

Alpine Climate Change and its Consequences on Health: Potential Benefits or Risks?

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The scientific community expects tremendous changes in the world climate within the next decades, which will also affect the Alps. One of the first suggestion regarding the Alps is that those changes in climate will have negative consequences on the environment: less snow, deficits in winter tourism, worse water quality of lakes etc.. Therefore, it is of utmost importance for the tourism industry to deal with this essential future problem and to become creative in offering appropriate packages, especially in the branch of Alpine health tourism.

From the medical point of view two examples are representative in order to demonstrate opportunities for the Alpine health tourism despite climate change. These are a) lower day and night temperatures in the Alps as compared to the temperatures in the valleys and b) decrease of allergen exposure at higher altitudes (> 1.500 m a.s.l.).

The incidence of heat waves in summer will increase even in Austria, influencing the outdoor offerings of many tourism providers, since on many summer days with temperature maxima > 35°C activities as biking, swimming, jogging and Nordic Walking will be nearly impossible at low altitudes. Moreover, heat waves increase the morbidity and mortality in elder people with cardiovascular diseases. Without any debt, the mean temperatures in summer will also increase at higher altitudes, but they will remain below the temperature profile in the valleys. Thus, a recreational sojourn including physical activities (biking, hiking) at higher altitudes, especially during summer heat, might be an attractive option for many persons.

Up to 25 percent of Europeans suffer from allergic diseases or events once in their lives. It is well established that the Alpine climate provides many benefits for guests with allergic diseases including allergic asthma. The exposure to allergens (pollens, house dust, mites) is reduced with increasing altitude and altitudes above 2.000 m are nearly free of allergens. In the next decades, a dramatic spread of plants with allergic potency is expected at low altitudes and will negatively affect the population (inhabitants as well as tourists). There is scientific evidence that a sojourn at altitudes > 1.500 m has many positive consequences on persons with allergic asthma. Symptoms of asthma were reported to decrease within several hours after arrival and the severeness of asthma symptoms can be ameliorated for several weeks and months after return from a vacation at moderate altitude. However, alpine tourism offerings for this specific target group with allergic diseases are missing yet but are a prerequisite for serious alpine health tourism. In addition, the development of such products might antagonise the decrease in tourism arrivals, especially within the frame of winter tourism due to worsening skiing and snow conditions. To develop such alpine vacation products means a close cooperation between medicine/research on the one hand and the tourism industry on the other hand.