Heartbeat Slowed By Paired Stimuli, NHI Study Shows

NATIONAL HEART INSTITUTE scientists report that paired electrical stimuli, delivered in rapid succession to the heart via an external pacemaker, slows heart rate while greatly increasing the vigor of its contraction.

After a heartbeat, the heart's specialized conduction system regains its capacity to transmit electrical impulses more quickly than heart muscle fibers regain the capacity to respond to them.

Timing Described
If an electrical impulse is delivered immediately after the conduction system has recovered, but before the muscle fibers have recovered, no contraction occurs and the recovery period of the muscle fibers is prolonged.

Thus, heartbeat can be effectively slowed by delivering pairs of closely spaced electrical stimuli, the first to produce heart-muscle contraction, the second to extend.

Patient Uses Ingenious Device As Means of Communication

Col. Mathias J. Schon Jr. demonstrates the "Speakeasy," a communication device developed by his friends at Fort Lee, Va. He controls the pointer on clock-like face (left) by light touch of left hand on electric control board on bed. He has just exchanged quips with the ward's head nurse, Mary D. Thompson. Photo by Lee Brogg.

By Frank Smith

The inventiveness of a soldier's friends has virtually restored to him the gift of communication. And it looks as though their invention may soon be shared by other patients at the Clinical Center.

Muscular atrophy made Col. Mathias J. Schon Jr. incapable of almost all muscle usage throughout his body, taking from him even the strength to speak. His ability to converse was limited to a short turn of the head for "no," a slight nod for "yes," and a smile.

Then, about 15 of his friends at Fort Lee, Va., came up with an innovation. The idea was initiated by Col. Lewis M. Flint, and others contributed.

Friends Build Device
They envisioned a large clock-like board, with letters, words and numbers on its face, and with a single "clock" hand to serve as a pointer. The pointer was to be remotely controlled by an easy tap of the finger.

W. J. Glass, another friend, incorporated the plans in construction of a device, using plywood, wiring, paint and controls. And it worked!

When Col. Schon was admitted to the Clinical Center not long ago, the nurses were "interested, amazed and thoroughly pleased with the Colonel's 'Speakeasy,' as he has dubbed it," says Mrs. Mary Haas.

Betting Behavior of Individuals Reveals Wishful Thinking Influences Decisions

By Karen Levin

Which rules, the heart or the head, when one is faced with a big decision? Wishful thinking almost always outweighs reason, according to Psychology, University of Pennsylvania, whose research is supported by the National Institute of Mental Health.

Subjects Draw Cards
Dr. Irwin and a group of his graduate students tackled this question through a study of betting behavior in card games. He described his findings from work done by him or his students at a seminar in the Clinical Center, sponsored recently by NIMH's Laboratory of Psychology.

In one series of tests, college students were shown packs of cards, some of which were marked X's. The subjects always were told what the odds were for drawing the X cards. Then they were asked to bet as each card was dealt, face down, on the chances that the card was marked.

The students received money for each X card drawn. Even though the subjects knew how many X cards were in the pack, they still defied reason and bet too frequently that they held the money-paying cards. The greater the reward, the more powerfully wishful thinking affected their behavior, Dr. Irwin's latest study shows.

Some Use Logic
A few individuals with a shrewd insight into mathematical probabilities successfully restrained their wishful thinking and bet with pure logic. But with most people, their

(See BEHAVIOR, Page 6)

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Robert S. Gordon Appointed NIAMD Clinical Director

Dr. Robert S. Gordon Jr. has been named Clinical Director of the National Institute of Arthritis and Metabolic Diseases. He succeeds the late Dr. Joseph J. Bunim who held the position from 1952 until his death last July.

Dr. Gordon comes to his new position from the National Heart Institute, with which he had been associated since 1953, most recently as a senior investigator in the Laboratory of Metabolism.

As Clinical Director of NIAMD he will direct clinical and related laboratory research in the study of the various forms of arthritis, of diabetes, cystic fibrosis, and other metabolic disorders, and of endocrinology, biochemistry and diseases of the digestive system.

Prior to joining NIH as an assistant surgeon in 1961, Dr. Gordon served his internship and residency at the Presbyterian Hospital, New York.

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Viruses of Lab Rodents To Be Symposium Topic

The National Cancer Institute, in cooperation with the Communicable Disease Center at Atlanta, Ga., will sponsor a symposium on "Viruses of Laboratory Rodents" on January 25 and 26 in Atlanta.

The symposium will be followed by a training course, through February 5, on the "Serology of Indigeneous Murine Virus." Course participation will be by invitation since enrollment is limited. Training course participants should be experienced in serological techniques and have a basic understanding of virology.

Further information concerning the symposium and training course may be obtained from Dr. Robert Holdemried, National Cancer Institute, NIH, Bethesda, Md. 20014 or by calling 49-60998.
NEWS from PERSONNEL

INJURIES AT WORK

All Civil Service personnel are reminded of their entitlement and obligation to seek immediate medical attention from the Employee Health Service when they are injured at work or contract a work-connected illness.

Under the Federal Employees Compensation Act the Government is responsible for all medical care needed for job-related injuries or illness, as well as for rehabilitation service and compensation in the event of disability or death. To obtain these benefits, however, the employee must:
- Report the injury immediately to his supervisor.
- Obtain first aid from one of the Employee Health Units (Clinical Center, Bldg. 10; North Health Unit, Bldg. 31; or Westwood Bldg., Health Unit).
- If further medical treatment is needed, obtain an order from the Employee Health Unit for treatment by an authorized physician or hospital.
- Make a written report of the injury or illness on a form furnished by the Health Unit, and give it to his supervisor within 24 hours.

Supervisors also have certain responsibilities for assisting the employee and making certain reports. The total requirements and detailed procedures are in Guide 8, Chapter IV of the Personnel Guide for Supervisors. The assistance of the I/D Personnel Officer should be solicited in any case in which questions or problems arise.

CIVIL SERVICE STATUS

“Civil service status” is a term usually denoted that a person has met the requirements for membership in the competitive civil service.

Conditions for Acquiring Status
The individual must meet all of the following: 1) Pass a civil service examination, 2) Be appointed from a register of eligibles, 3) Serve a satisfactory probationary or trial period.

Exceptions can be made only:
- By statute, by executive order, in certain cases by Civil Service Commission action. Such cases must be documented for Congress in CSC annual report.
- Benefits of Civil Service Status
- The individual: 1) Can be promoted, transferred, assigned to a different job, or reappointed—without again meeting open competition with others, but must have qualifications for new job; 2) Has certain safeguards against removal; and 3) In a reduction-in-force action, status person can’t be separated so long as there are nonstatus persons whose work can be performed by the status person.

SERVICE OPPORTUNITIES

The Personnel Management Branch has a registry of community volunteer service opportunities which shows various agencies and groups in need of volunteers for their service programs. Programs involving work with children, the elderly, and hospital patients are included.

Compiled by the Health and Welfare Council of the National Capital Area, the registry presents avenues for interested personnel to participate actively in the health, welfare, and recreational activities within the District and nearby counties of Maryland and Virginia.

The registry is available in Bldg. 1, Rm. 31, for anyone who wishes to refer to it.

In recent years, grants and awards have accounted for more than 75 percent of the total NIH appropriation.
Clinical Diagnosis of TB Discussed by Dr. Katz
At NIAID Grand Rounds

Speaking on the "Pathogenesis of Tuberculosis" at a recent NIAID Grand Rounds, Dr. Sol Katz warned clinicians that tuberculosis, which is similar in its clinical manifestations to many other diseases, should not be "overlooked" in differential diagnosis.

Dr. Katz, Chief of Medical Service at Mount Alto Veterans Administration Hospital and Associate Professor of Medicine at Georgetown University School of Medicine, emphasized that the three phases of tuberculosis — primary complex, hematogenous, and chronic pulmonary — are not necessarily a continuous process.

The course may be interrupted or arrested at any stage, he said, resulting in calcified, encapsulated, and even ossified lesions which may cause no further trouble.

On the other hand, he noted that lesions resulting from primary complex tuberculosis, whether or not they have progressed to cavitation in the lung, may spread by means of contiguity and continue in the system for many years.

Lesions May "Seed" Organs

Later, "when the setting is right" they may be responsible for "seeding" various organs via the blood stream, he said, thus triggering development of organ tuberculosis and/or eventually leading to chronic pulmonary tuberculosis via the endogenous re-infection of the apices of the lung. In this way the tubercle bacilli may be said to travel full-circle through the body. By passing the stage of hematogenous dissemination there may be no clear clinical or roentgenological evidence of the disease, he pointed out, though it is approximately 80% per cent demonstrable via the use of bone marrow or liver biopsy.

Dr. Katz also discussed the tuberculin skin test as a diagnostic tool and the ease and effectiveness of modern chemoprophylactic treatment for high-risk tuberculin-positive groups, such as very young children, medical students, and nurses.

Dr. Nirenberg Receives Harrison Howe Award

Dr. Marshall W. Nirenberg, Head of the Section on Biochemical Genetics of the National Heart Institute, received the Harrison Howe Award from the Rochester section of the American Chemical Society at a dinner meeting at the University of Rochester Faculty Club on November 9.

Later that evening Dr. Nirenberg delivered a lecture in the university auditorium. His subject was "On the Reading of the Genetic Code."

The following morning Dr. Nirenberg met in an informal seminar with members of the faculty and graduate students in the Department of Biochemistry of the School of Medicine and Dentistry.

For his work in describing the arrangement of chemicals in the cell nucleus which carry the hereditary message from one generation to the next, Dr. Nirenberg was honored by the National Academy of Sciences with its 1962 award for distinguished research in molecular biology.

Other Awards Received

In 1963 he received the Paul Lewis Award in Enzyme Chemistry from the A.C.S., and in 1964 he won the Modern Medical Award. A 1948 graduate of the University of Florida, Dr. Nirenberg received his master's degree there in 1952 and his doctorate from the University of Michigan in 1957. Since that time, he has been associated with the National Institutes of Health.

The Harrison Howe Award was established in 1945 as a memorial to Harrison E. Howe, a charter member of the Rochester section of A.C.S., and former editor of the Journal of Industrial and Engineering Chemistry. Among previous recipients are Nobel Prize winners Linus Pauling, Glenn T. Seaborg, and Carl and Gerty Cori.

Dr. Gordon Appointed NIAMD Clinical Director

(Continued from Page 1)

York City. He received his M.D. (magna cum laude) from Harvard Medical School in 1949.

Dr. Gordon is known for his research on the physiologic role of free fatty acids in blood. His studies showed that free fatty acids are the forms in which fat is mobilized from adipose tissue.

Subsequently he developed a diagnostic test using radioactive polyvinylpyrrolidone which has made possible the widespread recognition of diseases in which there is a loss of protein in the digestive system.

Dr. Gordon recently completed a very productive 3-year assignment in Dacca, East Pakistan, as Scientist Director and Chief of Clinical Research at the Pakistan-SEATO Cholera Research Laboratory.

An international research group there, headed by Dr. Gordon, demonstrated the effectiveness of a coordinated research effort, utilizing clinical, metabolic, and bacteriologic techniques, on one of the last major epidemic diseases afflicting mankind.

The new NIAMD Clinical Director is a member of Phi Beta Kappa, Alpha Omega Alpha, the American Society for Clinical Investigation, and the American Physiological Society.

A native of New York City, Dr. Gordon also received his A.B. from Harvard College. He served in the U. S. Army from 1943-44.

'Flyable' Mass Spectrometer Is Planned

For Use in Analysis of Moon's Surface

Design of a "flyable" mass spectrometer, small enough to be rocketed to the moon yet capable of analyzing samples of the moon's surface, is the problem facing Dr. Leonard F. Herzog II, a former National Heart Institute graduate.

Dr. Herzog, President of Nuclide Corporation, State College, Pa., recently was awarded a $96,429 contract by the National Aeronautics and Space Administration to begin design of such an instrument. Nuclide designs and manufactures mass spectrometers and other equipment for a broad range of scientific and industrial uses.

Device to Obtain Data

The miniaturized device, Dr. Herzog said, is intended to obtain valuable data for NASA's Surveyor Program, a series of unmanned moon shots to be launched prior to the astronaut-manned Apollo landings scheduled for the late 1960's.

A mass spectrometer, Dr. Herzog explained, can break down any substance — solid, liquid, or gas — into elemental matter at the atomic level. By measuring the "masses" of the constituent atoms the instrument reveals what molecules, elements, isotopes are present and, in addition, can determine in what quantities they exist relative to each other.

When NASA Surveyor space vehicles land on the moon they will contain a selection of scientific instruments and equipment. The mass spectrometer is being investigated, Dr. Herzog said, as one of the components intended to identify and analyze rocks, minerals, and dust.

Chemical analysis of the moon's surface by mass spectrometer, Dr. Herzog pointed out, is one more highly important step in the search to learn more about the moon.

Objectives Described

A successfully operating robot mass spectrometer landed in advance of astronaut landings, he said, could make major contributions to knowledge in these two general areas:

- To "pure" science which seeks answers to such dramatic questions as the origin and evolution of the solar system.
- To gain information that would help insure safety for the astronauts.

When manned landings are routine, he said, portable mass spectrometers operated by astronaut-scientists could help determine how well the "moon stuff" can be used to support a self-sufficient moon station. Alternatively, some of the data might be gained from samples brought back to earth — but a broad exploration program seems to require that analyses be done on the moon.
Investigations Link Muscle Activity to Intracellular Calcium Regulating Device

National Institute of Arthritis and Metabolic Diseases scientists have provided evidence of an intracellular calcium-regulating mechanism that controls muscular contraction and relaxation.

The physiological activity of muscle is related to the time course of intracellular calcium ion activity. Contraction can be triggered by local application of calcium ions, while relaxation is coordinated with action of a calcium "sink," an intracellular mechanism that reduces the amount of calcium available to the contractile elements.

In 1947, previous investigators observed that muscle fibers contracted in response to intracellular injections of calcium ions. This pointed to calcium as the physiological activator and suggested that an increase in intracellular calcium ion activity might be near the end of a series of activating steps that begins with membrane depolarization.

If this was so, the relaxation mechanism might be expected to involve a process for inactivating calcium. This hypothesis led to the present study.

Research Described

Evidence for a calcium "sink" was sought by observing how heavily a frog muscle fiber deprived of its surrounding membrane could be loaded with calcium and still relax. A minute piece of fiber (60x75 microns) was loaded with a series of calcium-containing droplets having volumes nearly equal to that of the preparation.

When the drops were transferred to the preparation there was vigorous contraction followed by relaxation, even after the number of added calcium ions exceeded the number of molecules of contractile protein. This can be explained easily by intervention of a "sink" that inactivates the added calcium.

An attempt was then made to relate the physiological properties of living muscle fibers to the rate constant for calcium interaction with the "sink." This was done by measuring the amount of calcium

Dr. Terry Announces Council Appointments

Two appointments to the National Advisory Arthritis and Metabolic Diseases Council were announced recently by Dr. Luther L. Terry, PHS Surgeon General.

Named to 4-year terms (ending September 30, 1969) were Dr. Alexander B. Gutman, Director of the Department of Medicine at Mount Sinai Hospital, N.Y.; and Professor of Medicine at Columbia University's College of Physicians and Surgeons; and Dr. Katharine McBride, President of Bryn Mawr College, Bryn Mawr, Pa.

Dr. May Reappointed to WHO Advisory Panel

Dr. Everett L. May, Chief of the Section on Medical Chemistry of the Laboratory of Chemistry, National Institute of Arthritis and Metabolic Diseases, has been reappointed to the World Health Organization's Expert Advisory Panel on Addiction-Producing Drugs.

The honorary appointment was made by Dr. M. G. Canaday, Director-General of WHO.

During his second five-year term, Dr. May will continue to inform the organization of important developments in this field.

May is widely known for his part in developing phenazone, an analgesic more powerful than morphine but less addictive.

A frequent contributor to scientific meetings, Dr. May has proposed new methods for treating muscular contraction by calcium "sink." The hypothesis is due to relaxation of calcium from the contractile elements.

These studies provide the first actual evidence that calcium "sink" operates in living muscle and support the general thesis that physiological activity of muscle is controlled by the time course of intracellular calcium ion activity.


Barbara Edelson

Wilson Stone Appointed to Stanford Univ. for Study of Anesthetics

A broad study of the pharmacology of anesthetics and related drugs, utilizing newly developed analytic methods and seeking measurements far more precise than heretofore obtainable, will be carried out at the Stanford University School of Medicine, Palo Alto, Calif., under a Public Health Service grant.

Dr. John P. Bunker, Professor of Anesthesia, and co-investigator Dr. J. Weldon Bellive, Associate Professor of Anesthesia, will coordinate the activities of a team of senior scientists.

The grant of $191,505 for the first year's research activities of a proposed 7-year program will be administered by the National Institute of General Medical Sciences.

Current Need Noted

Commenting on the objectives of his project, Dr. Bunker noted the current need for extensive and detailed knowledge of the pharmacology of anesthetics and the clinical problems they present so that physicians can cope with undesirable side effects, many of which are poorly understood at present.

This line of investigation has become increasingly important to the field of postoperative medical care, he believes, as advancements in clinical applications are made and as surgical techniques become more complex.

The scientists will emphasize the quantitative aspects of research reflecting the need for more precise measurements of drug effects and the availability of a rapidly developing technology for such studies.

Studies Listed

The studies will include dose-effect relationships, evaluation of secondary or side effects, toxicological effects, drug interactions, and the uptake and distribution of drugs.

Special attention also will be given to the design of experiments to provide information on the site and mode of drug action. In exploring problems of experimental design and particularly those relating to theoretical analysis of drug interaction, the research team will be working with the division of biostatistics.

Wilson Stone Appointed

Dr. Wilson S. Stone, Professor of Zoology, University of Texas, Austin, has been appointed to the National Advisory Research Resources Committee of the Division of Research Facilities and Resources for a 4-year term ending September 30, 1968.
the refractory period of the heart muscle fibers.

In the currently reported study, the researchers investigated the effects of sustained, paired electrical stimuli from an external pacemaker on heart rate and contractility in dogs and also in four patients undergoing open-heart surgery.

In the animal studies, the external pacemaker readily took over from the heart's own pacemaker, and reduced heart rate from an average of 182 to 109 beats per minute.

Even when the heart was paced at an extremely brisk rate (180-290 beats per minute) by single impulses from another external pacemaker, the paired stimuli could capture control of heartbeat, slowing heart rate by an average of 72 beats per minute.

Paired stimuli also readily suppressed tachycardia resulting from toxic doses of ouabain (a digitalis glycoside). Similar slowing of heart rate was achieved in the four patients; and, in one patient with atrial fibrillation, heart rate became regular during paired stimulation.

**Contractile Force Increases**

The slowing of heart rate during paired stimulation was always accompanied by a substantial increase in the vigor of heart-muscle contraction, which persisted as long as paired stimulation was continued. In the animal studies, ventricular contractile force was nearly tripled by paired stimuli delivered at the pace previously set by the heart's own pacemaker. In one patient, the slowed heart rate was accompanied by a 100 percent increase in ventricular contractile force.

Although increased ventricular filling was probably a contributing factor, the increased vigor of ventricular contraction stems for the most part from a fundamental increase in heart-muscle contractility. The mechanism underlying this increase is not yet clear.

The scientists conclude that paired stimulation, though not without hazard, may be clinically useful in the treatment of patients with arrhythmias and various other forms of heart disease and possibly in the post-operative care of patients undergoing heart operations.

These findings were reported in the American Journal of Cardiology by Drs. Nina S. Braunwald, William A. Gay Jr. and Andrew G. Morrow of the Surgery Branch, and Dr. Eugene Braunwald, of the Cardiology Branch. Their findings confirm and extend the original observations of Lopez and co-workers and the more recent work of Char-duck and associates.

**Study Shows Safer Adenovirus Vaccine Possible**

Developments which indicate a possible way to produce potentially safer and effective adenovirus vaccines have been reported by scientists of the National Institute of Allergy and Infectious Diseases.

A vaccine consisting of purified sub-units of the protein coat of the virus would offer two advantages. First, it would be possible to eliminate infectious virus, the adenovirus itself, or extraneous agents that could be present in tissue cultures used to prepare the vaccine.

Because of the suggestion that some viruses play a role in the causation of animal tumors, there is a continuing reappraisal of the use of live viruses in vaccines in order to exclude any risks of this sort, however remote.

Second, such vaccines could possibly be subject to chemical assay to be correlated with potency tests. Variation in antigenic potency of different lots of vaccine has been one of the reasons why present inactivated vaccines of whole adenovirus fail to provide consistent protection.

It has been possible to separate noninfectious soluble antigens, that is, structural sub-units of the virus particle present in infectious tissue culture suspensions.

**Trial Vaccines Prepared**

Using this procedure, Dr. Julius A. Kasal, Margaret Huber, Dr. Frank Loda, Dr. Peter A. Banks, and Dr. Vernon Knight, of the Laboratory of Clinical Investigations, prepared experimental vaccines to determine whether two of the soluble antigens of adenovirus type 1 could stimulate neutralizing antibody.

Injected into volunteers, these vaccines stimulated the production of antibody capable of neutralizing infectious virus in vitro. Moreover, the volunteers were found to be substantially immune to challenge with infectious adenovirus.

desires overcame their reason time after time—regardless of education, I.Q., or sex.

Cultural background doesn’t affect this phenomenon, either. In one of his earlier studies, Dr. Irwin compared the betting behavior in the X-card test, of middle class children with those from culturally deprived homes. The results were identical. Both were equally swayed by wishful thinking.

Dr. Irwin conjectured that this bias may affect men in all walks of life, including scientists. He said, “We have not studied scientists as such. But we have looked at adults who were faced with deciding which of two hypotheses was true. We know that they more readily accepted the hypothesis they wanted to be true on less evidence than did the hypothesis they didn’t like.”

Judgment May Improve

Dr. Irwin offered one ray of hope. One’s judgment may improve with age. He found that college students were swayed a little less by wishful thinking than fifth and sixth graders. The youngsters sometimes bet that they held, a desirable card fifty percent of the time, while the odds were ten to one against it.

But in general, Dr. Irwin believes that wishful thinking is a powerful and universal force in decision making, regardless of education and background. He warned that “One must guard against it at every level. The only way this irrational effect can be cut down is to resort to objective evidence whenever it is available—or, in short, stick to the facts.”

**BEHAVIOR (Continued from Page 1)**

**New NIAAMD Abstracts Journal to Aid Research Developments’ Communication**

The first issue of a journal designed to improve communication of research developments in the field of arthritis and rheumatic diseases has been inaugurated by the National Institute of Arthritis and Metabolic Diseases.

The new monthly publication, Arthritis and Rheumatic Diseases Abstracts, contains abstracts of current world literature on arthritis and rheumatic disease.

As the only central source of up-to-date information in this area of research, the journal will close an evidential gap and provide, free to investigators, ready access to articles from over 4,000 biomedical journals published throughout the world.

Included in each issue of the journal will be over 250 abstracts dealing with varied clinical and fundamental aspects of these disorders, as well as with social and epidemiological aspects. Subject and author indexes are also included in every issue and will be cumulated at the end of each year for easy reference.

**Members Are Advisors**

The abstracts, prepared under contract with Excerpta Medica Foundation, are classified according to a modification of the proposal of the Nomenclature and Classification Committee of the American Rheumatism Association. Eminent members of the association also serve as editors and advisors for the new publication.

**The first issue of the journal is dedicated to the memory of Dr. Joseph J. Buring, Clinical Director of the National Institute of Arthritis and Metabolic Diseases and a pioneer in arthritis and rheumatism research.**

This specialized communication is one of four such information bulletins published by the National Institutes of Health. The others are Cancer Chemotherapy Abstracts and Caregineous Abstracts (NCI), and Psychopharmacology Abstracts (NIMH).

**Terry Appoints Three To Neurology Council**

Surgeon General Luther L. Terry of the Public Health Service recently announced three appointments to the National Advisory Neurological Diseases Council.

Named to 4-year terms were Dr. John S. Meyer, Professor and Chairman, Department of Neurology, Wayne State University College of Medicine, Detroit; Dr. Francis A. Sney, Professor and Chairman, Division of Otolaryngology, University of California Medical Center, San Francisco; and The Rev. Thomas J. Carroll, Executive Director, St. Paul’s Rehabilitation Center for the Blind and the Catholic Guild for All the Blind, Boston.

**DEVICE (Continued from Page 1)**

D. Thompson, head nurse on his ward.

Reasonable ability to communicate non-verbally is expected of nurses of the NINDB medical neurology service due to the Institute’s relatively high incidence of patients unable to talk. But this device takes all the strain out of it for us; and it is obviously a great blessing to the patient himself.”

The face of the Speakeasy shows an outer circle of the alphabet and numbers one through 10 in black; an inner circle of key words and phrases in green; and a third innermost circle of words and phrases in red.

**Pointer Indicates Words**

The pointer begins by stopping at a black, red, or green dot at the top of the outer circle to put the reader on the right track—and then leads him from letter to letter, spelling words, or from key word to key word.

The pointer moves and stops at the command of a light touch on a wooden control board by the patient’s side. It can be made to go backwards as well as forward, like a toy electric train. In fact, the motor device within the Speakeasy was taken from such a train set.

“ar device is also equipped to be operated by a head band, permitting the muscles of the brow to control the pointer,” says Dr. King Engel, Col. Selon’s attending physician. “The little effort required to operate the Speakeasy makes it feasible for many patients but especially for those with muscular atrophy.”

Dr. Engel added, “We want to begin exploring the possibility of having several duplicates of the Speakeasy made right here in our own shops for use by other patients.”

The instrument is easily constructed, and in retrospect it even seems like an obvious idea; but the fact is that innumerable patients, until now, had to remain mute because it didn’t exist.

Pictures and wiring diagrams of the Speakeasy have been made available to veterans with the Veterans Administration and the Department of the Army, specifying that anyone anywhere may reproduce it or a similar instrumentation, without patent or other rights interference. This idea, though novel, is an obvious one; but the vision that its reproduction may not be for profit.
First of PHS Dietitian Interns Enroll For 3 Weeks Clinical Center Training

The Clinical Center Nutrition Department felt the equivalent of a pat on the back when the PHS Staten Island Hospital recently asked for a helping hand in training new dietitian interns.

"The Staten Island Hospital is a real old-timer at providing the Commissioned Corps with well trained dietitians," says Edith A. Jones, Chief of the CC Nutrition Department, "We are naturally very happy to begin doing our part by giving its interns the benefit of three weeks' experience in cafeteria management and in evaluating dietetics in a research environment."

The trainees are college graduates who will complete a full year's internship covering virtually every phase of dietetics in order to be certified by the American Dietetic Association. They will affiliate with the CC two at a time, a total of 12 per year.

The Clinical Center is included in their training program primarily because its cafeteria operates in competition as a public service—unlike the cafeteria at Staten Island Hospital.

The first two weeks here are taken up with learning how to give the optimum in food and service to cafeteria patrons while breaking even on costs.

Food Service Studied

The third week is devoted to providing food for research patients—distinct from nutrition service on a purely therapeutic or general medical care basis.

Formerly the Nutrition Department was called upon to answer a constant string of requests for this kind of instruction, largely from hospital nutrition departments.

As a result the CC nutritionists established a program of week-long conferences in "metabolic food service," which they now conduct three times a year for some 30 dietitians.

"High quality and efficiency in food service are, as in any profession, the children of both academic and experiential education," Miss Jones says. "We'll do our best to give these new interns the full benefit of on-the-job training."
Neutralizing Antibodies Against SV5, SV20 Found in Human Sera

A Division of Biologies Standards study has found neutralizing antibodies against two simian viruses in the sera of persons from New Guinea and the United States, but the presence of these substances in man has not been associated with the use of vaccines, or with any definite clinical disease. Although about 100 viruses of lower primate origin have been isolated and characterized, only a few of these have been studied to determine whether they also infect man.

In this study, the sera from 267 persons living in two markedly different geographic and ecologic settings (New Guinea and the United States) were examined for the presence of neutralizing antibodies against two primate adenoviruses—monkey myxovirus SV5 and monkey adenovirus SV20.

Human Infections

The results suggest the possibility that these viruses, or agents antigenically related to them, might infect man.

SV20 antibody was found in two-thirds or more of the New Guinea donors in all age groups; it was found in only one-fifth of the sera of U.S. donors above six years of age, and was absent in those six or younger. None of the New Guinea sera and eight percent of the U.S. sera possessed SV5 neutralizing antibody.

U.S. donors who did receive adenovirus vaccines prepared in monkey kidney cell cultures did not have detectable SV5 and SV20 antibodies, indicating that these antibodies are not associated with the use of these vaccines.

The fact that New Guinea donors had never received vaccine of any kind, nor had contact with any primate other than man, suggests that their antibodies against SV20 might have been stimulated by what may actually be a human infective agent, which just happened to be isolated from lower primates first.

Clinical Manifestations Unknown

Nothing is known about the clinical manifestations of SV5 and SV20 infections in either monkey or man. The fact that SV20 antibody appears with great frequency in the blood of New Guinea natives and less commonly in the blood of United States residents, and the presence of SV5 antibody in the U.S. sera, may be indications that SV5 and SV20 are human pathogens.

A report of this study by C. G. Aulissio and Dr. J. A. Morris of the Division of Biologies Standards, and Mrs. D. C. Wong of the National Institute of Allergy and Infectious Diseases, appeared in the Proceedings of the Society of Experimental Biology and Medicine.

Ruth Overton Retires As NIH Library Aide; Serves Here 16 Years

Ruth Overton, a Library Assistant in the Library Branch, Division of Research Services, retired recently after 26 years of Government service. During the last 16 years she was on the staff of the Circulation Unit of the NIH Library.

Miss Overton began her Government service in the Administrative Services of the Works Progress Administration in 1936 and remained there until 1945.

Joins PHS in 1946

From 1944 until 1946 she was a civilian employee at Camp Pickett, Va. Her career with the Public Health Service began in 1946 in the Bureau of State Services. In 1948 she transferred to the NIH Library.

A native of Burkeville, Va., Miss Overton attended Randolph-Macon Woman’s College in Lynchburg, and the Peabody College for Teachers and Vanderbilt University in Nashville, Tenn.

Miss Overton has returned to Burkeville, where her family has lived for many generations, and plans to resume her interest in music.

Division of Biologi- healthcare professionals, and the public at large. The Division is also responsible for developing and disseminating medical information to the public, including the development of educational materials and the provision of medical and public health information to the public.

R&W Annual Meeting Set for December 16

The Recreation and Welfare Association of NIH announced that its annual meeting this year will be held Wednesday, December 16, at 12 noon in Wilson Hall.

All R&W members are urged to attend the meeting and to bring their 1964 membership cards.

Included among the business to be conducted at the meeting will be the presentation of a slate of officers for 1965. Nominations also will be accepted from the floor. The election will be conducted by mail ballot.

Door prizes will be awarded lucky ticket holders. In addition, the first 100 members to arrive will receive a special gift.

Dr. David Winter Wins Hans Berger Award

Dr. David L. Winter, until recently with the Electroencephalography Branch, NINDS, received the American Electroencephalographic Society’s annual Hans Berger Award for outstanding neurophysiology research at the society’s annual meeting, October 1-3, in Santa Fe, N. Mex.

In making the award, the society recognized Dr. Winter’s studies employing microcorticograph and PIPER, Newark, Del., and Dr. E. R. H. is in practice at the Baton Rouge Animal Hospital, Baton Rouge, La.