehabilitation

## THE ROLE OF ELECTROENCEPHALOGRAPHY IN AERONAUTICAL MEDICINE

**Cristian Dogaru, Daniela Raţiu**

**Abstract:**
Electroencephalography is the recording of the electrical potentials of spontaneous activity of cortical neurons, using electrodes applied to the scalp.
In the past, its applicability was very wide. The first measurements of the biocurrent are made by Galvani in 1788. In 1875 the British Caton highlighted the spontaneous and evoked electrical potentials of the brain, and in 1924 a German psychiatrist, Hans Berger, describes the fundamental waves and rhythms that we then guide ourselves to. today. Over time, EEG has been replaced by more efficient diagnostic methods such as brain imaging (CT, MRI, PET-CT), but it remains a routine procedure used to determine the medical fitness of military pilot candidates

**Keywords:** electroencephalography, brain waves, electrical potentials, military pilot candidates.

## ROLE OF TYMPANOMETRY IN CIVIL PILOTS' SELECTION

**Ruxandra Oana Iana, Andrei Luca, Cristian Dragos Stefanescu**

**Abstract:**
Civil Aviation Procedures and Instructions (PIAC) in accordance with European standards ED 2019/002/Rstipulates the conditions for issuing, validity, revalidation and renewal of medical certificates required to exercise the privileges associated with civil pilot profession. The medical evaluation of all pilotscandidates includes a full ENT examination including pure tone audiometry and tympanometry. The aim of this paper is to present a small study conducted on a short number of pilot candidates who were seen in the National Institute of Aviation and Space Medicine (NIASM) in Bucharest, Romania from October 2018 to March

2019 and presented alteration of the tympanogram. All subject underwent a medical and/or surgical treatment aiming the resolution of their impairment. This article presents its' results and conclusions

**Keywords:** pilots, tympanometry, medical licence

## UNFITNESS FOR A PILOT DUE TO A DEPRESSIVE EPISODE

**Roxana Mazilu, Monica Dascalu**

**Abstract:**
A 45-year-old military pilot came to the annual medical assesment, accusing a symptomatology with negative hyperthymic aspect, which is why he was admitted to the psychiatric ward of the Central Military University Emergency Hospital "Dr. Carol Davila" Bucharest, having as consequence his professional unfitness..

**Keywords:** Pilot, annual medical examination, depression, severe depressive episode, professional experience, hospitalisation, professional unfitness.

## Psychological test of focused attention - standard for the military aviation environment –

**Violeta Ionescu**

**Abstract:**
The aeronautical environment is a complex operational environment with a continuous flow of information that needs to be processed and integrated into a dynamic mental model by the human operator (pilot, traffic controller, paratrooper). For a detailed investigation of this information processing, the concept of awareness of the situation in which attention mechanisms play an important role was developed.
The objective of the study is to standardize, for the aeronautical environment, a concentrated attention test.
Method and material. The concentrated attention test (COG) requires: vigilance, concentration, selectivity, reaction rate. The COG test is part of the Vienna Test System test battery, used in aeronautical psychological assessments
The group consisted of 777 subjects from the military aviation environment, aged between 17-53 years.
Results. Following the processing of the collected data, we calculated a standard specific to the aeronautical field. Consequently, the sample can be used in the methodology of psychological selection and evaluation of aeronautical personnel.

**Keywords:** attention, concentration, selectivity, reaction speed, information processing.