

MEDICINE

Artery Disease Research

President Roosevelt's death may focus attention on the need for study of this major cause of death as in life he called attention to polio needs.

► IN LIFE President Roosevelt more than any other person focussed the nation's attention on the need for funds to fight infantile paralysis.

Perhaps his death will focus attention on the big medical problem of heart and blood vessel disease. Cerebral hemorrhage, from which he died, is part of this big problem. The strain that causes hemorrhage from blood vessels in the brain in one man may fatally damage the blood vessels of the heart in another.

Diseases of the heart, arteries and kidneys cause the majority of the adult deaths in the United States, Dr. Henry S. Simms, of Columbia University College of Physicians and Surgeons, told the Senate Subcommittee on Wartime Health and Education at a hearing last December.

The number of these deaths is increasing yearly and is far in excess of war casualties, he stated.

Although heart and artery diseases killed 536,745 persons in the United States in 1940, only \$93,835 was spent that year on research on these diseases. That is at the rate of 17 cents a death.

By contrast, \$2.18 research money was spent for each of the 164,906 cancer deaths, \$4 for each death for infectious disease other than infantile paralysis, and \$525 for each of the 1,026 infantile paralysis deaths that year.

A concerted program for an all-out fight on diseases of the heart and blood vessels, comparable to the programs for fighting cancer, tuberculosis and infantile paralysis, has not yet got under way. Individual scientists or groups of them are working on various parts of the problem, such as diabetes, gout, kidney disease, high blood pressure and emotional and mental strains, all of which may affect the health of the blood vessels and heart.

From one of these groups of researchers, Drs. R. D. Taylor and Irvine H. Page, of the Lilly Laboratory for Clinical Research at Indianapolis, has recently come a yardstick for predicting death from apoplexy in persons with high blood pressure.

Grim foreboding though this may be

to some, establishment of the yardstick, if confirmed by further studies, may open the way to a more direct search for methods of preventing death from cerebral hemorrhage. It will, moreover, offer comfort and assurance to those who probably will not die of apoplexy, even though they have high blood pressures.

The yardstick applies only to persons with high blood pressure of the type doctors call essential hypertension. It consists of five signs: severe headache at the back of the head or the nape or scruff of the neck; vertigo (dizziness) or fainting spells; motor or sensory neurologic disturbances such as memory defects, loss of ability to speak, and numbness or tingling; nosebleeds; and retinal hemorrhages without papilledema or exudates which the physician can determine from examining the eyes.

Apoplexy may strike, suddenly and fatally, in a person otherwise in apparently good health. If, however, any four of the above five signs appear in a person with essential hypertension, Drs. Taylor and Page state from their findings, it may be assumed that the patient will die of apoplexy within eight-tenths of a year to five years or, on the average, within 2.1 years.

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CARTOGRAPHY

Spherical Maps Save Space, Can Be Turned Quickly

► A GLOBE which can quickly and easily be turned with the finger tips to any desired position, and a nesting series of concave and convex spherical maps, arranged on frames which swing about a central axis, are increasing the usefulness of maps presented on a curved surface.

A new type of mount, which makes it easy to swing the globe about any one of three axes, eliminates the large amount of space needed for a globe set in the middle of the floor, and makes it possible to have built-in globes in classrooms, board rooms and offices.

A five-foot globe weighing several hundred pounds may now readily be turned to any desired position with little

effort by means of the mechanical mount developed at the Science Museum of St. Paul, Minn. And polar areas, which were inadequately represented in the traditional axis and ring globes, may be carefully studied by those interested in air routes.

An atlas of spherical maps, some convex and some concave, arranged on frames which swing about a central axis, has made it possible to display a series of spherical maps without occupying too much space. The maps fit into each other and both the inside and outside of the sphere are used.

From the observer's standpoint, the chief advantage of concave maps is that he is looking at the inside of the bowl, and the map swings about him instead of curving away from his line of sight, states Dr. Louis H. Powell, director of the Science Museum.

"In its pioneering map exhibits dealing with national security, the first of which appeared in April, 1941," reports Dr. Powell, "the Science Museum abandoned at the start all attempts to represent the earth on flat planes and has used exclusively globes, segments of globes and concave spherical maps."

As long as one cannot see the entire surface of a globe at one time, a spherical segment of the globe is just as useful for most purposes as the globe itself. Most



EASILY TURNED—Large globes weighing several hundred pounds may readily be turned to any desired position. A recessed globe which can easily be oriented about any one of three axes is shown being used by a schoolboy.