MEDICINE

Long Transport Hard

Polio patients may be harmed by long distance travel to hospital when disease is acute. Physical activity during polio's start may not increase paralysis.

➤ TRANSPORTING POLIO patients long distances to the hospital while they are in the acute stage of the disease may be harmful. But physical activity shortly before or during the start of the illness, except in grown-ups, does not lead to more severe paralysis.

These findings, the last one contrary to previous widely held medical opinion, are reported by two different groups of investigators in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION (June 30).

The report on physical activity is from Dr. Robert M. Albrecht and Mrs. Frances B. Locke, biostatistician, of the New York State Department of Health. The one on transportation is by Dr. M. Bernard Brahdy of Mount Vernon, N. Y., and Dr. Selig H. Katz of New York City.

Dr. Albrecht and Mrs. Locke studied 200 polio patients in Nassau County, N. Y., who were stricken during the 1949 epidemic. To determine the amount of paralysis in those who recovered, muscle grading according to the standards of the New York State Health Department and the National Foundation for Infantile Paralysis was done from five and one-half to seven months after the start of the illness.

Among 77 patients aged three to 49 years who had normal to heavy activity the day the illness started, 53.2% had light or no paralysis about six months later. Normal to heavy activity ranged from housework, office work, school and normal play to manual or strenuous sports or play.

Among 39 who rested at home the day the illness started, classed as light activity, 71.8% had light or no paralysis. And of 67 who were in bed the day the illness started, 71.6% had light or no paralysis.

Of 24 who died, 10 had restricted activity the day meningeal symptoms, such as headache and stiff neck, started.

"Deaths and severe paralysis in children are not related to the degree of physical activity either shortly before the onset of illness or at any time during the illness," Dr. Albrecht and Mrs. Locke conclude.

"Deaths and severe paralysis in adults," they add, "may be attributed in part to the degree of physical activity in the meningeal stage."

Grown-ups, however, are more apt than children to continue their routine activities when ill, the scientists point out. They believe age is a major factor in the outcome of polio and that grown-ups, irrespective of activity, are more severely affected than children. However, they conclude that "factors other than age and activity are of major importance in the prognosis of poliomyelitis."

The harmful effects of long transportation, reported by Drs. Brahdy and Katz, were found in a study of 493 patients admitted to Willard Parker Hospital, New York, from June 13 to Oct. 31, 1949. The 380 patients from within New York City traveled an average of seven miles to the hospital. The 113 patients transported to the hospital from outside the city traveled an average of 85 miles. The median distance was 70 miles.

The fatality rate for patients transmitted long distances was three times that of the local patients. For patients who had bulbar or encephalitic poliomyelitis, the fatality rate was almost twice that of the local group.

From information obtained about the patients, there was no evidence that the more seriously ill patients outside the city were selected for transportation. They came from vacation spots where adequate facilities for their care were lacking, from orphanages, and from an area where a small contagious disease hospital did not have room for all the patients brought to it. Most of the seriously ill patients in this group were kept in the small hospital. The less seriously ill were the ones transported.

Whether treatment of patients during the acute stage of polio should be decentralized or whether methods of transportation should be improved are problems which Dr. Brahdy and Katz state require further study.

Science News Letter, July 7, 1951

ECOLOGY

Scientists Study Life On Remote Coral Atoll

➤ ONE OF the most isolated inhabited areas of the world, Onotoa coral atoll in the southern Gilbert Islands, is being visited by a team of American scientists this summer.

All the living things, including the 1,500 natives, will be studied in relation to the uninviting conditions that exist on this bit of land of little rainfall.

Because there are only brackish wells for drinking water, aside from the liquid in coconuts, the Pacific Science Board of the National Research Council is sending an experimental solar still along with the party. It can convert five gallons of salt sea water into fresh drinkable water each day.

Other equipment transported by U. S. Army, Navy and Coast Guard for this Office of Naval Research-financed expedition include: four diving outfits with oxygen supplies for underwater work, fathometers for sounding the depths of the lagoon, outboard motors and emergency radio equipment.

Dr. Preston Cloud of the U. S. Geological Survey heads the party, which consists of Dr. Albert Banner, University of Hawaii, Dr. Ward Goodenough, University of Pennsylvania, Dr. Edwin T. Moul of Rutgers University and two University of Hawaii graduate students, Donald Strasburg and John E. Randall, Jr.

Science News Letter, July 7, 1951

INVENTION

Cross Wind Landing Gear Simplified and Improved

➤ SIMPLIFIED AND improved airplane landing gear which permits landings on runways criss-cross with the wind brought John Harlin Geisse, Washington, D. C., patent 2,557,275.

In this new landing gear only one of the two main wheels is turned in the direction of the runway. The other remains in a position parallel to the axis of the plane whose nose is headed into the wind. In older cross wind landing gears all three wheels are turned in the direction of the ground movement along the runway.

It is the downwind wheel that is turned. This wheel guides the plane along the landing strip. The other main wheel plays but a minor part. Pressure of the wind on the plane tends to raise the side against which it blows, thus taking weight off the upwind wheel and decreasing traction between it and the runway.

Science News Letter, July 7, 1951

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