

MEDICINE

Sulfadiazine Does Not Affect Coordination

► SULFADIAZINE given prophylactically to members of the armed forces to protect them from meningitis in case of a threatened epidemic will not affect their ability to pilot an airplane, drive a jeep or perform other tasks requiring hand-eye coordination and swift reaction, it appears from studies reported. (*Journal, American Medical Association, May 13*)

The studies were made by Dr. Alison H. Price, of Jefferson Medical College and Hospital, Philadelphia, and John C. Pedulla, safety examiner for the Pennsylvania State Police.

Sulfadiazine in amounts usually considered adequate for treatment or prevention of certain infections was given to 90 healthy young men medical students. Eye-hand coordination and reaction time before and after the sulfadiazine were tested on apparatus used to determine the fitness of automobile drivers. The same tests were given to 44 students who did not receive any sulfadiazine and who served as controls.

No significant difference was found between the controls and the men taking sulfadiazine. What effects there might have been if the men had been suffering from an infection in addition to receiving the drug was, however, not learned from the tests.

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MEDICINE

Extra Doses of Vitamins May Help Treatment of TB

► SOME of the B vitamins may help to make promin a better medicine for tuberculosis, it appears from studies reported by Dr. G. M. Higgins of the Mayo Clinic.

When this relative of the sulfa drugs is given by mouth to growing white rats it exerts a rather severe toxic effect, he found. Over-irritability, occasional paralysis, some loss of appetite, cyanosis and anemia are among the changes in these animals following doses of promin. The animals lost weight and gradually lost their hair.

When, however, the promin-treated animals were allowed to partake freely of B vitamins as they desired, their intakes of thiamin, riboflavin and pyridoxine greatly increased, sometimes sixfold over the amounts considered essential for normal nutrition.

While taking these extra amounts of the vitamins, they did not show signs of toxic effects of promin. There were no signs of irritability, they did not grow bald, nor did they lose their appetites or any weight. Signs of cyanosis were far less marked and the anemic condition improved.

Although Dr. Higgins' report does not refer to any human application of his findings, they suggest that extra doses of B vitamins or a diet rich in vitamin B foods might help prevent toxic symptoms in patients under promin treatment and thus, perhaps, extend its usefulness.

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PUBLIC HEALTH

U. S. Death Rate Higher In First Quarter 1944

► AN INCREASE of nearly 8% in the death rate for the first quarter of 1944 over the corresponding period of 1943 is reported by the Metropolitan Life Insurance Company for its industrial policy holders.

Provisional data for the general population of the United States show a similar picture, the report states.

The increase in war deaths and the influenza epidemic were chiefly responsible for the increased death rate. In January, when the influenza epidemic was at its peak, the death rate from all causes combined was the highest in 11 years. The influenza death rate was five times as high as in the previous year and exceeded any rate registered since the widespread epidemic of 1936-1937.

Tuberculosis, measles, scarlet fever, diphtheria, and diarrhea and enteritis of children have all shown increased death rates during 1944.

The rise in the meningitis death rate which started in 1943 continued, and was about 60% higher during the first quarter of 1944 than the corresponding period last year.

Death rates for diseases afflicting mothers in childbirth have also increased, although the birth rate has been decreasing.

Only bright spot in the rather gloomy picture is the fact that homicides were fewer this year than last. War deaths from enemy action more than doubled, suicides were up slightly, and accidents increased 12.3%, a large part of this coming from the increase the first three months of this year of motor vehicle fatalities.

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IN SCIEN

INVENTION

New Hypodermic Needle Makes Proper Insertion

► WITH THOUSANDS of new, hastily-trained hospital aides expected to use hypodermic needles nowadays, a device that will help to make the insertion to proper depth and at proper angle might come in handy. Such a device is offered by H. P. Gorman of Rye, N. Y., under patent 2,347,179.

It consists of a light frame, in which the syringe is held within a light helical spring. When properly "cocked," a slanting-edged annular end-piece is set against the patient's arm. A trigger-like arrangement releases the spring, which carries the syringe forward and thrusts the needle home to a predetermined depth. Then the plunger of the syringe can be operated in the conventional manner.

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GENERAL SCIENCE

War Equipment Packaging Should Be Done Properly

► OVERPACK rather than underpack, was the advice given to American manufacturers packaging war equipment of all types for overseas shipping to Allied forces, by Lt. Comdr. Boyd R. Lewis, speaking at the Packaging Conference and Exposition of the American Management Association in Chicago.

"The success of an entire campaign may depend on supplies being given the necessary protection for safe delivery," Commander Lewis declared.

Combat areas are hard going for men and hard going for materials, he continued: "Handling facilities are meager in ports which have been recently taken over. A lot of work is done on men's backs. Packages which would normally carry in the United States are just not good enough to be handled over and over again."

In the New Guinea area, from which the speaker recently returned, clothing quickly mildews, shoes grow moldy, guns and machines easily rust because of heat, humidity and rain. The prevention is proper packaging.

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CE FIELDS

PSYCHIATRY

Suicide Increase Likely In Post-War Period

► AN INCREASE in suicides after the war was predicted by Dr. James H. Wall, of the New York Hospital, at the Philadelphia meeting of the American Psychiatric Association.

The present low suicide rate, which has been reflected even in mental hospitals, is accounted for by the peak of employment and, Dr. Wall pointed out, by the facts that more lives have purpose and aggression is turned outwards as a result of the war.

Electric shock treatments have been "outstandingly helpful in curing suicidal tendencies" in mental patients, Dr. Wall said.

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PUBLIC HEALTH

Aerial Transport Of Disease Discussed

► MUTUAL PROBLEMS, from politics to pure food and drugs, that affect the health of all the people of the Americas were discussed at the Fifth Pan American Conference of National Directors of Health in Washington.

Spread of diseases from one country to another, always a problem, is made more acute by the war, Dr. Hugh S. Cumming, retired Surgeon General of the U. S. Public Health Service and provisional president of the conference, pointed out.

Increase in air travel between American countries has increased the hazards, too, because undetected infections such as yellow fever may be carried not only by passengers but by stowaway mosquitoes. Provisions of the International Sanitary Convention of 1933 for guarding against this danger may need to be changed to meet present conditions.

Protection against unsafe food and drugs is a federal responsibility in the United States, Surgeon General Parran, U. S. Public Health Service, pointed out. The responsibility, however, does not extend to foods and drugs that are exported from this country. Extending this protection against adulterated or impure food and drugs and vaccines to people in all the Americas may re-

quire strengthening of laws in each individual country, or some international agreement might be worked out in the future to meet this problem.

Political interference with national health services may be a problem in some of the American nations, it was indicated by Dr. J. Barros Barreta of Brazil.

Even animal diseases present a problem for these national health officials, since some of these diseases may spread to man. Prevention of their spread between countries is also a matter to be planned by international cooperation.

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METALLURGY

Machine Shop Iron Wastes Are Made Into Briquets

► MACHINE SHOP iron wastes, resulting from such machining operations as turning, boring, chipping and filing, may, by a new process, be coked with the use of certain coals into briquets in the factory where this type of scrap is produced and remelted in small cupola furnaces for reuse. The common practice for years has been to compress them with heavy presses into bricks for shipment to steel manufacturers for use in open hearth or blast furnaces.

The process was explained at the recent meeting of the American Foundrymen's Association in Buffalo by Dr. H. W. Gillett, of Battelle Memorial Institute, where much development work is carried on in metallurgy, particularly in many phases of the government's metallurgical war research.

In this new method the chips and other wastes are mixed with certain types of coal and the mass coked into briquets by heating. The briquets are from 75% to 85% metal. While coal is not ordinarily thought of as a plastic, Dr. Gillett said, there are some coals that, in heating in the process of coking, go through a very plastic range, becoming soft enough to flow around and engulf such materials as iron chips used with the ground coal. Suitable coals, he stated, are Powellton, Sewell and Upper Freeport. The resulting briquets can be handled with a lifting magnet.

Cupolas are shaft furnaces very much like a blast furnace but vary greatly in size. As stated by Dr. Gillett, the cupola is differentiated from other melting media by the small size of its individual charges and taps. In some of the tests at the Battelle Institute a 12-inch cupola was used.

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STATISTICS

Longevity of Americans Reached Peak in 1942

► THE AVERAGE length of life of the American people reached a peak of 64.82 years, the highest on record to date, in 1942, statisticians of the Metropolitan Life Insurance Company report.

The average girl baby who celebrated her first birthday that year can expect to live longer than the proverbial threescore and ten years. She can expect to live till she is 71 years old, the statisticians have figured.

She gains almost two years over the average expectation of life at birth by surviving the first, dangerous year of life, and gains still more by being a girl. Among white males, the average age at death will be over 70 only for those who have reached their fortieth birthday.

The longevity record established in 1942 probably will not be equalled in 1943 or 1944 because of the war, it is pointed out.

"A very large proportion of those now at work will live to the usual retirement age," the statisticians state in discussing the 1942 longevity record. "Age 65 will be attained by more than two-thirds of the persons now between 25 and 35, by almost three-quarters of those now 45, and by four-fifths of persons 55 years old. The number of years remaining after 65 is quite appreciable; for the average person it is 13.12 years, while for those in a state of health better than average the outlook is even more favorable."

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MEDICINE

Wheeled Stretcher May Be Useful to Army

► A STRETCHER intended to relieve the bearers of some of their wearying work is offered by Ernest Friedlaender of Detroit, for patent 2,348,210. Near the forward end is a pair of light, wheel-bearing legs, which are able to support as much as 80% of the whole load. These operate on floors, roads and in other places where the going is smooth. When the bearers come to rocky, muddy or otherwise unsuitable ground, they simply swing the legs up under the stretcher, where they are secured by a latch, and carry the stretcher in the ordinary way.

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