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5B29 Study on the Beauty of Leg Lines

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Every woman wants to have a beautiful leg lines. Then the authors undertook the experiments using 50 college male students. They answered questionnaires regarding the important factor for desirable female, and judged the beauty of leg lines for 168 pictures drawn by authors. The upper part of body of pictures was fixed, and the shape of lower part was transformed. The factors of shape were short or long, fatty or thin and straight or X-type or 0-type. The looks of face, hair, legs, breasts were the important factors in general and the thigh, ankle, calf were important in the leg lines. The results of judge for pictures showed that the fatty-thin factor was most dominant. The rank of beauty was manifest, however the rank of preference had a tendency to mingle.

5B30 Study on the Treatment of Body Hair

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Present study was composed of 2 parts. In part I, 256 college female students were surveyed regarding the body hair treatment by questionnaires. The main results were as follows. More than half of them are troubled with the hair. The axillae were treated by 90% of women, and the mean age of the first treatment was 13.9 yrs. The values of the face and legs were 73 and 79%, 15.1 and 15.2 yrs, respectively in the same way. In part II, 8 women tried to remove their body hair by 4 kinds of method, namely wax, mousse, jelly and razor. Their lower legs were divided into 4 parts and treated. The length and density of hair were observed for 4 weeks using photographs. When wax and jelly were applied, the subjects felt a pain, however the completion was good. The density of hair was minimum in wax.

5B31 Changes of skin color with the times in Japanese adult male and female

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Mori et al. (1956) reported the properties of 22 points of skin color in Japanese adults(27 males and 22 females). On the other hand, the authors undertook the same kind of study in 1994 (21 males and 21 females). Then we tried to observe the difference between the data of 40 years ago and the one of today. The common positions of measurement were the cheek, chest, abdomen, front of thigh, front of lower leg, sub-scapula, upper arm and back of hand. The Munsell color system was applied. The females' value were higher than males' in both data. Our subjects were reddisher in hue, lower in value, higher in chroma than Mori's. The difference was largest at the front of thigh and the front of lower leg. It seemed that the skin color had been influenced by the style of clothes.

5B32 Observation Study on Stairs Utilization from the View Points of Sex and Age

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In this study, data on the speed of going up and down a stairs were collected. In additoin, the ways of going up and down were also investigated. Five thousand and seventy four users of stairs were observed from 10:00 am to 5:00 pm. It was found that young people were faster than other age groups, and skipping one step or running up the stairs showed a higher percentage than others.

Elderly group, especially the female group, showed some characteristic behavior, such as holding , and climbing at the slowest rate.

5B33 Evaluation of the Motion of Standing Up

from Different Kinds of Sittting Postures Tsutomu Kagoshima¹⁾, Yoshihiro Shimorura¹⁾, Hiroyuki Izumi¹⁾, Kenji Ido¹⁾, Shan YuanQing Tan¹⁾, Tomoko Terashima¹⁾, Toshiyuki Hayashi¹⁾, Testuo Katsurura¹⁾, Yasuyuki Kikuchi¹⁾, Hajime Harada¹⁾, Koichi Iwanaga¹⁾ and Tadao Shimizu²⁾

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The motion of standing up from six types of Japanese sitting postures on the floor (kosikikoza, katahizatate, kiza, koza, seiza, and tonosama-suwari) were evaluated by muscle activity, body movement and subjective evaluation.Experiment was conducted under three conditions:1) not allowed to use hands; 2)allowed to use hands: 3)a man sitting in front of the subject when standing up. Subjects were five male and five female students. Subjective ratings and EMG of gastrocnemius, vastus medialis, erector spinae, and tricipitis were measured.Body movements were recorded with a VTR. The differences of standing up movements were observed between sitting postures, sex, and conditions when standing. Standing up movements were categorized into seven types, which were found to be independent to sitting postures.

5B35 An Ergonomic Evaluation of Cooking Range Switch

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Useability of cooking range switches were examined. Subjects were 9 elderly women (age: $62 \sim 75$) and a 28 years old woman. Two types of switches; push-and-turn type(PT) and push-button type(PB) were tested. Three levels of load to operate were tested in each type of switches. Subjects ignited 5 times for each switch. Surface EMG of upper limb (anterior deltoideus, triceps, pronator teres, extensor carpi ulnaris), joint angle (elbow, wrist), thumb pressure, subjective ratings and useability investigation were measured during the operation. Maximum muscle strength when operating the switch was also measured. As a result, significant difference was found between the types of switches. In case of PB type, there were no large movements on the joints. In case of PT type, the joints were seen to support the pronation movement. Under almost all conditions, iEMG was larger on the PT type.