

MEDICINE

Zinc Sulfate Pontocain Solution Urged as Preventive of Polio

New Spray Recommended by Scientists at University Of Michigan Must Be Administered by Trained Person

PARENTS anxious to protect their children against infantile paralysis by the newest preventive method may have a zinc sulfate pontocain solution dropped or sprayed into the child's nose by a physician specially trained in such work.

This is the advice, given in response to an inquiry by Science Service, of Dr. Max Peet of the University of Michigan, who with Drs. Dean H. Echols and Harry J. Richter have devised a new technique for giving the solution which should make it more effective.

The solution contains one per cent zinc sulfate, one-half per cent. sodium chloride and one per cent. pontocain. The latter is a local anesthetic used because the zinc sulfate solution is irritating and may cause smarting and running of the nose and even headache. The solution was devised by Drs. E. W. Schultz and L. P. Gebhardt of Stanford University. It is said to be more effective than the alum-picric acid spray devised by Dr. Charles Armstrong of the U. S. National Institute of Health because in tests on monkeys it protected the animals for a longer period of time.

Chief difficulty with the nasal spray method of protecting against infantile paralysis is that the spray does no good unless it reaches the olfactory area, far at the back of the nose. The virus that causes infantile paralysis enters the body at this point, travelling along the nerve of smell to the nerve centers of brain and spinal cord. The spray hardens the tissues, keeping the virus from passing through.

Special Atomizer

Ordinary atomizers do not reach the olfactory area in the human nose, although they may in the monkey nose. Dr. Peet and associates have found that an atomizer with a long, thin metal spray tip will get the solution onto the olfactory area. The child's head must be tilted backward at about 45 degrees while the atomizer is used. This spray procedure must be carried out by a physician specially trained in the technic. A nose and throat specialist would know

how to do it but neither parents nor the physician unfamiliar with such technic can do it safely and satisfactorily.

The method cannot be used for children under eight unless they are very cooperative. For these Dr. Peet advises dropping the solution into the child's nose when the child is lying on a table with his head hanging over the edge. The child's head should then be kept in this position for about two minutes. This method is not quite as certain to give protection but is, Dr. Peet says, the only one applicable in uncooperative children.

The zinc sulfate pontocain spray causes a little discomfort to children and more to adults.

"We are now trying different solutions to eliminate all discomfort. One is

quite successful," Dr. Peet told Science Service, "but its value has not yet been determined by monkey experiments."

No Let-Up

The Middle West and New England are still in the grip of infantile paralysis, reports from state health officers to the U. S. Public Health Service show. For the week ending Sept. 4 there were 612 new cases. This figure does not include New York State exclusive of New York City. Reports from that state have not yet been received but will probably swell the total considerably above last week's figure of 621, as New York had 64 cases the previous week.

Largest number of new cases were reported from Illinois, 106. Other states with large numbers were: Ohio, 31; Michigan, 34; Indiana, 11; Wisconsin, 23; Massachusetts, 44; Maine, 19; Connecticut, 10; Colorado, 20; California, 38; Pennsylvania, 19. Texas, where the epidemic struck first, reported 36 cases. Health authorities believe the epidemic is now dying out there. Figures for the preceding two weeks in Texas were 34 last week and 51 the week of August 21.

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MEDICINE

300 to 500 Respirators Are Available Throughout U. S.

BETWEEN 300 and 500 respirators or so-called iron lungs for treatment of infantile paralysis patients are available at institutions throughout the United States. At least seven unorderd respirators are on hand and could be shipped within a day or two.

The respirators are manufactured by two concerns: the Warren E. Collins Co. of Boston, Mass. (555 Huntington Avenue), and J. H. Emerson of Cambridge, Mass. (22 Cottage Park Avenue).

One of the manufacturing firms reports that orders for respirators come chiefly when there is an epidemic of infantile paralysis, despite their best efforts to interest hospitals in advance of epidemics so that they will be supplied when the need arises. During a normal year this firm's production runs from 20 to 30 respirators, while during an epidemic year it may run as high as 80, mostly within a month or two. The firm tries to anticipate epidemics and adjust

its production to probable demand. This firm is now making two respirators a day to meet the demand of the present epidemic.

The price of respirators ranges from \$1,000 to \$2,450. The higher figure is for the orthopedic model, which is large enough to admit a patient who must have his arms in airplane splints.

The respirators work on a very simple principle. They are large tanks in which the patients rest with their heads outside the tank. A negative pressure or partial vacuum is created in the tank which forces air to be sucked into the lungs through the nose. The pressure in the tank then changes, forcing the air out again. The alternating changes in pressure go on mechanically, and take the place of the patient's breathing muscles which cannot perform this function because they have been paralyzed by the disease.

Philadelphia is the best-equipped city

in the world. The State of Maine Bureau of Health owns two which it sends in specially built trailers to any community needing them.

According to the manufacturers' records, the number of respirators in use in each state is as follows: Arkansas, 1; California, 30; Colorado, 2; Connecticut, 22; Delaware, 1; District of Columbia, 2; Georgia, 2; Illinois, 10; Indiana, 4; Iowa, 2; Kentucky, 3; Louisiana, 1; Maine, 4; Maryland, 1; Massachusetts, 30; Michi-

gan, 5; Minnesota, 8; Missouri, 4; Montana, 1; New Hampshire, 2; New Jersey, 8; New Mexico, 1; New York, 48; Ohio, 7; Oklahoma, 3; Oregon, 1; Pennsylvania, 24; Rhode Island, 5; Tennessee, 2; Texas, 5; Utah, 2; Vermont, 5; Virginia, 2; West Virginia, 1; Washington, 2; Wisconsin, 2; in foreign countries: Canada, 6; China, 2; England, 1; France, 1; Australia, 1; the Commonwealth of the Philippines, 1.

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HORTICULTURE

Fuzzless Peach Developed After Many Years of Research

Twenty-Five Years of Crossing and Re-Crossing Ends With Fruit of Good Flavor, Shape and Texture

PEACHES with smooth, waxy skins like plums, quite free from the fuzz which many persons find objectionable, can now be grown, as a result of a quarter of a century of patient breeding work by Dr. Fred W. Hofmann, research horticulturist of the Virginia Agricultural Experiment Station.

Dr. Hofmann's long research for a high-quality peach, waxy-skinned and fuzzless, began in 1912. In that year he found, among the seedling progeny of the Greensboro peach, one tree bearing fruit with plum-like skin. He named it the plum-peach.

The smooth coat was about the only

virtue possessed by the plum-peach, for the fruit was small and of no particular quality. However, a good geneticist is always willing to make a try at combining one good quality of an otherwise little-account plant with other good qualities supplied by other parent strains.

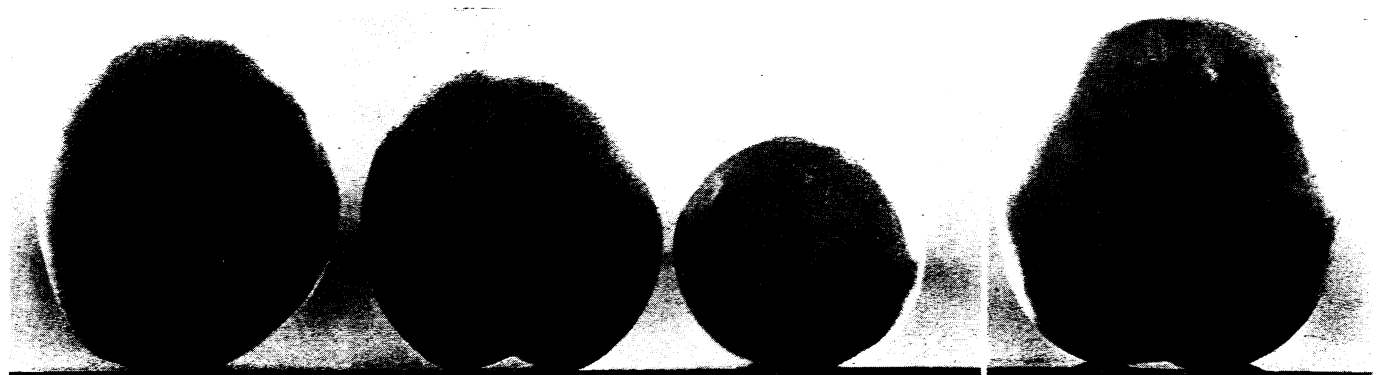
Dr. Hofmann crossed plum-peach with Elberta, and then crossed the hybrid offspring with the J. H. Hale peach, believed to be a seedling variety of Elberta. Further breeding produced, finally, the peach Dr. Hofmann was looking for: waxy-skinned, fuzzless, good-sized, round and evenly shaped. The flesh is yellowish around the pit, stone free and small, flavor and texture superior. The skin color is reddish orange yellow, with a wash of attractive dark carmine.

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Termites once ate up the votes in a Philippine ballot box, thereby adding to the confusion of a contested election.

NEW PEACH'S FAMILY TREE

Reading from left to right: First, one of the parents, a standard Elberta; third, the other parent, the plum-peach "sport"; between them, the first-generation progeny. At right, the perfected progeny, a high-quality fruit with fuzzless, waxy skin.



PSYCHOLOGY

Upper Twenties Best Age For Many Kinds of Sports

IF YOU want to be a champion in the field of sports, you should get started early. The golden age for best achievement in sports is between the ages of 25 and 30, it was revealed when Dr. Harvey C. Lehman, of Ohio University, reported to the American Psychological Association his analysis of the ages of those at the very top of their sports.

Even golf is not an old man's game in respect to the age of championship contenders; although professional golf champions are somewhat older than the men in baseball or tennis. The professional champion is usually between 30 and 34, the amateur from 25 to 29; which gives a decade of best playing from 25 to 35 for golf players.

The best age for baseball is 28, and the years from 25 to 30 provide most of the swat kings.

In tennis, outdoor champions are younger than indoor champions, the best ages being 22 to 26 for the former and 25 to 30 for those who play inside by artificial light. This may be explained by the fact that outdoor tennis would interfere more with the hours of business and so remove some of the older players from competition, Dr. Lehman suggested.

Crack shots with rifle and pistol as well as billiards champions and automobile race winners are at their best from 25 to 29.

Bowlers and duckpin bowlers are slightly older, 30 to 34, as are also those who hold world records in billiards.

Pugilists are younger, being in their prime from 24 to 27. For cornhusking, the best age is 30 and the best periods of years from 26 to 30.

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