addition, we discussed the characteristics of each item among four cities in Korea, China, Taiwan and Japan.

**P-16** A Comprehensive Study of Effect of Urbanization on Health of Children in East Asia Part 3 Questionnaire Findings about Habitat

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We performed a comprehensive study about urban environment and health of children in East Asia. We investigated various measurement items, for example, local cold tolerance and questionnaire about a lifestyle in four cities of East Asia. We developed two questionnaire sheets for children and their parents. The main questionnaire for children asks 1) sleeping time and quality, 2) daily physical activity, 3) usage of information technology devices, 4) cramping for examination and 5) subjective score for health. That for parents asks 1) health of child, 2) indoor pet animal, 3) passive smoking, 4) heating, cooling and ventilation system, 5) residential construction and 6) family structure. The database was made based on these measured items.

In this report, we describe the results of residential construction, heating, cooling and ventilation system, passive smoking, family structure. In addition, we discussed the characteristics among four cities in Korea, China, Taiwan and Japan.

**P-17**

**P-18** Comparison of Body Fat Percentage Measured by Different Methods

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Body fat percentage (%FAT) of fealty volunteers with age from 20 to 84 was measured by using 8 kinds of measuring instruments. The principles of the measuring instruments used were bioelectrical impedance analysis (BIA), air displacement plethysmography (BOD POD), skinfold thickness, and ultrasonography. The measured values of %FAT were found to depend strongly on the instrument used. As much as 5% difference in %FAT values were noted between "InBody" and "BOD POD", which have been considered to be most reliable. Two instruments for home use showed considerably different %FAT values which were strongly age-dependent each other. The reason is considered that these apparatus utilize different presumption methods to transform measured body impedance to %FAT.

**P-19** Evaluation of Ability for Differential Threshold Associated with Applied Force in a Finger-tip—Comparison with Archery Athletes—

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The objective of the study was to investigate the effect of adaptation to cutaneous sensation by measuring a tactile differential threshold associated with applied force presented on a fingertip in an archery athlete, who has trained fine finger manipulation with the requirement of precise tactile perception. A total of 14 subjects consisted of two groups, a control group and an archery athlete, participated in the study. As a result, the Weber ratio was 0.10 for both groups until the standard stimulus was 5.0gf and the Weber ratios for each group were increased differently when the standard stimulus became less than 5.0gf. The average differential threshold for athlete group, however, was higher than that for control group, which implied that the cutaneous sensation obtained at the finger tip for archery athletes was less sensitive than that for control subjects. It was concluded that the adaptation of archery athletes was not observed as the tactile differential threshold in our experiment; however, the hardness of the skin on the fingertip rather showed their adaptation since it was revealed that the hardness of the skin was correlated with the differential threshold.

**P-20** Modeling for a Cerebral Cognitive-Task Processing Based on Reaction Time in the Task

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Reaction time in a cognitive task would be a good candidate for an indicator to evaluate the influence of a stimulus on a higher brain function. In this study, reaction time was measured in healthy male graduate students using an instrument developed by us to display a cognitive task and to measure the reaction time. Based on analysis, focusing to priming effects of the results in the reaction time, a model for the cerebral cognitive-task processing has been proposed. Moreover processing time in each processing stage in the model has been estimated from the reaction time measured. The model for a cerebral cognitive-task processing proposed in this study would be remarkably useful in analyzing the higher brain function.

**P-21** Evaluation of the Movement Intensity in a Free Walk for the Elderly

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It is extremely important to maintain the necessary ability to