



MODEL PLANT—The scale model of the Air Force heavy forging press plant being built at Alcoa's Cleveland works. Use of the layout allowed shop foremen to contribute their knowledge to the final plans.

GERONTOLOGY

Warding Off Infection

► **SMALL DAILY** doses of aureomycin can help protect elderly men and women from infections that often prove fatal to bodies already weakened by other diseases.

Studies showing this were reported by Drs. Douglas H. Sprunt and Leon Victor McVay, Jr., of the University of Tennessee College of Medicine, Memphis, at the meeting of the Gerontological Society in San Francisco.

As the population ages, infectious diseases are no longer the chief cause of death, but they remain a grave problem, they pointed out. As complications of chronic degenerative processes, they terminate the lives of countless elderly people, particularly those suffering from diseases of the heart and blood vessels, diabetes, chronic bronchitis, bronchial asthma, pulmonary emphysema and bronchiectasis.

The studies covered 149 patients having chronic congestive failure, 189 with diabetes mellitus, and 30 with extensive chronic respiratory disease. Alternate persons received 250 milligrams of aureomycin, technically known as chlortetracycline, twice a day. The remainder were given an identical placebo (make-believe medicine). Neither the physician nor the patient was aware of which medication a given individual received. The average length of treatment for the entire group was 19 months.

A decrease of at least 50% in respiratory

infections occurred in 30 of the heart patients on aureomycin, compared with only four of the heart patients getting placebos, the physicians reported.

"Moreover, 36 of the aureomycin cases regarded themselves as better because of treatment," the report said. "This contrasted with only 23 of the controls. One patient in the antibiotic group considered himself to be worse as compared with seven in the controls."

Of the diabetics, 68 on aureomycin said they felt better, compared with only 29 of the controls, and laboratory tests indicated a much lower concentration of infectious germs in the blood of those getting aureomycin. Fifty-one of the aureomycin group enjoyed a reduction of at least 50% in the number of chest infections sustained during the period, compared with only 20 of those receiving no aureomycin.

Subjective improvement of aureomycin patients suffering from chronic respiratory diseases was much more marked than in those of this series getting placebos, and these views were supported by objective physical and laboratory findings.

Science News Letter, September 5, 1953

More than 40,000 *boat accidents* were reported in 1952 to the Coast Guard; many of these are believed due to uncorrected hearing troubles of the boat operators who did not hear warning sounds such as fog horns.

GERONTOLOGY

Calcium Lack Leads to One Kind of Arthritis

► **EATING PLENTY** of calcium-rich foods, such as cheese, green leafy vegetables and milk, could help ward off the arthritis of old age.

Studies suggesting this were reported by Dr. L. W. Cromwell of San Diego at the meeting of the Gerontological Society in San Francisco.

A strong possibility exists, he thinks, that prolonged lack of calcium results in porous bones. The body makes up for this at areas of stress by deposits of extra calcium. Following on this theory, Dr. Cromwell examined patients at the Arthritic Clinic, asking about their diets over the years.

The hands of the older patients, he found, usually told the story of whether or not their owners had been getting too little calcium for many years. The bulges on finger joints, called Heberden's nodules, and other arthritic changes in their fingers were much more marked in those with low calcium intake over the years.

Women who had both ovaries removed at an early age, he found, developed the old age kind of arthritis at an earlier age than the average woman. Among brothers and sisters, those who took little calcium showed more osteoarthritic changes than those on high calcium intake.

Interviews of 500 oldsters showed that those with marked osteoarthritic changes on the whole had suffered from prolonged low-calcium intake.

Other factors involved in the development of this old age arthritis are protein intake, amount of male and female hormones in the blood, vitamin D intake and certain metabolic and mechanical influences.

Science News Letter, September 5, 1953

QUESTIONS

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What elements can be used to trace the spiral arms of our galaxy? p. 150.

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CHEMISTRY—How does milk exposed to sunlight get its off flavor? p. 152.

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GENERAL SCIENCE—What four major actions have recently been taken concerning the National Bureau of Standards? p. 148.

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GERONTOLOGY—Lack of what chemical may cause artery hardening? p. 155.

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TECHNOLOGY—How can laundered clothes pick up germs? p. 152.

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