

SURGERY

Male Hormone Helps Nourish Surgical Patients

► A SHOT of male hormone preparation given before a surgical operation helps to keep the patient from getting undernourished after the operation when he cannot eat heartily.

This way of solving a nutrition problem in surgery appeared in two reports to the American College of Surgeons meeting in San Francisco.

Patients who had part of the stomach removed and other patients who had the gallbladder removed were given an injection of a long-acting male hormone preparation called depo-nortestonate before the operation.

After the operation, they got less than optimum calories and protein, but they lost little or no weight and apparently were not short on protein-building nitrogen. The results with these patients were reported by Dr. William E. Abbott and associates of Western Reserve University School of Medicine, Cleveland.

A different male hormone preparation, norethandrolone, was used in studies reported by Dr. John M. Beal and associates of New York Hospital-Cornell Medical Center, New York. Their patients were having either part of the stomach or the colon removed.

These patients also showed the benefit of the tissue-building stimulus of the male hormone.

Science News Letter, October 27, 1956

PUBLIC SAFETY

Sees Atomic Testing Safe for Many Years

► "TESTS of atomic devices may be safely continued at the present rate for years," Dr. Shields Warren of the Cancer Research Institute, New England Deaconess Hospital, Boston, said at the dedication of the new headquarters building of the American Association for the Advancement of Science.

"The best level of controllable radiation is none at all" was the contrary view expressed at the same dedication exercises by Dr. L. G. Dunn, professor of zoology, Columbia University, New York.

The difference in views came because Dr. Warren concerned himself with the effects of radiation on the human body, effects such as death of tissues, blood disorders, cancer and premature aging, whereas Dr. Dunn concerned himself with the effects of radiation on "the mammalian population of genes" and the evolutionary changes through mutations that radiation may cause.

Dr. Warren based his statement on "over a quarter of a million measurements of radioactive fallout made in many localities here and abroad." He cautioned, however, that the health problems of the atomic age, although not now acute, are not solved.

Research is urgently needed, Dr. Warren said, on methods of waste disposal, a prob-

lem that will increase with the increasing numbers of atomic plants. Needed also is research on ways of protection from radiation, in cure of radiation injury, in basic radiobiology and in genetics.

Dr. Dunn and Dr. Warren both referred to the recent reports on radiation hazards made by the U. S. National Academy of Sciences and the British Medical Research Council. Dr. Dunn, however, criticized the reports because, in assessing the hazards to future generations, both reports made two assumptions he said are "open to serious question." These assumptions are:

1. "That induced mutations are qualitatively the same as spontaneous ones, and thus merely add quantitatively to the total number of mutations in the population.

2. "That the fate of a mutation in a population depends primarily on its effect when homozygous, that is, when the offspring receives the same recessive allele from each parent."

The testing of these two assumptions constitutes two of the essential problems in the field of radiation genetics, he said.

Science News Letter, October 27, 1956

PSYCHOLOGY

Courses Called "Tough" Because Others Say So

► COLLEGE STUDENTS' ATTITUDES toward courses as hard or easy are derived from contact with the attitude more than from experience with the course. In this, their attitudes are like other types of attitudes such as those toward minority groups.

This is suggested by research reported by Dr. Frederick R. Fosmire of the Veterans Administration Hospital, Sheridan, Wyo., in *Science* (Oct. 12).

Dr. Fosmire asked college students to rank the courses offered in order of difficulty. He then compared this ranking of toughness with the actual difficulty as indicated by the grades handed down. He also compared both rankings with scores made by students on the Selective Service College Qualification Test.

Both reputation for toughness and actual difficulty are more closely related with scores on the SSCQT than they are with each other. Evidently superior students are attracted to the most difficult courses and to those with the reputation of being toughest. Best students were in physics and chemistry, poorest in home economics and physical education.

Chemistry and physical sciences head all three lists, although in reputation chemistry is put ahead of physics in toughness.

Most misjudged course was fine arts. This was actually the easiest course on the campus but it had a reputation of being third in difficulty. Business and commerce was rated as easiest, but actually was fourth in difficulty.

Home economics and physical education were correctly judged as among the easiest courses. English and psychology were correctly judged as among the hardest.

Science News Letter, October 27, 1956

IN SCIEN

MEDICINE

Antibiotics Team Up to Stop Resistant Germs

► AN ANTIBIOTIC TEAM that is stopping disease germs resistant to a single antibiotic was described at the Fourth Annual Symposium on Antibiotics in Washington.

This germ resistance to antibiotics, particularly by such dangerous germs as staphylococci and streptococci, has been causing increasing worry to doctors who find their once powerful weapons against infections losing their edge.

The antibiotic team combines tetracycline and oleandomycin. The latter antibiotic gets its name because it contains the sugary chemical of the oleander bush. The team is called Sigmamycin by its producers, Chas. Pfizer and Co., Brooklyn, N. Y.

Here are results given for it:

Effective in 96% of 50 patients suffering with the bone disease, osteomyelitis, acute gall bladder infection, skin ulcers and infections of the urinary tract, Drs. Sigmund S. Winton and E. Cheserov of Northwestern University Medical School and Oak Forest Sanitarium, Chicago, reported.

Only one of 189 patients treated at the Florida Farm Colony, Gainesville, Fla., failed to be helped by the new team, Dr. C. Carter reported.

Highly effective in 187 patients suffering from infected cuts, carbuncles, and human and animal bites, and curative in two venereal diseases, lymphogranuloma venereum and acute gonorrheal urethritis, in the experience of Drs. Rupert A. LaCaille and Aaron Prigot, Harlem Hospital, New York.

Worked well in such tropical diseases as yaws and amebiasis and probably will be better for such diseases than previous medicines, reported Drs. Elmer H. Loughlin and William G. Mullin, New York Medical College, Flower and Fifth Ave. Hospitals.

Science News Letter, October 27, 1956

MEDICINE

Modern Leprosy Drugs Prefer Affected Skin

► SULFONES, the modern drugs effective in treating Hansen's disease, or leprosy, may owe their beneficial effect to the fact they prefer diseased skin to healthy.

When a sulfone tagged with radioactive sulfur 35 was given to leprosy patients, the concentration in diseased skin after 18 hours was about 10 times greater than that in healthy skin, Dr. K. R. Chatterjee, School of Tropical Medicine, and Dr. R. K. Poddar, Institute of Nuclear Physics, Calcutta, India, report in *Nature* (Oct. 13).

Science News Letter, October 27, 1956

CE FIELDS

PSYCHOLOGY

Late Deciders May Tip Election Balance

► THE MINORITY—the late deciders—may tip the scales and carry an election.

The late deciders, at least one psychological study indicates, are those who have the least compelling interest in the outcome.

They do not know, sometimes until the morning of election day, for whom they will vote, because they do not particularly care. Or because they are pushed this way and then that by conflicting desires and pressures.

This voter with the relatively low interest in politics is, then, the factor that keeps the outcome of the election an exciting uncertainty until all the precincts have been counted.

This voter is also the factor that has kept democracy alive in the United States, a group of social scientists notes as a result of studies of voting in elections from 1940 to 1952. The scientists are Dr. Bernard R. Berelson of the Ford Foundation, Prof. Paul Lazarsfeld, Columbia University, and William N. McPhee, Columbia's Bureau of Applied Social Research.

Extreme interest, they explain, goes with extreme partisanship, and might culminate in rigid fanaticism that could destroy democratic processes.

Where the individual voter is personally too much involved in politics, where he cares too much, the two-party system would be impossible. The voters would be fragmented into a large number of splinter parties.

The typical American voter, they conclude, is likely to be a "campaign citizen" in the same sense that many have a "Sunday-only religion."

Science News Letter, October 27, 1956

PSYCHOLOGY

No Scientific Evidence Of Race Difference

► WHATEVER DIFFERENCES there may be between Negro and white children in intelligence test scores and ability to learn are due to previous educational opportunities and the whole pattern of environment.

There is no scientific evidence of intellectual difference due to race, a group of psychologists, experts in this field, announced in a statement.

The 18 scientists include Prof. Otto Klineberg, Columbia University; Dr. Theodore M. Newcomb, University of Michigan, past president of the American Psychological Association; Prof. Jerome Bruner, Harvard University; Prof. Anne Anastasi, Fordham

University, and Dr. Gardner Murphy of the Menninger Foundation.

"No one can deny," the statement reads in part, "that at the present time the intellectual achievement of American Negro children, particularly those who come from segregated schools, is lower on the average than that of white children, nor that a reasonable amount of time must elapse before the gap can be closed.

"We would interpret the difference in terms of the whole pattern of educational opportunities associated with the social environment, and which may affect both the physical and mental development of the child.

"Even those few scholars, however, who prefer an explanation in terms of race, indicate that there is overlapping between the two racial groups. Overlapping is usually defined technically as the percentage in one group which is superior in test scores to the median or average score obtained by the other. In every comparison with which we are familiar in this field there is some degree of overlapping.

"This means more than that some Negro children do better than some white children.

"It means that some Negro children do better than the average white child, in spite of all the handicaps to which the former have in the past been subjected.

"The conclusion is inescapable that any decision to use differences in the average achievement of the two racial groups as a basis for classifying in advance any individual child, Negro or white, is scientifically unjustified."

Science News Letter, October 27, 1956

MEDICINE

Finds New Arthritis Drug Lifesaving in TB

► PREDNISOLONE, recently developed as an anti-arthritis drug, can save lives of tuberculosis patients when used with anti-TB drugs such as streptomycin and isoniazid, Dr. Harry Shubin of Philadelphia General Hospital reported at the Fourth Annual Symposium on Antibiotics in Washington.

Its life-saving effect appeared in patients with acute forms of tuberculosis that had attacked the brain and spinal cord or had spread all through the body.

In chronic tuberculosis in which the germs have grown resistant to anti-TB drugs, Dr. Shubin also reported, prednisolone proved helpful in converting the patients to a non-contagious state.

In another group of 40 patients with far advanced tuberculosis of the lungs and who stopped improving after one or two courses of treatment, 22 showed further improvement when prednisolone was included in the treatment.

Adequate anti-TB treatment must be given at the same time that the prednisolone is given, Dr. Shubin warned. The prednisolone preparation he used has the trade name Sterane.

Science News Letter, October 27, 1956

GENERAL SCIENCE

Compton Sees Major War Using Atomic Weapons

► ANY MAJOR WAR in the future must be fought with atomic weapons.

This is the belief of Dr. Arthur H. Compton, Nobel Prize winner, expressed in his book, "Atomic Quest," which gives his personal story of the development of the atomic bomb and its consequences. (See p. 268.) Nobelist Compton was the chancellor of Washington University, St. Louis.

Dr. Compton emphasizes that nations are far from having the degree of confidence in each other that would enable the United States to rely wholly upon any atomic disarmament agreement.

Extensive peaceful use of atomic energy is foreseen by Dr. Compton. By 1975, he predicts, a substantial portion of the electrical power used in the United States will be coming from atomic power plants.

Science News Letter, October 27, 1956

ANIMAL PSYCHOLOGY

Could Assess Inflation By Reactions of Chimps

► THE EFFECTS of inflation on human beings could be assessed by means of experiments on chimpanzees, Dr. Roger T. Kelleher of Yerkes Laboratories of Primate Biology, Orange Park, Fla., suggests in *Science* (Oct. 12).

Dr. Kelleher trained two chimps to work by pressing a lever to obtain poker chips and then to spend the "money" by pushing the chips through a slot in a Plexiglas window to obtain food.

The apes learned to work only when an overhead light was burning. An open "automat" was signaled by illuminating the window with a red light.

The animals were paid on a time basis and also on a piece-work basis.

On the first schedule, the animals were paid after the first lever push following the end of a five-minute shift. They were not permitted to spend their pay, however, until the close of an hour. On this schedule, the apes "loafed" for a time after they collected their pay and then gradually picked up speed until time for the next pay.

On the time basis, the apes worked slowly. They sometimes gave only one push in the five minutes, and it was soon found they could not even keep this rate up unless they were allowed to spend their pay more quickly.

On the second schedule, the apes were paid after each 20th push of the lever. On this pay scale, the animals worked at a high, stable rate.

The effect of inflation could be tested, Dr. Kelleher suggests, by requiring the ape to push more than one chip through the slot to obtain a single morsel of food.

Another suggestion was that a pay raise could be tried. The animal might be paid more than one chip per lever push.

Science News Letter, October 27, 1956