

Questions

ASTRONOMY—What theory is proposed for the polarization of light in of a brilliant supernova such as the Crab Nebula? p. 265.

CHEMISTRY—About what percentage of lignin is in the wood used in making paper? p. 264.

ENGINEERING—What is the difference between "inertial space" and "earth space" and why can it not be detected? p. 259.

GENETICS—What have scientists discovered about the function of the Y chromosome? p. 258.

PHYSICS—How many electron volts of energy is Russia's giant atom smasher expected to give when it is in full operation? p. 261.

Why was it so important to physical theory when the principle of conservation of parity was broken? p. 258.

PHOTOGRAPHS: Cover, U. S. Atomic Energy Commission-Department of Defense; p. 259, Massachusetts Institute of Technology; p. 261, Ann Ewing; p. 262, National Institute of Oceanography, England; p. 266, National Association for Mental Health; p. 272, Monroe Calculating Machine Co.

EDUCATION

Scientist Suggests Means For Keeping U. S. Lead

► AN AMERICAN CHEMIST and industrialist took issue with Dr. Edward Teller, father of the H-bomb, and predicted "the Russians never will have better scientists than we have, but they surely will have more of them unless we stop talking and do something about it."

Dr. Otto Eisenschiml, president and chairman of the board of Scientific Oil Compounding Co., Chicago, said that the something "will have to be more realistic than penny-piddling treats to high school teachers at supper meetings, students' prizes, or the naive fantasy of an annual raid on the U. S. Treasury for two billion dollars worth of scholarships."

Dr. Eisenschiml challenged Dr. Teller's recent prediction that Russia will have the world's best scientists in 10 years before the local section of the American Chemical Society in Toledo, Ohio, which celebrated its 40th anniversary.

The Chicago scientist recommended some definite steps for maintaining this country's lead in science.

He suggests:

1. Lifting scientists and affiliated professions to the highest possible social pedestal to assure them better recognition.
2. Banishing from scientists the "specter" of financial insecurity by assuring them a ready market for everything they can produce, in the very same manner the Government now assures uranium producers.
3. Taking the over-age and temporarily

unemployed scientists into the armed forces and granting them the rank and pension rights of officers in the Army.

4. Using defense appropriations to raise the salaries of high school and college science teachers "who are the coaches of our future scientists, and should be considered in that light."

Dr. Eisenschiml thinks, however, that salaries paid by industry should be left to the law of supply and demand.

Science News Letter, April 27, 1957

MEDICINE

Relax Housekeeping to Avoid Arthritis

► AMERICAN WOMEN should relax their housekeeping standards as much as possible if they want to avoid arthritis, the Arthritis and Rheumatism Foundation has warned.

Major house cleaning should be done in installments and mothers should "try to take it easier with the children," the Foundation reported.

"Rheumatoid arthritis, the most severe and crippling form of the disease, strikes women three times as often as men. Most of the victims are young housewives and working women between the ages of 20 and 35, the childbearing years."

Case histories of women crippled by the disease show long hours of hard work, either in the home or outside, with little rest or relaxation, the Foundation statement said.

The disease often hits following a period of illness when a women's physical condition is below par. Grief, fear and worry can also spark the onset of the condition.

The Foundation listed the following warning signs or early symptoms of rheumatoid arthritis:

1. Morning stiffness, 2. pain and swelling of the joints, 3. persistent muscular aches and pains, 4. unexplained weight loss, 5. fever and weakness.

"If any of these warning signs occur and persist," the Foundation said, "it is time to consult a physician. If neglected, in rheumatoid arthritis, they may recur with sudden violence and progress to fusion of the joints into one solid mass."

The Foundation added that, although there is as yet no cure for arthritis, women who suffer its symptoms are not necessarily headed for the wheelchair. With its present knowledge, medical science can prevent serious crippling in 70% of the persons who develop arthritis if symptoms are recognized early and treatment is begun promptly.

Among the things women can do to check the effects of the disease are getting as much rest as possible, keeping well nourished without becoming overweight, avoiding tensions, and protecting themselves against cold, dampness, and sudden chills, the Foundation advised.

The Arthritis and Rheumatism Foundation said it had a booklet, "It's Women 3 to 1," available at its local chapters.

Science News Letter, April 27, 1957

PHARMACOLOGY

Report New Drug for "Shaking Palsy"

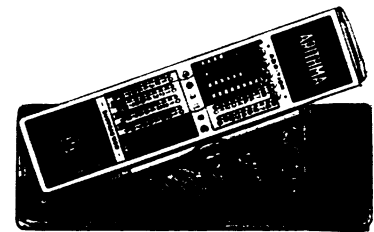
► A DRUG for treating Parkinson's disease, or "shaking palsy," that brings relief from many of the distressing symptoms of the illness was reported by Drs. Lewis J. Doshay and Kate Constable of the College of Physicians and Surgeons, Columbia University, New York, in the *Journal of the American Medical Association* (April 13).

Trade-named Disipal and known chemically as orphenadrine hydrochloride, the drug helped over 55% of the 176 patients in whom it was tested. It was especially useful in releasing the free and automatic activity of the body, which is either slowed down or lost in victims of Parkinson's disease.

Although it had no effect on the serious shaking which is characteristic of the disease, it did improve minor tremor, balance, posture, gait and mental depression, the researchers reported.

The drug's effects eventually wear off in many patients, but even so it is a highly desirable remedy to have when needed. Combined with other drugs, it can produce improvement that cannot be obtained when the other drugs are used alone, they said.

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