

PSYCHOLOGY

Sickness From Worries

Study of illnesses of telephone operators with like backgrounds shows that hard work, worry and disappointments can make persons more susceptible to sickness.

► MUCH HARD work, worry and many disappointments can make a person more susceptible to sickness of all kinds, from colds to nervous breakdowns and accidents.

Evidence for this was presented by Drs. Lawrence E. Hinkle, Jr., and Norman Plummer of New York Hospital Cornell Medical Center, New York, at the meeting of the American Federation for Clinical Research in Atlantic City, N. J.

A study of all the illnesses which had occurred in a group of 1,297 telephone operators in New York City furnished the evidence. This group is made up chiefly of people of the same sex, age, place of residence, place and type of work, economic, social and cultural background. None had shown signs of significant illness when employed in their late teens, and a record was available of every subsequent illness of each woman for up to 35 years thereafter.

Some of these women who started out so much alike in health had a lot of all kinds of illness, while others had few illnesses of any kind. More than two-thirds, 69%, of the attacks of sickness occurred in only 37.8% of the women, and the same women fell into the high and low illness groups year after year.

These differences in total amount of ill-

ness could not be accounted for by any malingering, psychological disturbances, heredity, economic background, nutrition or exposure to infection. Twenty of the frequently sick women, 20 of the well women and others in between, selected at random, were examined and interviewed at length.

The telephone operators who had the most sickness, the doctors found, were widows and divorcees with small children to care for.

"They had many responsibilities and worries, much hard work and many frustrations," the doctors reported. "They were 'struggling' through a life of disappointments, insecurity and hard work.

"The healthiest telephone operators were single women without family responsibilities with no desire to be married, who were all content and comfortable with their occupations and their life situation."

In contrast to the well women, the doctors pointed out, the ill women had been exposed to stressful life situations much of the time throughout adult life. The alteration in bodily function which accompanied their attempts to adapt to these situations appeared to be the most important factor in their susceptibility to disease.

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Sedimentary deposits containing workable quantities of uranium are known as carnotites, copper-uranium and asphaltite, occurring in Utah, Colorado, South Dakota, Wyoming and Pennsylvania, and limestones and phosphorites, occurring mostly in Florida and Tennessee.

Science News Letter, May 16, 1953

ICHTHYOLOGY

Fishes Have Gland To Regulate Calcium

► FISHES DO have what corresponds to the parathyroid gland in higher animals for regulating calcium use, two American Museum of Natural History scientists in New York have discovered.

Previously it was thought that calcium metabolism glands made their first evolutionary appearance in the amphibians—frogs, etc.—even though fishes lower on the scale of life admittedly were able to use calcium to build bones. The parathyroid function of bony fishes resides in their ultimobranchial gland, Priscilla Rasquin and Libby Rosenbloom reported to the American Society of Ichthyologists and Herpetologists meeting in New York. This was shown by experimentally produced hormone imbalance.

Science News Letter, May 16, 1953

METEOROLOGY

For Safety, Acknowledge Catastrophe Can Happen

► PEOPLE WHO design houses and build dams and levees are afraid to acknowledge the risks of catastrophe.

This is the opinion of a man who spends his life trying to figure out how bad a catastrophe like a flood on the Mississippi or a tornado in the Midwest can get. He is R. W. Schloemer of the Hydrometeorological Section of the U. S. Weather Bureau. He told the American Meteorological Society meeting in Washington that it is the duty of hydrometeorologists to figure out the maximum possible weather catastrophes so that designers can incorporate these estimates in their building plans.

Until recently such estimates had to be made up largely of well informed guesswork. He pointed out that to know how high the water of the Mississippi and the Missouri rivers can get at St. Louis, one has to take into account rainfall over an 800,000-square-mile drainage area and the snow which has fallen on distant peaks.

However, he said, the application of statistical probability theories to hydrometeorology is making the estimates more exact.

Obviously, designers of buildings and dams cannot always build them to withstand the big catastrophe which may never happen in the lifetime of the structure. A compromise has to be made between several factors, one of which is the hydrometeorologist's estimate.

Science News Letter, May 16, 1953

GEOLOGY

Uranium Hunting Hints

► LOOK FOR uranium only in certain areas of the world and in certain kinds of rock formations if you wish to find rich deposits of the ore.

Time spent poking a Geiger counter into all kinds of geological formations is wasted, according to Donald L. Everhart, geologist of the division of raw materials, U. S. Atomic Energy Commission. He described to members of the New York Academy of Sciences the classification of uranium deposits worked out as a result of the stepped-up search now going on.

Locations of the richest uranium deposits are the hydrothermal veins in western Europe, western and central Africa, along the western margins of the Canadian Shield and along the entire length of the Cordillera of North and South America, said Dr. Everhart. The widespread distribution of small quantities of uranium in other localities occurs because uranium compounds dissolve in many kinds of ground water and combine with carbonaceous material. Geologically, uranium behaves much like iron.

Next to the rich vein deposits, the best place to look for the radioactive mineral is along old stream beds. Here geologists are divided in opinion as to whether the uranium compounds were deposited in the clay as it silted out of the running water, or whether they welled up from deeper waters and were added to the clays from below.

Three time epochs seem to have contributed the richest store of uranium to the rocks where it is now mined. The oldest uranium-bearing rocks are contemporary with the very dawn of life on this planet, at the end of the Pre-Cambrian era. A second time of deposition of uranium ore was when the giant reptiles left the swamps and moved to dry land, at the end of the Paleozoic age. Again at the end of the age of reptiles, when man's earliest four-footed ancestors appeared, uranium was deposited in early Tertiary rocks. What connection there is between these times of geologic change and the formation of uranium ore geologists have not yet worked out.