



SVEUČILIŠTE U RIJECI - MEDICINSKI FAKULTET
UNIVERSITY OF RIJEKA - FACULTY OF MEDICINE

medri

Centar za istraživanje i edukaciju u podvodnoj, hiperbaričnoj i pomorskoj medicini
Centre for Research and Education in Underwater, Hyperbaric and Maritime Medicine
Voditelj: doc. dr. sc. Igor Barković, dr. med.
Head: Assist. Prof. Igor Barković, MD, PhD



Centar za istraživanje i edukaciju u podvodnoj, hiperbaričnoj i pomorskoj medicini

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To whom it may concern,

This is to certify that Vitomir Maričić has active part in research projects concerning safety in deep free diving in Center for Research and Education in Underwater, Hyperbaric and Maritime Medicine. The main interest is pulmonary barotrauma at descent in freediving.

My special concern is extreme freediving and enhancing safety at remote places. Athletes asked me for advice how to prevent, prepare for and treat possible complications of "squeezes" (barotrauma of lungs at descent) especially at remote locations as we had such cases. We would like to more widely discuss that issues, but for curent advice I suggested them to have oxygen onboard, provided them CPAP (contineous positive airway pressure) device and puls oxymeter, and suggested that they have diuretic Lasix (fursemid) with them as the only possible farmacotherapy that they can use in extreme situations. As it is use in daily clinic practice we know it has good results with lung edema, drowning, and other underwater related complications including squeeze, where it can be a potentially life saving substance in emergency situations. I strongly stressed that fursemid can be used only if squeez happens with low oxygen saturation as consequence (lower than 90%). I strongly stressed that fursemid is only an emergency treatment substance, never to be used in a dive. Aditionally, I dont see the way diuretics can enhance freedivng results. In following litterature I found articles that can support my advicess.

Sincerelly,

Assist. Prof.. Igor Barkovic, MD, PhD.
Consultant Pulmonologist and critical care specialist
Head of Center for Research and Education in Underwater, Hyperbaric and Maritime
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To whom it may concern,

This is to certify that Vitomir Maričić has active part in research projects concerning safety in deep free diving in Center for Research and Education in Underwater, Hyperbaric and Maritime Medicine. The main interest is pulmonary barotrauma at descent in freediving. Vitomir is actively enrolled not only as athlete but also as investigator. Our collaboration already produced two CC published papers and few more are in process of finalisation.

Haemoptysis in breath-hold divers; where does it come from?

Igor Barković^{1 2 3 4}, Vitomir Maričić⁵, Boris Reinić³, Frano Marinelli^{1 2 3}, Tamara Turk Wensveen⁶. Diving Hyperb Med. 2021 Sep 30;51(3):299-302.
doi: 10.28920/dhm51.3.299-302.

Arterial blood gases' analysis in elite breath-hold divers at extreme depths.

Barković I, Jurilj Z, Marinelli F, Maričić V, Pavlović M, Turk Wensveen T, Peršić V. Eur J Appl Physiol. 2023 Apr;123(4):857-865. doi: 10.1007/s00421-022-05110-2. Epub 2022 Dec 13.

Vitomir is also part of our teaching staff at our elective course and summer school "Diving medicine" for exchange medical students.

Sincerely,

Assist. Prof.. Igor Barkovic, MD, PhD.

Consultant Pulmonologist and critical care specialist

Head of Center for Research and Education in Underwater, Hyperbaric and Maritime Medicine