

Climate and tourism - between therapy and pathogenesis

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ABSTRACT: The article presents the relationship between the health of the tourist and the climate through two opposing and complementary aspects: forms of tourism therapy and possible pathogenic effects in case of unfavourable weather.

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1. Introduction

Tourism is a modern form of leisure, for young and elderly people, on holidays or retirees.

The purpose of tourism: recreation, active rest, physical training, cultural, folkloric information, pilgrimage, but also balneary prophylactic, proper or rehabilitation treatments.

The tourist usually benefits from services of transport, accommodation, meals, amusements but and natural landscape conditions: relief, forest, lake, mineral springs and, last but not least, the climate.

2. Methods

The general aspects of the relation between the geographic environment and the medical, positive and negative effects of the movement of the tourists in specific time and space conditions are presented and systematized.

3. Results

3.1. Some aspects of climate pathology due to climate

The general state of the tourist is influenced by the change of the geographical environment in general and of the climate in particular.

This is the travel from one climatic zone to another (for example, moving from northern or central Europe to Africa or South Asia or Greece to Canada or Alaska). This shift leads to an adaptation to the parameters typical of the new medium climate, but also to changing time zones.

We also need to consider moving from one geographic region to another (for example, from a plains town to a balneary-climatic mountain or to seaside resort). In this situation, adaptation is made, as the case, to cold or hot stress, partial oxygen pressure drop, higher solar radiation, air dynamics, or greater ambient air humidity.

In terms of weather, recreational tourism is practiced outdoors in the most favourable seasons to enjoy a beautiful, comfortable, warm and dynamic time. and in this case there are no pathogenic aspects.

The balneary tourism that takes place in a balneological-climatic resort for treatment, with numerous hydro-electric therapeutic procedures, massage, kinetotherapy, treatment base, depends less on season and weather, so it can practice even in unfavourable weather conditions.

For outdoor tourism, there are weather conditions when climatic parameters go out of comfort limits, or when weather is unstable, and then climatic risk phenomena can occur, resulting in accommodation and acclimatization of the human body to this stress.

Among the phenomena of climatic risk, we will mention:

3.1.1. Heat waves. These cause a number of negative effects on the body: sweating, hypotension, mineral imbalances, heat edema, tiredness, faintness, heat congestion, caloric shock or syncope, or even death. It also increases the frequency of infectious diseases due to conditions favourable to the development of viruses, pathogenic bacteria and vectors that transmit diseases (mosquitoes, flies).

Examples: - hot summer 2003 in central and western Europe (Paris) with tens of thousands of deaths, or hot summer 2007 in Eastern and Southern Europe (Bucharest, Athens), also with a higher frequency than usual of the morbidity index; and mortality, etc.

3.1.2. Waves of cold. In general, trips are less numerous in winter. For the unexpected cold that occurs during the warm season of the year, proper clothing usually solves problems of adaptation.

But in the mountains, an unexpected cold in the warm season of the year, with inappropriate clothing and footwear, and possibly the wandering of the road, led to dramatic final situations (frostbite, rheumatic pain, neuritis, nephritis, hypothermia or even death). If the cold wave is accompanied by a strong blizzard, the health of the tourists is in danger. Hypothermia is felt even by a healthy body, more than one person with rheumatic, renal or cardiovascular disease

3.1.3. Temperature inversions may create discomfort for tourists, especially in cities with tourism potential, but located in depressions or valleys, where pollutant products from vehicle circulation stagnate, or even more when the city has industrial polluters, and air pollution increases above the maximum admissible concentration limits. Specialist treaties mention the case in London in December 1952 when under strong chemical pollution, in a period of thermal inversion, high

atmospheric humidity, and calm atmosphere, the number of deaths stood at several thousand over the average, while two weeks, and morbidity has remained high for a long time.

3.1.4. Atmospheric precipitations become a risk factor if they occur unexpectedly, especially in the event of torrential rain that produces thermal and water discomfort, with health effects: catarrh, fever, rheumatic pain. Also, some environmental consequences - floods, landslides, road damage, etc. - can hinder tourist activity. For example: the floods in Central Europe in the summer of 2002, or the 2006 floods in Romania.

3.1.5. Storm phenomena, lightning, possibly hail, are dangerous to the tourist, especially in the open field. Also, fog is a phenomenon of risk especially in the mountains, inconvenient by its moisture and especially by reducing the visibility.

3.1.6. Snow, as a landscape factor, is important in practicing winter sports tourism. However, in the case of avalanches, the degree of danger depends on the character of the snow layer, the weather (hot) and some mistakes of the tourists (access to narrow paths or very inclined slopes, noise that can trigger the avalanche) etc. Examples: in the Alps - in 1951 avalanches took place with a balance sheet of over 300 victims.

In the Carpathians, although the avalanches do not have the magnitude of those in the Alps or other higher mountains, more than 300 avalanche drains have been highlighted in Retezat, Parâng, Bucegi, Piatra Craiului, Rodna where they have been registered since when some accidents usually resulted in deaths.

3.2. Tourism Therapy. Natural Cure

Tourism besides recreation, rest and information can be a form of natural therapy, indicated in the prevention or treatment of certain conditions. There are several forms of climatic and balneal therapy, depending on the predominant factor.

3.2.1. Air-therapy is an air bath that is performed by partial or total exposure of the body progressively to the action of air, eliminating direct sun radiation.

Climate therapy techniques are different depending on the health of the patients and weather: sedative - relaxing or stimulants. There can be associated: aero-therapy, with negative ion generators inside, as well as inhalations of marine aerosols or inhalation of aerosols of forest, in the proper environment.

The air cure acts on thermal regulation, improves blood circulation, increases the resistance potential of the human body to the environment

3.2.2. Heliotherapy provides medical exposure to solar radiation, whether sea or mountain, or even to the plains or hill resort.

Indications: otorhinolaryngologic disorder, tracheobronchitis, rickets in children and allergic asthma, gynecological and dermatological disorders in adults.

Contraindications: cancer or precancerous conditions, evolutionary pulmonary tuberculosis, gastro-duodenal ulcer, decompensated heart disease, etc.

We mention that in mountain heliotherapy, under snow conditions, due to the high albedo of snow, the danger of sunburn in the sunny days of winter is even higher than during the summer

3.2.3. Hydrotherapy is water bath treatment in the sea (thalassotherapy), or in rivers or lakes (possibly heliotherms) as well as in open or covered water basin.

Effect: exciting-tonic, in a cold and stirred water, and sedative effect, in a warm, quiet water.

Results: improvement of peripheral circulation, stimulation of metabolism and cutaneous receptors.

A hydro-aero-therapeutic complex is considered to be stationary near a cascade causing a big quantity of negative ions. They play an important role in respiratory phenomena, stimulate the body's defences, regulate physiological functions, metabolism, blood pressure

3.2.4. Other natural practices:

- psamotherapy (sand therapy), which is a dry thermotherapy by covering the body with sand heated by the sun.
- fangotherapy (sludge therapy), partial or total sludge mud, these on the seaside or near salt lakes, which also benefit from sapropelic or mineral sludge deposited at the bottom of the lake, in rheumatic, dermatological, gynecological diseases
- staying in saline for the decongestion of mucous membranes of the respiratory tract, in non-specific chronic respiratory diseases, bronchial and allergic asthma.
- staging in mofette, useful for vasodilatation in peripheral blood circulation, hypotension, varicose ulcer
- spending a limited time in the microclimate of the caves for the spectacular landscape, but also for the inhalation of calcium aerosols in the treatment of some forms of rickets or osteoporosis.

3. Conclusions

There is a close relationship between tourism and the climate, which in fact contains two opposite but complementary aspects:

1. Climate is a basic factor in developing, in the best possible conditions, tourist activities that will achieve their purpose: relaxation, rest, cultural and scientific information, improvement of health and mental mood.
2. A stressful weather and an unfavourable weather prevent and hinder the development of established tourist programs. May result in a worsening of the state of health, or symptoms and crises related to the occurrence or exacerbation of older diseases.

A young, healthy, trained man passes more easily over the shortcomings caused by climate stress, instead an elderly, sedentary, uneducated person, eventually with different affections, or a person, even healthy, but which forces the body to adapt to weathering or exceeds the body's resistance to some climatic factors (long exposure to sunlight, rain, cold, wind, heat) may present reactions requiring physician intervention.

Bioclimatologists have tried to make this relationship between the climate and the human body more objective, to establish the most favourable tourist regions and to establish the most favourable periods of the year based on bioclimatic indices, that take into account the main meteorological parameters and their comfort limits for the human body.

For this purpose, establishing a bioclimatic touristic calendar can give the most favourable space and time indications for different categories of tourists and patients, depending on age, health and training.

References

- Ardeleanu I., Barnea M., (1973), *Elemente de biometeorologie medicală*, Edit. Medicală, București
- Besancenot J-P. (1990), *Climat et tourisme*, Masson, Paris
- Berlescu Elena (1990), *Enciclopedia de balneoclimatologie a României* (ed. a II-a), Edit. All
- Binștoc O., (1962), *Cura cu factori naturali în stațiunile balneoclimatice și la domiciliu*, Edit. medicală, București
- Mănescu S., (sub red.) (1984), *Tratat de igienă*, vol I, Edit. Medicală, București
- Muică Cristina, Muică Ileana (2011), *Factori naturali de risc în activitatea turistică*, Edit. Universitară, București
- Percek A., (1987), *Terapeutică naturistă*, Edit. Ceres, București
- Rădulescu Andrei, Teodoreanu Elena, (2014), *Noțiuni de balneofizioterapie și balneoclimatologie – o selecție de restituiri*, Edit. Medicală, București
- Smith K., *Principles of applied climatology*, Mc Graw hill Book Company, London
- Sorocovschi V. (2008), *Climatologie și aplicații bioclimatice în turism*, Casa Cărții de Știință, Cluj-Napoca
- Teleki N. Munteanu L. Stoicescu C, Teodoreanu Elena, Grigore L. (1984), *Cura balneoclimatică în România*, Edit. Sport Turism, București,
- Teodoreanu Elena, Dacos-Swoboda Mariana, Voiculescu-Ardeleanu Camelia, Enache L. (1984), *Bioclima stațiunilor balneoclimatice din România*, Edit. Sport Turism, București
- Teodoreanu Elena (2002), *Bioclimatologie umană*, Edit. Academiei Române. București,
- Teodoreanu Elena (2004), *Geografie medicală*, Edit. Academiei Române. București
- Teodoreanu Elena (2011), *Clima și omul, prieteni sau dușmani*, Edit. Paideia, București
- Teodoreanu Elena, Gaceu Ovidiu (2013), *Turismul balneoclimatic în România*, Edit. Universității din Oradea
- Tromp S.W., (1974), *Progress in biometeorology*, vol. I, Prt IA, Swets et Zeitlinger BV: Amsterdam