



## Being high is good for you

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Living at a somewhat higher altitude has been linked to a reduction in heart problems by a new Greek study that examined mortality rates over many years.

The effects were greatest among the men living at altitude, in spite of the fact that they drank more than their plains-dwelling peers in two nearby villages.

Residents of a 950-metre-high farming village near Athens had worse coronary risk profiles than the low-dwellers but were still less likely to die of heart disease over the duration of the study, released Monday.

"The important finding of this study is that residents of the mountainous village as compared with residents of the lowland villages had lower mortality from all causes and even lower mortality from coronary heart disease," Dr. Nikos Baibas wrote in an article that will appear in the Journal of Epidemiology and Community Health.

Dr. Baibas says that his work is more rigorous than earlier studies which "had inadequate control of potential cofounders," because he was able to study essentially homogeneous groups and adjust for variables. Other research was clouded by the effects of high altitude, poverty or heterogeneous groups.

The researchers sought to escape those mistakes by looking at more than 1,000 people in the three small villages -- Arahova, at 950 metres, and Zevgolatio and Aidonia, both on the Peloponnesus plains. Checking back in on these people an average of 14 years later they found that the mountain-dwellers had outlived their peers.

"The apparent protective effect of high altitude is not mediated by traditional risk factors like hypertension or blood lipid concentrations, as values of these factors were generally higher in high rather than low altitude residents," wrote Dr. Baibas, who was unavailable for interviews.

The researchers say that the difference may be related to diet but speculate that it may also be caused by the small extra effort required for even day-to-day living at altitude. Although the residents of all three villages lived a fairly traditional existence, farming and homemaking, those at the higher village would have to have exerted themselves a little more with every move.

"There exists extensive literature on the cardio-protective effect of daily physical activity, which has been found to reduce total and coronary mortality in epidemiological studies," Dr. Baibas wrote.

"Experimental studies have shown that the physiological strain and the energy cost of walking are greater on uphill slopes than on level grounds. In addition, acclimatization to the hypoxic conditions of moderate and high altitudes has been found to improve endurance in athletes, and hypoxic exercise may convey greater health benefit than physical activity at sea level."

A resident of the British Columbia town of Kimberley, which bills itself as the highest community in Canada, that he wasn't surprised by a study linking health with mountain living.

Colin MacKenzie, a volunteer at The Owl and Teapot used-book store, said that the laid-back ethos, clean environment and small-town atmosphere make it a pleasure to live in the 1100-metre-high community, which lies near Cranbrook in the southeast of the province.

He told globeandmail.com that the study results seem in line with his own observations after years of living in the former mining town.

"There's a lot of very old people that are very healthy, so I'm not surprised," he said by telephone. "There's a lot of 90-year-olds, plenty of 80-year-olds and oodles of 70-year-olds."

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