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# Amplitude-time characteristics of the individual reactions of healthy people, to the action of meteorological factors

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The reaction of cardiovascular system on action of space and terrestrial weather has been earlier repeatedly established. Actual question is now, which departments of cardiovascular system of each concrete person, and in what measure react to action of these factors? Based on analysis of long-term daily measurements of blood pressure (BP) and heart rate (HR) in healthy volunteers, middle-aged residents of the middle latitudes, we obtained two types of reactions of these physiological parameters to complex meteorological factors. It is shown that among the investigated parameters of the weather (barometric pressure, relative humidity, air temperature, wind speed, the average rate of change of atmospheric P and T, the most influencing is an air temperature T. Two types of reaction of the BP and HR were observed: 1) monotonic (but non-uniform in speed) reduction in systolic blood pressure (SBP) with increasing T and a weak response in diastolic blood pressure (DBP), while no response in HR, and 2) two-phase reaction, which coincides with the first type at low temperatures and is characterized by positive correlation between SBP, DBP and HR with T for T> 5°C. The absolute values of the coefficients of the linear regression of blood pressure from the air temperature in some temperature ranges can reach a value of 0.8 mmHg /°C, which means systematic increase in mean SBP by 15-16 mm Hg with decrease temperature from -5 to -25°C. The mean values of the coefficients of linear regression are 0.15-0.40 mmHg/grad C