

A Multinational Andean Genetic and Health Program. VIII. Lung function changes with migration between altitudes

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Studies of lung function in high altitude populations have suggested the influence of hypoxic environment on the development of this characteristic independent of confounding variables such as ethnicity and habitual exercise. However, often the effect of altitude on vital capacity is greater in children than adults, suggesting that more than developmental adaptation is operative. Also selective migration could account for the similarity of migrants and permanent residents at a destination altitude. To explore these problems we studied the lung function (FVC, FEV1, PFR) of 377 individuals who had migrated between altitudes in northern Chile. Migrant measurements were adjusted to those of permanent residents of appropriate age, sex and height at the altitudes of origin and destination. The measurements were then related to ethnicity (Spanish?Aymara ancestry), occupation and permanence, the latter combining information on both age at migration to and length of stay at a destination altitu