

VITAL STATISTICS

Widowed Die Sooner

NATIONAL VITAL statistics based on deaths in the U. S. in 1949-51 plus the Census of 1950, reveal that those persons under age 35 who are widowed have a strikingly higher mortality rate than their married counterparts of the same age.

But the poorest risk, relatively, falls to the white widowed male between the ages of 25 and 34. His chances of dying are 4.31 times as great as are those of his married buddy of the same age, Dr. Arthur S. Kraus of the State of Maryland Department of Health says in the *Journal of Chronic Diseases* (Sept.). Dr. Abraham M. Lilienfeld of the Johns Hopkins University School of Hygiene and Public Health co-authored the paper.

The next highest risk occurs in the age group 20 to 24. The risk for a young white man in this group is almost four times that of his married counterpart. This applies also to the nonwhite widowed males in the 25 to 34 age group. Their risk was 3.88.

Next on the list are widowed white females, ages 20 to 24, whose death rates were 3.70 times the rate of their married girl friends of the same age and race.

Among the older age groups, 35 years

and over, the death rates of the widowed, compared to the married, decreased steadily with increasing age, Dr. Kraus explains.

Statistics from the 1950 census revealed that there were at that time, 46,830 widowed men and women under the age of 25 in the U. S. Of these, 2,200 were not more than 14 years of age.

Further study of figures from 1949 to 1951 revealed that the major causes of death for which the young widowed had a much greater risk than the married were arteriosclerotic heart disease, hypertension with heart disease, general arteriosclerosis, vascular lesions of the central nervous system and tuberculosis.

The researchers suggest these three possible explanations for the higher death rates among the widowed: individuals with a short survival potential tend to choose like mates; the widowed and his deceased spouse shared unfavorable environmental factors which led to the death of the first spouse, and finally, perhaps the grief, new worries, responsibilities and alterations in one's daily life have a damaging effect upon the widowed.

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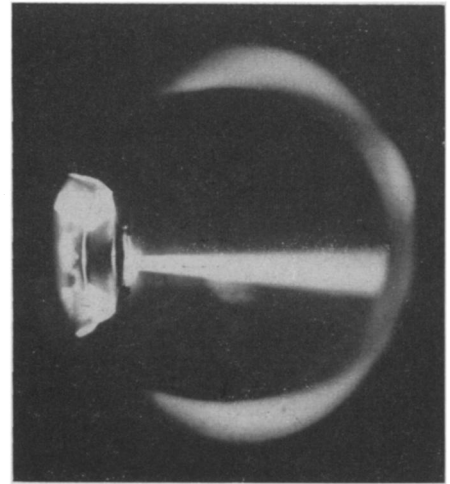
men, he pointed out. Almost without exception, patients say that a long automobile ride or prolonged sitting will cause them pain. They are not able to lie on the back comfortably at night.

Most patients habitually sit with a poor posture, with the lower portion of the back arched out instead of arched inward, toward the stomach. They slump in a chair and allow the middle portion of the sacrum and coccyx to press against a chair, according to Dr. Cooper's description. The patient usually sits down and gets up slowly and carefully.

There is hope for these people, however. Of 100 patients, 62 were treated by massage only. This treatment was given an average of six times over a period of three to four weeks. Relief came to 50 patients, 80% of that group.

Heat treatments plus correct posture instructions were given to 28 patients, resulting in relief for 25 of them. Ten were given massages and surgical treatment of infections, relieving nine.

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ION TEST—An ion thrust device, developed by Rocketdyne, produces ion beam during a test run in a vacuum tank which simulates outer space conditions. An ion engine has been suggested to power interplanetary space vehicles.

ENGINEERING

Dew-Line Dome Rises In Test for Arctic Use

See Front Cover

A GIANT dome, 140 feet in diameter on top of a three-story building, will provide storm protection for radar antennas designed to track missiles in the U.S. Air Force's Ballistic Missile Early Warning System in the Arctic.

The prototype, shown on the cover of this week's SCIENCE NEWS LETTER, is being built east of the Camden-Philadelphia area. The dome is made of paper faced with plastic-impregnated fiber glass.

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GEOGRAPHY

Flares Measure Coastline

A BRIEF BURST of light in a clear night sky could enable geodesists to pinpoint Europe's geographic position within 50 to 90 feet.

Scientists at Ohio State University at Columbus have recommended to the Air Force Cambridge Research Center at Bedford, Mass., that the Government launch flare-bearing rockets from ships well at sea for telescopic studies. These would measure more accurately the distances between North America and Europe, and South America and Africa.

The scientists proposed stationing two ships 620 miles apart in the North Atlantic on a north-south line midway between Europe and North America. On one night, one ship would fire a rocket, and telescopic cameras in Labrador and Newfoundland and northern Scotland and southern England would photograph its flare against known background stars. The process would be repeated the following night when the second ship sent up its flare-bearing rocket. By triangulation methods, the distance between the two continents could be more accurately determined.

At present, the Ohio State scientists pointed out, it is believed various national geodetic systems have errors up to one mile on continents and between continents, and errors up to 10 miles in positions of ocean islands. Accurate, standard distances between continents are now needed for aerial and underwater navigation.

The formal proposal was made by Dr.

Weikko A. Heiskanen and his group at Ohio State University Research Center's Mapping and Charting Research Laboratory.

Previous attempts to obtain accurate measurements were made during eclipses of 1945, 1947, 1948, 1954, and 1955, but none was successful. It will not be until the year 2151 when another eclipse will occur as good as the 1954 eclipse which was obscured by clouds. A rocket experiment presumably would give observers more control over the weather and could yield satisfactory results.

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SURGERY

Many Americans Suffer "Television Bottom"

MANY AMERICANS are suffering from a condition called "television bottom."

The medical term for the condition is coccygodynia, pain in the tail of the spine. It arises frequently from spending long periods of time before the television set, Dr. Wilford L. Cooper, Lexington, Ky., surgeon, explained at the International College of Surgeons meeting in Chicago.

The surgeon also blamed long auto drives for many of the pains. Patients, he said, complain of pain in the coccyx, the tail bone of the spinal column. This is often accompanied by hip pain and leg pain. It is caused by pressure on the sciatic or gluteal nerve.

Women seem to be more susceptible than