

# Why is pulmonary hypertension at high altitude so common and dangerous?

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Everyone who climbs to high altitude will develop pulmonary hypertension, a temporary constriction of blood vessels that results in increasing strain on the right heart. It is a normal adaptive mechanism but if exaggerated can have serious consequences, resulting in life-threatening disorders and remodeling of the pulmonary circulation. Five mini-Review articles that comprise a Special Topic section in *High Altitude Medicine & Biology*, a peer-reviewed journal from Mary Ann Liebert, Inc., publishers provide an up-to-date overview of the clinical management and biological processes that underlie this fascinating disorder. The articles are available free on the *High Altitude Medicine & Biology* website.

In the article "Hypoxic Pulmonary Vasoconstriction," Erik Swenson, University of Washington, Seattle, provides a broad overview of pulmonary hypertension and describes what advantages and disadvantages its development may offer in normal human physiology and disease and at high altitude.

Urs Scherrer and colleagues from University Hospital (Bern, Switzerland), Universidad de Tarapacá (Arica, Chile), and University Hospital of Lausanne (Switzerland) review studies in the literature aimed at understanding the mechanisms underlying pulmonary [hypertension](#) and identifying potential targets for drug therapy. These studies have focused on people with either acute or chronic exposure to high altitude, and on the potential role of epigenetic mechanisms that may lead to remodeling of the lung vasculature during fetal development or

childhood. The authors describe potential new directions for drug development in the article "Mechanisms and Drug Therapy of Pulmonary Hypertension at High Altitude."

"An increased pulmonary artery pressure always occurs when the oxygen level in the lungs is reduced as occurs at high altitude," says John B. West, MD, PhD, Editor-in-Chief of *High Altitude Medicine & Biology* and Professor of Medicine at the University of California, San Diego School of Medicine. "Although the effects may not be easily discernible, [pulmonary hypertension](#) can be a factor in high altitude pulmonary edema and other diseases of high altitude."

**More information:** [online.liebertpub.com/doi/full/10.1089/ham.2013.1010](https://online.liebertpub.com/doi/full/10.1089/ham.2013.1010)

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