

Volunteers wanted (18-60 years old) for an

avalanche study at terraXcube

With this study, we aim to test a new safety device designed for use in case of avalanche burial. The objective is to evaluate whether this device, which allows for prolonged breathing under the snow, can extend survival time, thereby increasing the chances of timely rescue. To better understand the device's effectiveness and the physiological impact of avalanche burial on the human body, we will simulate an avalanche within the **terraXcube** climate chamber, recreating environmental conditions that preserve the snow's natural characteristics.

WHO CAN PARTICIPATE?

- Healthy
- non-smokers
- aged **18 to 60**.

WHAT ARE THE VOLUNTEERS EXPECTED TO DO?

Participants will spend **half a day** at terraXcube and can choose between two time slots based on their availability: **8:00 – 1:30 PM** or **1:30 PM – 7:00 PM**.

Before the tests begin, experienced medical staff will place an **arterial catheter** and an **esophageal probe**. Blood samples will be taken from the catheter (without additional needle insertions), and ultrasound examinations will be performed before, during, and after the tests.

During the study, participants will be positioned **in front of the avalanche** rather than buried beneath the snow. They will breathe through the device being tested, which will be connected to the avalanche via a system of tubes. Each participant will undergo two tests: one with the device activated and one with the device deactivated. **Each test will last approximately one hour.**

WHEN AND WHERE?

The study will take place from **March 17 to March 21, 2025**, for half a day (either **08:00 – 13:30** or **13:30 – 19:00**, depending on availability). All experiments will be conducted at **terraXcube, NOI Techpark, Via Ipazia 2, Bolzano, Italy**.

WILL EXPENSES BE REIMBURSED?

We will cover **travel expenses** up to a maximum of **€80**. Additionally, we will provide **lunch** and **insurance** for the duration of the study.



For more information and registration

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To allow us to process your data in a manner that complies with the law, please read the notice below and add it to your application email: "I have read and understood the privacy policy at <https://www.eurac.edu/en/static/privacy-policy> and authorize Eurac Research to process my personal data in accordance with EU Regulation No. 2016/679 and national law."

Who we are

We are researchers at the **Institute for Mountain Emergency Medicine, Eurac Research**. Our team, specializing in medicine and physiology, focuses on improving the diagnosis and treatment of mountain-related illnesses and trauma. We conduct both in-field and controlled simulation studies at **terraXcube**, a climate simulation center, where we can safely replicate high-altitude conditions.