

immune, Dr. Abner Wolf, Dr. David Cowen and Dr. Beryl H. Paige of Columbia University College of Physicians and Surgeons state (*Science*, June 6). The disease is a form of encephalomyelitis, and it is caused by a parasitic one-celled animal known as *Toxoplasma*.

In some cases, the luckless babies are born dead, in others, perhaps even more unfortunate, they survive only to run the

gantlet of crippling or fatal disease after they are born.

The three doctors are making efforts now to find means of detecting the infection in seemingly healthy mothers, in order to prevent its occurrence in their children. It is hoped, they add, that serological tests and eventually a curative agent will make this possible.

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MEDICINE—PSYCHIATRY

Infantile Paralysis Victims May Get Disease Again

American Neurological Association Hears Reports of Animal Experiments; Alcohol Disease Occurs in Fish

RECOVERY from one attack of infantile paralysis is no insurance against further assaults by this dread disease, Dr. Howard A. Howe, Johns Hopkins University, and Dr. David Bodian, University of Chicago, told the meeting of the American Neurological Association in Atlantic City.

They reported experiments with animals that show that immunity resulting from the disease is local, just where the virus has travelled along the fiber pathways of the nervous system. Animals convalescing from an attack which affected the brain were able to contract the disease again through the nose. And two monkeys that had had an attack of infantile paralysis confined to a limited section of the spinal cord, contracted

another typical case of the disease in the previously uninvaded portion of the central nervous system.

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Fishes Need Vitamins, Too

EVEN fishes and foxes may need their vitamins, too.

Allowed to over-indulge in a diet of raw fish, both these creatures were observed to develop spontaneously a disease identical with the alcoholic disease caused in man by lack of thiamin (vitamin B₁), it was revealed at the meeting.

Both the foxes and the fishes can be cured of their trouble by the vitamin, Dr. Leo Alexander, of Boston, and his associates Drs. Robert G. Green, C. A. Evans and Louis E. Wolf told the meeting.

The human disease, known as Wernicke's disease, has been produced experimentally in animals by Dr. Alexander and other colleagues when they fed them a diet deficient in vitamin B₁ but over-abundant in other vitamins, particularly riboflavin, nicotinic acid or vitamins A and D. The excess of the other vitamins, they concluded, had so raised the vitamin B₁ needs that the resulting deficiency was greater than it would have been otherwise.

What happens to the blood chemistry in thiamin deficiency or Wernicke's disease, was described to the meeting by another group: Drs. Herman Wortis, Norman Jolliffe, Martin H. Stein, and Ernest Bueding. In both these conditions, the blood's pyruvic acid is invariably increased.

When normal individuals are fed glucose, the blood pyruvate is increased, but returns to normal within three hours. In Wernicke's disease this increase is very high and the return to normal is delayed. Feeding thiamin to the patient brings the blood chemistry back toward normal.

Although Wernicke's disease is always associated with lack of thiamin, these investigators said, their observations indicate that it is also due to lack of other nutritive essentials.

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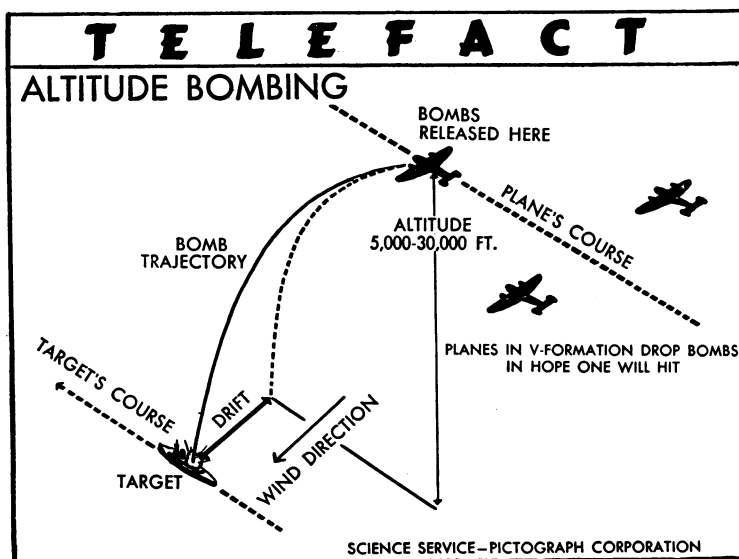
Mental Treatment Safer

THE mentally ill may be shocked back to sanity by metrazol without the danger of severe convulsions if two drugs reported to the neurologists prove effective in clinical use.

A safe drug, easily prepared, which may be used with metrazol to make the convulsions less severe and reduce the danger of the patients' breaking their own bones through violent contractions, has been sought and found by Dr. B. J. Alpers and Dr. H. E. Yaskin, Philadelphia psychiatrists. It is magnesium sulphate (Epsom salts), they reported. This familiar drug, given just before the metrazol, protects the patients from fractures, softens the convulsions and in some cases even abolishes entirely the violent muscular contractions.

The other chemical, pyridine, and some of its derivatives, were reported by Dr. Lewis J. Pollock of Chicago with Drs. I. Finkelman and Eli Tigay.

These chemicals, the investigators suggested, are able to prevent or reduce the severity of the metrazol convulsions by counteracting toxins in the patient.



The magnesium sulphate, it is believed, acts by paralyzing temporarily the muscles, so that although the metrazol still produces a violent discharge of energy from the brain it is prevented from producing corresponding contractions in the muscles.

The Indian arrow poison, curare, has previously been used for this purpose, but is difficult to obtain.

Science News Letter, June 21, 1941

Clashes Threat to Nation

CLASHES between labor unions, business men and politicians threaten the health of the nation just as conflicts in an individual produce insanity, the American Neurological Association was told.

National obedience to social health laws can cure the disease of clashing interests just as the physician can restore health to broken personalities, Dr. Edward A. Strecker and Dr. Kenneth E. Appel, of Pennsylvania Hospital, University of Pennsylvania Medical School, declared.

Work and the satisfaction of accomplishment are prescribed by these psychiatrists as protection against national as well as individual disorders of the emotions and mind. An understandable but unfortunate emphasis on money and material standards has kept many from work, they said, because of the insistence on higher wages and no work, rather than lower wages and wholesome work.

"It is a serious question," the report stated, "whether labor unions in the fight for more equitable conditions of life and work did not unwittingly decrease opportunities for employment and thereby spread the disease of enforced idleness.

"And now in the face of world emergencies, disputes on hours of work and wages are frequently holding up defense production, when perhaps the only guarantee of freedom for any possible discussion of such matters and the only possibility of decent wages at all in the future, depends on speeding production.

"It is as if two firemen should discuss as to who was to hold the hose and who should turn on the hydrant when a fire was rapidly consuming a house."

The experience of unhealthy dependency produces helplessness and insecurity and resulting fear which makes the individual demand more help and support, the psychiatrists said. This is true whether the dependency is that of a child on his parent, the unemployed on the government, or the wealthy on their fortunes.

"Millions of our people are developing characteristics that are not only unwholesome but a serious burden on and threat to our economic and cultural sanity," they declared.

"Malignant tendencies exist on both sides of the economic fence. We must

not unnecessarily contrast the interests of the different classes nor exaggerate their differences. A realization should be cultivated that all groups are standing on common ground and unless they pull together all will suffer and perhaps be lost."

Science News Letter, June 21, 1941

ECONOMICS

Japan's Latest Bottleneck Is General Labor Shortage

Last Year Thousands of 12-Year-Old School Children Worked in Heavy Industries, Chinese Economist Says

PLAGUED by numerous bottlenecks, Japan has a new bottleneck threatening its precarious war economy—shortage of labor, any kind of labor.

So the situation is analyzed by a Chinese economist, Dr. T. Y. Hu of the Chinese Economic Council, in a new report on *Japan's Economy Under War Strain*.

Labor shortages, which at first affected skilled workers, have spread to the general supply and Japan has now tapped every available inexpensive source, Dr. Hu concludes, citing these indicators:

Last year, thousands of children 12 years of age just out of grade school were recruited for heavy industries. Pressure was exerted to get Korean workers to come to Japan, bringing 35,000 out of an expected 85,000. The ban on women working in mine pits has been lifted. About 25,000 prison inmates have been put to work producing munitions.

To expand current output now—and Japan's schedule for the fiscal year ending April 1942 calls for 11% increase in "available national income"—the war-strained country is trying to get more production out of its plants and enterprises, Dr. Hu states. The attempt is being made to transform Japan's innumerable small-scale enterprises into more efficient units.

That individual efficiency is unlikely to be pushed farther is indicated by statistics of factory injuries, industrial casualties and relative retardation of growth among working youths, which are attributed to long working hours and hard working conditions.

Trying to expand "available national income" 11%, Japan cannot hope to borrow, and her gold store must now be

dwindling fast, Dr. Hu further points out. The increasing burden must be shouldered mainly by civilians taking further cuts in their standard of living, which endangers the stirring of war-weariness and discontent.

That war economy is straining Japanese people so acutely that even the traditionally patriotic, docile, and persevering Japanese are restive, Dr. Hu infers from official attempts to appease the masses and other political trends. No signs of social revolution loom on the horizon. But it is considered not impossible that increasing war strain may breed anything from "a palace revolution" to a popular movement against continuance of war.

Japan is more dependent on foreign trade for war materials than ever as the international situation advances, Dr. Hu reports. More than four-fifths of Japan's vital war imports, he states, must come from "her two main rivals, the United States and the British Empire."

The report adds: "Unless Japan can have continued access to the material resources of the United States and the British Empire, and of areas within the range of their influence—whether through normal trade channels or as a special diplomatic concession—she can never hope to develop sufficient strength even to cope with the 'China Incident,' let alone to realize her grandiose dream of the 'Greater East Asia Co-Prosperty Sphere'."

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German troops sing as *breathing exercise* as well as for morale, says an American who soldiered in Germany, and he adds that some army songs are written to require deep inhaling and exhaling.