This study investigated the contribution of ambient temperature (T), wind velocity from a car air-conditioner (V) and radiation (R) to thermal sensation in summer using an actual cabin. The subjects were eight healthy male students. Fifteen experimental conditions were designed by combinations of T conditions (22°C, 26°C and 30°C), V conditions (the average wind velocity: 0.18 m/s, 0.25 m/s and 0.33 m/s) and R conditions (values of solar radiation at the instrument panel top surface: 0 w/m², 150 w/m², 300 w/m²). The subjects sat in the passenger seat for 30 minutes. They evaluated their thermal sensation and thermal comfort. The factor influencing overall thermal sensation most was T, and the next was R. On the other hand, there was less influence from V in comparison with T and R. This result would indicate that regulation of air temperature is a more effective means than regulation of air velocity to create a comfortable thermal vehicle-environment. Furthermore, we propose a simple index for the thermally comfortable area in vehicles based on the calculation of overall thermal sensation by thermal factors.

1-12 A Survey of the Thermal Environment and Human Responses of the Office Workers in “Cool Biz” Implemented Office
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This paper reports the results of the measurements taken in “Cool Biz” thermal environments and workers’ responses which included evaluation of the thermal environments. The subjects were 83 male and female office workers at an office located in central Tokyo. Ambient temperature, relative humidity, air velocity, and radiant temperature were measured. PMV and PPD were also calculated. The thermal sensation vote, comfort vote and information on actual clothing worn were recorded. The preferences of each worker and physical characteristics were also noted. The ambient temperature was approximately 26.7°C. The workers perceived the thermal condition differently. Women’s perception was rather neutral, although the men’s perception was varied. It was considered that the differences in perception were due to individual constitution. The mean clo value was 0.53 clo, which indicates that the workers wore very light summer clothes. The mean value of PMV of each worker was 0.50 and PPD was 12.4%.

1-13 Line-of-Sight Changes of the Aged during Their Getting Out of Bed
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Towards the prevention of fall accidents often reported in hospitals, line-of-sight changes of aged persons during their movements around the bed (getting out of bed and starting walking) are investigated.

A comparison of the line-of-sight changes of the aged with those of the young shows that the aged frequently turn their eyes to get much information while the young fix their eyes on one point during each stage of movements.

The aged also tend to look downward in movements. This is the same line with the practice in hospitals, where attention has often focused on the legs of the aged patients. This point should be re-examined from the viewpoint of the relationship between the processing of (excessive) visual information and the stability in movements in the aged persons.

1-14 Effect of Aging on Brachial and Femoral Artery Blood Flow during Passive Heating
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To approach the mechanisms underlying the age-related decrement of skin blood flow that first appears in the lower limbs from the viewpoint of the interaction between thermoregulatory and cardiovascular responses, we measured the brachial and femoral artery blood flow (ABF) and skin blood flow (LDF) on the forearm and thigh in 15 older men and 12 younger men during 40-min passive heating (by placing the lower legs and feet in a 42°C water bath while sitting in ambient conditions of 30°C and 45% rh). During the heating, the ABF and LDF increased significantly in both older and younger men at both body sites, together with an increase of mean body temperature (Tb). The rates of increase of thigh LDF and femoral ABF were lower in the older men than in the younger men, but those of forearm LDF and brachial ABF similar in both groups. Tb response was also similar in both groups. These results suggest that the age-related decrement of skin blood flow that begins in the lower limbs may be associated with the decrement of femoral artery blood flow.

1-15 Thresholds of Skin Sensitivity to Warm and Cold in Older Men
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We investigated the age difference in the thresholds of skin sensitivity to warm and cold over the body surface, and the relationships between these thresholds and physical activity in daily life (PR) or maximal O₂ uptake (VO₂max). The thresholds...