

giovedì 5 marzo 2026 Ore 21:00

RICERCA MEDICA A 6000m SULLE ANDE: L'ACONCAGUA

Where Oxygen Fades

Assessing efficacy of a Portable Hyperbaric Mask for High-Altitude Hypoxia: a pilot crossover trial

The Project

At extreme altitudes, the risk of acute mountain sickness (AMS) rises, potentially leading to fatal complications like pulmonary and cerebral edema. Portable hyperbaric bags – Gamow – help but are bulky and restrict movement. Our study introduces a lightweight, 3D-printed hyperbaric mask designed for portability and ease of use, allowing oxygen support without compromising mobility. We'll assess the mask's impact on oxygen saturation and AMS symptoms in the Italian alps and at Aconcagua, aiming to establish it as a life-saving tool for high-altitude emergencies.

The Research Squad

Dr. Paolo Rodi, MD, MSc, PhD(c)
Surgical resident in Zurich and PhD candidate at CRIMEDIM Center for Disaster Medicine, President of BiALP, Alpine, Disaster and Wilderness Medicine research group. Greedy mountaineer with climbs in the Alps and Andes.

Dr. Giovanni Cappa, MD
Emergency Medicine Physician, President of the Italian Society of Extreme Environments Medicine.
"Combining the physical challenge of austere settings with the curiosity of clinical research is what fuels my dedication to medicine and exploration"

Davide Pellegrini
Alpine Rescue Operator, National Alpine Rescue (CNSAS).
"Mountaineer by passion and alpine rescuer by vocation, I love high altitudes and organizing independent expeditions to explore great mountains"

The Time

Dec. 2024 – Jan. 2025: Tests in Italian Alps, 3000–3500m
Feb. 2025: Test at Aconcagua Camp 3, 6000m and Aconcagua Summit 6900m
Mar. – Apr. 2025 – Data Analysis
May 2025 – Presentation of results at World Association of Disaster and Emergency Medicine Congress, Tokyo, Japan

In Collaboration with: SIMAE – Società Italiana di Medicina degli Ambienti Estremi
BiALP – Alpine, Disaster and Wilderness Medicine Research



*presentato dai Medical Pirates:
Giovanni Cappa, Paolo Rodi e Davide Pellegrini*



*presso
l'Aula Magna, g. c., del
Collegio Cairolì
piazza Cairolì – Pavia
ingresso libero*



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