

Physiological responses of the driver in a solar heated car cabin

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Abstrak

The aim of this study was to evaluate the physiological responses of the driver when he or she enters the vehicle cabin for the first time after the vehicle was in a parking lot. Eight healthy male students underwent tests in vehicle cabins that had been parked for two hours without any shade. Immediately after they entered the cabin, they ran one of the test conditions: (1) all windows in the cabin were fully lowered and the air conditioning (AC) system was off (CON); (2) all windows were closed and the AC was set at the first speed level (AC 1); or (3) all windows were closed and the AC was set at the second speed level (AC 2). The attempt to decrease the air temperature in the cabin by opening all the windows did not provide a significant impact on the participants' physiological responses. Decreasing the air temperature by turning the vehicle air conditioning on lowered mean skin temperature and heart rate, but not core body temperature. However, using the first or second speed of the AC did not make any significant difference in the physiological responses of the volunteers.