

PUBLIC HEALTH

Doctor Shortage Due

Merely maintaining the present ratio of physicians to people requires that we build about 20 new medical schools and provide them with adequate funds and staffs.

► A SHORTAGE of doctors for the American people is inevitable during the next 12 years, even if large funds for medical education and research are provided now.

Expenditures for medical research in this country can and should be tripled from the present \$300,000,000 to \$1,000,000,000 annually by 1970, a group of prominent medical educators and industry research executives told the Secretary of Health, Education and Welfare, Marion B. Folsom. He appointed the group about one year ago to advise him on long-term needs in medical research and education. Dr. Stanhope Bayne-Jones of the Army's Surgeon General's Office was chairman of the Secretary's consultants on medical research and education.

The consultants warned, however, that a medical research effort of this magnitude will require a major increase in the number of physicians and other scientists engaged in medical research, from 20,000 now to 45,000 by 1970.

More funds for more medical schools, more doctors to teach in medical schools, and more research scientists are needed for an ever expanding population that is experiencing increasing longevity.

The medical schools of today, the consul-

tants emphasized, cannot turn out enough doctors to provide sufficient staff for the research program that is needed, and still meet the growing medical care needs of the expanding population.

To maintain the present ratio of 132 physicians for each 100,000 persons in the population would involve construction of from 14 to 20 new medical schools at a cost of between \$500,000,000 and \$1,000,000,000.

Unless there is a marked change in social philosophy leading to private gifts or state appropriations on an unprecedented scale, large Federal appropriations will be required, the group said.

Among other recommendations they offered were:

1. Increases in virtually all programs of the Department of Health, Education and Welfare involving medical research.

2. Extension of research programs concerned with radiation injury, accidents, air and water pollution.

3. High priority for the purpose of securing additional funds for research, training and strengthening the staff of the Food and Drug Administration and for a suitable, well-equipped building for the FDA, including its research and training functions.

Science News Letter, July 26, 1958

the boy was asked how the unusual operation had helped him, he replied: "Now I can walk up the hill." Since then he has been doing even more, including running.

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● RADIO

Saturday, August 2, 1958, 1:30-1:45 p.m., EDT
"Adventures in Science" with Watson Davis, Director of Science Service, over the CBS Radio network. Check your local CBS station.

Stanley F. Reed, President, Reed Research, Inc., Washington, D. C., will discuss "Research for the Future."

ENGINEERING

Use Cold Water To Cool Homes

► HOMES can be cooled in summer by cold water circulators for under 80 cents per day, the University of Illinois Engineering Experiment Station has reported.

Cooling systems similar to hot water radiator systems were installed in a six-room research home for under \$1,500. Water at 45 degrees Fahrenheit, pumped from a cooling unit in the garage, circulates through coils in a false ceiling. Fan-blown air circulating around the coils distributes cool air.

A bulletin on the subject written by the research team, Prof. W. S. Harris, N. B. Migdal and G. R. Sward, is available from the experiment station at Urbana-Champaign, Ill.

Science News Letter, July 26, 1958



SALIVATING FOR SCIENCE—Margery (left) and Nancy Oliver, identical twins studying at Michigan State University, have their saliva flow collected with a special plastic device used by Dr. Harold O. Goodman, assistant professor of zoology. Dr. Goodman has been collecting the saliva of both fraternal and identical twins to determine the influence of heredity on saliva and its consequent effects on tooth decay. Preliminary results indicate there is an inherited influence.

SURGERY

Perform Rare Operation

► MEDICAL HISTORY has been made with the only known successful bypass heart operation of its kind.

The operation, which was performed on a seven-year-old boy, re-routed the blood around his heart. The boy's blood now bypasses the right side of his heart, traveling directly into the lungs to pick up fresh oxygen without the normal pumping push from the right heart.

As far as medical records show, this is the first time this operation has been successfully performed on a human. The surgery was performed six months ago by Dr. William W. L. Glenn, Yale School of Medicine, whose report of the operation appears in the current *New England Journal of Medicine*. This surgical procedure has been investigated by doctors in other parts of this country and abroad but results are not yet known.

The operation does not repair the damaged section of a defective heart, but simply enables part of the blood circulation to bypass the section. Dr. Glenn emphasizes that the technique is recommended only in special cases where other known means, such as "open heart" surgery, cannot be

used. Such was the case with the seven-year-old.

The success of this operation proves that at least part of the blood can be circulated through the lungs without benefit of the pumping action of the right side of the heart.

The youngster was born with a defective ventricle and defective great vessels in his heart. These defects cut down his supply of purified blood. Like other "blue" babies, he had blue coloring.

The operation consisted of taking one of the two major veins leading into the right heart and connecting this vein directly to the end of the right pulmonary artery. Normally, the blood should flow from this vein into the right heart and then be pumped to the lungs through the pulmonary artery.

Immediately following the operation, Dr. Glenn reports, there was marked improvement in the patient's coloring. Oxygenation of the blood is near normal and post-operative examinations have shown that the bypass has not forced a heavier workload on the left heart.

A few weeks after the operation when