

Muscle Fiber Conduction Velocities of the Gluteus Muscles of Bipedal Standing Rats

Toshiyuki TAKAHASHI, Chinami NISHIMOTO, Tetsuya NISHIMOTO and Akio TSUBAHARA

Muscle fiber conduction velocities (MFCV) of the gluteus maximus muscles of bipedal standing rats were measured to determine whether exercise induces changes in intra muscular function. Sixteen four-week old male Sprague-Dawley rats were divided into two groups ; a control group (N= 8) and a bipedal exercise group (N= 8). Bipedal standing exercise was performed in a special bipedal training box called a Skinner's operant box. The animals were trained twice every day, in the morning and evening, five days a week. After 15 weeks of training the MFCV of the medial side (MFCV-M) and the lateral side (MFCV-L) of the gluteus maximus were measured using a comb style electrode under general anesthesia with thiopental sodium. Muscle fiber action potentials were evoked by electrical stimulation directly to the muscles, and recorded using a comb style electrode array on the surface of the muscles. The mean MFCV-M participation in hip extension in the bipedal exercise group (3.83 ± 0.39 m/sec) was significantly higher than that in the control group (3.45 ± 0.43 m/sec). However, there were no significant differences in the mean MFCV-L participation in hip rotation between the bipedal exercise group (3.81 ± 0.34 m/sec) and the control group (3.67 ± 0.35 m/sec). These results suggest that the increase in MFCV in the bipedal exercise group was caused not only by structural changes in the muscles, but also by changes in muscle function including muscle strength.

Short Reports

A Survey of the Elderly People with Severely Hearing Impairment Concerning their Terminal Phase of Life

Hajime SAKUGAWA and Kyoko TANINAKA

In order to clarify the characteristics of the thoughts of aged people with hearing impairment, a questionnaire investigation concerning their thoughts about death was conducted on 15 severely hearing impaired. Some parts of questionnaire were conducted by sign language. Following facts were revealed.

- (1) None of the subjects was concerned about their physical suffering when faced with death. On the other hand, 4 subjects were more anxious about their families and friends than themselves.
- (2) Four subjects wanted to donate their bodies to medical research for treatment of hearing impairment.
- (3) Six subjects replied that they feel lonely and anxious about dying without being able to communicate with people close to them.
- (4) Many subjects strongly wished to communicate more easily with normal people by popularizing the use of sign language.

In general, the subjects expressed more concerns about total welfare of people with hearing impairment than about themselves.

Improving The QOL on a Psychiatric Ward

— A Study of Practices and Two Case Studies —

Yukiko AGENO and Hiroe HITOMI

No abstract

Changes in Japanese Families after World War II — The Relationship between Parents and Children —

Yoriko KOSHIBA

No abstract

Assistance of Physically Handicapped Person in the Leisure Activities

Koji TODA

A person with leisure time may have trouble finding ways to spend and enjoy it.

As a social rehabilitation casework, I endeavored to find a way to help a physically handicapped person by devising a program to make the leisure more pleasant and enjoyable. The program was a success and the person was able to live a more fulfilled life while enjoying his leisure time.

Menstrual Attitude and Menstrual Distress of Girl High School Students

Yuuko Takei

No abstract

A Study of the Sleep Habits and Behavior of Elderly Persons — Differences by Sex and Age —

Kimiko MIZUKAMI, Takahiro HONO and Ken YAMAMURA

No abstract

A Study of the Recording Region for Local Sweat Volume as a Pain Indicator

Kiyoko FUKAI, Akiko NIIMI and Miho TANAKA

This experiment was designed to determine a suitable recording region for local sweat volume as a pain indicator for clinical application. Local sweat volumes of the thumb, thenar and forehead were recorded in twelve healthy women during association game playing and the electrically induced pricking pain. Sweat increase on the forehead was observed much less frequently than the thumb or thenar during association game, while they were similar during pricking pain. Further, sweat responses also occurred with anticipation of pricking pain on the thumb and thenar, but not the forehead. These results indicate sweat volume on the forehead can be a good pain indicator.

Changes in Pneumatic and Metabolic Function over Time with Sanding as the Activity

Katsutoshi SENOO and Chinami NISHIMOTO

No abstract

**Present State and Problems of Physical Therapy Service
— A Theme Awaiting Solution to Be Solved in Education of Physical
Therapist —**

Tetsuya NISHIMOTO and Susumu WATANABE

No abstract

Materials

Safety Procedures for College Students Swimming in The Open Sea

Akiko IKEGAMI, Hiromi YANO, Yoko HOSHIJIMA, Mitsushiro NAGAO and Kazuhiko
KIMURA

No abstract