

## PUBLIC HEALTH

## British Doctors Increase

► THE CLAIM that large numbers of British doctors are fleeing their country because of socialized medical care is without fact, U. S. Public Health Service's Public Health Reports, 77:735, 1962, said, citing British Ministry of Health statistics.

The often-heard claim was most recently made by a British doctor imported by the American Medical Association in connection with the U. S. medical care to the aged debate.

Dr. John R. Seale, who came to this country at the invitation of the AMA to speak against the British system, wrote an article based on his own collected statistics in the British Medical Journal (March 17, 1962), titled "Medical Emigration from Britain."

Now comes the calmly written statistical piece in Public Health Reports that analyzes British Ministry of Health figures without comment.

"The British system is not for export," one of the coauthors, Miss Estelle Seldowitz, U. S. PHS medical economist, told SCIENCE SERVICE, "but obviously the British people are still receiving adequate care."

Here are some of the facts:

The number of physicians and dentists in the National Health Service increased during the period 1949-1960 from 1.07 per

1,000 population to approximately 1.20 per 1,000 population.

More than 25,000 full-time nurses have been added to the staffs of the National Health Service in England and Wales since 1949.

The number of staffed beds in Service hospitals has increased 5.5 per cent since 1949, while the population of England and Wales increased only 4.5 per cent during this period.

In addition to physicians' home calls, the National Health Service includes a well-developed program of services to patients in their homes, including visiting nurse services and domestic helpers.

Expense of the National Health Service has remained relatively constant since 1949—3.9 per cent in 1949-50 and 3.6 per cent of the gross national product in 1958-59.

"It would seem that expenditures for medical care in England and Wales are not out of line with expenditures for medical care in the United States in terms of gross national product," the article said.

Mrs. Agnes W. Brewster, chief, division of community health services, U. S. Public Health Service, reported the study with Miss Seldowitz.

• Science News Letter, 82:220 October 6, 1962

## BIOCHEMISTRY

## Study Life Chemistry

► IN AN outdoor laboratory high on the slopes of a California mountain peak, scientists are studying the life chemistry of the world's oldest living things—bristle cone pines.

Dr. Harold Mooney and Robert White, botanists from the University of California, Los Angeles, are making the first precise measurements of the chemical indexes to the "living rate" (metabolism) of these ancient trees in the White Mountains near the California-Nevada border.

Small branches of the trees are enclosed in a glass chamber in which temperature and light can be controlled by the investigator. Instruments connected to the chamber record the rate at which the bristle cone pine needles take up carbon dioxide.

Such measurements are made in light, when the needles (leaves) are making food by photosynthesis and in the dark when the tree is only utilizing food. They are an index to the chemical processes that have sustained the life of the trees for more than 4,000 years.

So far nothing unusual has been discovered about the life chemistry of the trees which has enabled them to live longer than any other organism. These ancient trees exist only at altitudes of 9,000 to 12,000 feet in the arid White Mountain area. Like most plants in this high, cold climate, they have higher metabolic rates (live "faster") than plants at lower altitudes.

One advantage bristle cone pines have is that their trunks are made up largely of dead tissue. Thus the green portions of the plants do not have to manufacture very much food to meet the tree's needs.

This is in contrast to the much larger, but slightly younger giant Sequoias of California, in which considerably more of the tissue is still alive.

Dr. Mooney is planning comparative studies of the life chemistry of these two types.

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## BIOCHEMISTRY

## Widely Used Chemical Can Be Cause of Cancer

► A DANGEROUS substance widely used in chemistry has been shown to cause cancer in rats and to be extremely toxic.

The chemical is nitrosomethylurethane. The actual substance causing cancer is diazomethane, easily formed from the unstable nitrosomethylurethane by hydrolysis.

Drs. H. Druckrey and R. Preussmann of the University of Freiburg, Breisgau, Germany, reported in the British scientific journal Nature, 195, 1111, 1962, that a non-toxic and non-cancer-causing chemical should be substituted in the preparation of diazomethane. The name of the safe chemical is nitrosomethyl-p-toluenesulphonamide.

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## Do You Know?

Lime burning is one of the oldest technical arts.

It costs about \$50,000,000 in taxes to clean up *trash* from the nation's primary highways alone.

Liquid *nitrogen* is used in helping reduce space environmental test chambers to a temperature of minus 320 degrees Fahrenheit.

A new *coating* for missile launching pads reduces the 5,000 degree Fahrenheit blast of the burning propellants to between 130 and 140 degree Fahrenheit by the time it penetrates the coating's bubble-filled layer.

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