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ANATOMY

Man's Will Can Control All Voluntary Movement

➤ MAN DOES NOT have to practice yoga to control tiny, isolated muscle contractions of his body.

With the help of visual and auditory aids he can train his will to consciously isolate and control individual units that produce the finer body motions, such as twitches.

A Canadian anatomist injected electrodes by means of a hypodermic needle into primary muscles in the right hands of 16 normal persons. Every time the muscle contracted, no matter how slight the motion, it was recorded both visibly and audibly.

By hearing the contractions of the motor units, the subject learned to relax one or more units instantly on command and to reactivate them at will.

Some obtained such fine control that they produced audible rhythms and drum rolls on the recording instrument, an electromyograph. Neighboring cells remained dormant while one cell was in use. A previous study dealing with the control of athletes showed that they have no better control than the average person.

Dr. J. V. Basmajian of Queen's University, Kingston, Ontario, recommended future studies to determine the relationship of manual dexterity and skills to conscious control of all voluntary muscle movements. The future studies may also help to expose the underlying mechanism of the spinal cord, he reported in *Science*, 141:440, 1963.

• *Science News Letter*, 84:116 Aug. 24, 1963

GENERAL SCIENCE

Rat's Body Electricity Powers Radio Signals

➤ RADIO SIGNALS have been generated using the electricity produced naturally by a rat.

The "broadcasts" have important possibilities for medicine and biology. Although nothing has yet been transmitted except a "busy signal" indicating the transmitter was operating, future devices could be used to transmit information from a human's interior.

Reducing the transmitter's size and adapting it for use inside an animal's body is now being undertaken. Within a few months, L. W. Reynolds of General Electric's Space Sciences Laboratory at Valley Forge, Pa., hopes to have a miniature radio station established inside a dog, operating on power drawn from the dog's own body.

Future development is expected to yield many applications. Transmitters implanted inside human beings could send out information concerning the heart, nervous system, brain and various body processes.

Use of a transmitter of this type, which is harmless to body functions and produces no pain, would eliminate the need for short-lived batteries and cumbersome external attachments. This would be particularly valuable in space medicine and biophysics.

• *Science News Letter*, 84:116 Aug. 24, 1963

Questions

ASTRONOMY—What is the summer triangle? p. 122.

BIOLOGY—How do penguins add to the growth of algae in the South Pole? p. 119.

GENERAL SCIENCE—What is the granddaddy of lobbying organizations for scientists? p. 117.

MEDICINE—What is the more popular name for "housewives' dermatitis"? p. 128.

SPACE—How does solar wind affect Echo 1? p. 115.

ZOOLOGY—What is the fastest-known reflex in nature? p. 121.

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