

PUBLIC HEALTH

Butlers' Blood Pressure

► THE QUIET imperturbability of the best butlers—including that of the royal butler who recently threw his hand in because he could not stand being called by finger-snapping—is often achieved at the cost of high blood pressure.

Dr. W. P. D. Logan, chief medical statistician to the General Register Office in London, reported that people in personal service suffer most from high blood pressure. Others in this group, besides butlers, include hotel and restaurant staffs, synagogue keepers, left-baggage clerks, photographers and water-closet attendants.

Dr. Logan's report is based on a survey carried out in cooperation with the College of General Practitioners. It shows the distribution of sickness among men, women and children, by occupation and social class, based on 280,000 clinical records.

Taking all occupations as 100, the proportion of people in personal service who consulted their doctor for high blood pressure was 147. The figure for store keepers was 134, while assistants in stores scored only 69.

Agricultural workers, with a score of 52, and miners, with 62, had the lowest ratios. Professional and executive groups scored 120 and 127, higher than average, while semi-skilled and unskilled workers were lower than average with 70 and 89.

Farmers and their workers have the healthiest jobs according to Dr. Logan's figures. Counting all kinds of illness, farmers had a ratio of 81 and other agricultural workers 80. By contrast, mine workers had a ratio of 124.

Farmers and their workers also suffer very little from psychoneurotic disorders. The figures scored for them there were 48 and 61 respectively, in comparison with 123 for professional and executive workers, office clerks 133 and plant foremen 127.

Agricultural workers are fortunate again in their experience of coronary heart disease. Here their ratios were 58 and 39, against 144 for store keepers, 139 for office clerks and 135 for plant foremen. For miners the proportion was 32.

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MEDICINE

Use Live Vaccine Booster

► THE SABIN oral live-virus polio vaccine, found suitable for government license by the U.S. Public Health Service, will make an ideal booster for persons who have had Salk polio shots, and appears to be safe and effective as a polio preventive for infants.

Researchers doing work with March of Dimes money from the National Foundation reported these findings which were discussed in a meeting of the Foundation's advisory committee on virus vaccines, Sept. 14, in New York City. The committee, which guides the Foundation in its vaccine research and policy decisions, met to consider problems concerning the use of the new vaccine in the United States.

Dr. John R. Paul of Yale University is conducting the experiments on dosage schedules. He reported that there is no evidence that persons who have had Salk shots should avoid Sabin vaccine. Dr. Joseph L. Melnick of Baylor University Medical School in Houston, Tex., said more strongly: "Those who have had Salk, without question can be given Sabin. In fact, they are the ideal group."

Two Foundation studies with newborn babies and young children on the effects of the vaccine have shown no ill effects on the young.

Dr. Martha Litson Lepow, who is assisting Dr. Frederick C. Robbins in polio research at Western Reserve University, Cleveland, said they began experiments to determine administration and dosage of Sabin in infants on Jan. 1, using 150 newborn infants and 75 babies three months of age. "It will take one year to be able

accurately to determine immunity effects of the vaccine relative to the time of life when it was administered," Dr. Lepow said.

Besides studies with infants, Dr. Melnick has begun tests on adults, using 650 prisoner volunteers.

Dr. Melnick's work with adults is expected to reveal to what degree viremia—the presence of poliovirus in the blood—occurs after the administration of Sabin vaccine.

With viremia there is a greater likelihood of the central nervous system being affected. In polio infections, the blood stream is the chief route by which the virus travels to the brain and spinal cord where it may cause paralysis.

Should Dr. Melnick's studies show that viremia does occur often and to a considerable degree, authorities might have to consider whether live-virus vaccine is suitable, particularly for young adults and pregnant women, Dr. Thomas M. Rivers, the Foundation's vice-president for medical affairs, said recently. (For other stories about infant polio vaccination, see SNL, 78:101, August 13, 1960.)

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METEOROLOGY

Hurricane Donna Tracked by Radar

See Front Cover

► THE LADIES are expensive. Hurricane Donna and her sisters have cost hundreds

of lives and billions of dollars. The lives can be saved and the damage reduced—but that will take a lot of money, too.

Especially difficult to predict and warn of, even with advanced techniques anticipated in the future, will be storms such as Ethel, Donna's younger sister that came to life suddenly in the Gulf of Mexico. Gulf storms are dangerous because they can reach land within two days of their birth.

This is the word from the U.S. Weather Bureau as estimates of Donna's damage climb to more than a billion dollars and deaths in the United States and West Indies add up to more than a hundred.

But recently installed and highly expensive radar now enables the U.S. Weather Bureau to watch storms like Donna and Ethel better than ever. Donna, as shown on the cover of this week's SCIENCE NEWS LETTER, was tracked by radar engineers at the Raytheon Company's center at Wayland, Mass. Each circle in the picture is a 20 mile marker.

Carol, in 1954, was one of the most convincing arguments for this new equipment. After moving sluggishly off Florida and South Carolina, Carol dashed one night for New England, where citizens slept unaware. By noon, some city areas were under eight to ten feet of water.

Carol cost about \$500,000,000. But Diane, in 1955, topped that. And now Donna has over-reached both. Only twice in this century, before 1954, had the Northeast been in the path of severe hurricanes.

With the new equipment, a hurricane is usually noted first by radarmen at Cape Hatteras. But soon thereafter the hurricane can be seen on the big, \$300,000 radarscope in Washington. This radar has an effective range of about 250 miles—about 100 miles farther than earlier sets.

Radar data is combined with ship and hurricane reconnaissance plane reports. Prevailing weather conditions and knowledge of the turns and paths of earlier hurricanes are also used in the forecast of a new hurricane.

Soon data may also come from satellites. A Tiros weather satellite scheduled this year will be "partially operational." That is, some of the pictures will be rushed to the Weather Bureau for use in predicting storms' paths. A fully operational weather satellite called Nimbus is planned for 1962.

The satellites will probably help in predicting the paths of hurricanes. They will also provide early warnings and permit good estimates of a hurricane's size.

But they may also reveal information more precious still: data on the mysterious birth of the storms on or near equatorial fronts. Apparently the spin of the earth combines with other weather factors to produce these hurricanes—but scientists need to know more.

Some scientists have suggested that with this further data, man can diminish a hurricane's force by rainmaking—by causing rain to fall before a storm reaches an area and thus "starving" the hurricane.

(See also stories p. 201 and 78:90, August 6, 1960.)

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