

Infantile Paralysis Wave May Let Science Test Preventive

Nasal Sprays Save Laboratory Monkeys, But Will They Work on Humans?



Hero monkey—that's what science calls the tiny rhesus monkey, like the little fellow here, whose nose is being sprayed in an experiment to test a preventive for infantile paralysis; thousands of monkeys have died in the cause. If the sprays prove successful on humans it may mean the end of pitiful cases like that of the little girl above. The annual, nation-wide series of President's Birthday parties helps to raise funds for the research work; a scene from one is also shown.

By WILLIAM C. UTLEY

WITH a wave of infantile paralysis assuming serious proportions in the south central region of the United States, science may find its long-awaited opportunity to make mass tests of nose sprays as a means of preventing the dread, crippling disease.

Nasal sprays have proved nearly 100 per cent effective upon laboratory monkeys, which respond to poliomyelitis (infantile paralysis) in the same way humans do. But until an extensive outbreak of the disease occurred there was no chance to conduct experiments upon humans, for the lives of large numbers of persons must not be endangered unnecessarily.

Now that outbreak may be at hand, for the south central regions are reporting an increase in "polio" cases far over the normal increase which comes with the summer months. Between May 9 and July 24 there were, according to the United States public health service, 486 cases reported from the west south central region, as compared with only 18 cases for the same period of 1936 and 65 cases for the same period of 1935. During these weeks the east south central region reported 317 cases as compared with 234 in 1936 and 57 in 1935. There was some indication of the spread of the disease eastward.

Doctors hope that the nose spray will be proved definitely successful in its application to human beings, for it is more than a century since the first written account of poliomyelitis was made by a trained physician.

English Doctor Started Crusade.

Even so, progress has been phenomenally rapid in the light of the age of the disease, for it is probably as old as mankind. But it was only 102 years ago that Dr. John Badham, of Workson, England, moved by the condition of four tiny patients, pleaded through the medium of medical journals for other doctors to come to his aid with suggestions for the cure of a disease nobody knew anything about.

Dr. Badham's paper, telling of the plight of the four crippled youngsters doomed to pathetically unhappy lives, launched one of the greatest crusades in medical history. Poorly equipped as they were, doctors of the Nineteenth century did not hesitate in responding to the pioneering Badham's call for assistance.

Get on Trail of Germ.

Only five years later, Jacob von Heine, German orthopedic surgeon of Cannstatt, made public an important study of infantile paralysis. His practice brought him in contact with many cases of deformed limbs in children. A shrewd observer, he noticed something about young paralytics which other medical men had largely overlooked. He saw that paralysis was the result of some kind of acute disease which preceded the appearance of muscular weakness.

The discovery was epochal for, in other words, Heine perceived that paralysis in children didn't just happen—it had a definite antecedent cause. He won for himself a place of honor in ranks of those battling

against the spread of infantile paralysis. It was a battle that widened to many more fronts as time wore on, and by 1885 the infectious nature of the disease was pretty generally accepted.

Yet it was not until 1908 that the first real advance was made in the search for a germ. Then Landsteiner and Popper, in Paris, injected portions of the brain and spinal chord, taken from a fatal human case of infantile paralysis, into some monkeys. They succeeded in infecting the monkeys with the disease, thus putting it on an experimental basis for the first time. Only a short time later several doctors almost simultaneously managed to pass poliomyelitis from one monkey to another. They were Flexner and Lewis in New York, Leiner and Von Weisner in Vienna, and Landsteiner and Levaditi in Paris.

The way was now cleared to studying the mechanism of the disease. It was indicated how the germ was spreading, but scientists still had not banded in any united effort. It took a national tragedy to wake them up.

In the summer of 1916 the great infantile paralysis epidemic hit the United States. It began in a small area in Brooklyn, then spread rapidly over the rest of New York City and Long Island, eventually cascading over the entire country. It touched every state, and struck down more than 25,000 persons, most of them children.

Health Officers at Loss.

Panic swept the nation. In the mistaken belief that only those under sixteen were susceptible, railroad officials refused to let children ride on trains. Vigilante bands of citizens established unofficial martial law in many places, and health certificates were required as "passports" for children moving from one community to another.

Health officers made every conceivable effort to check the disease, but they still lacked a working knowledge of ways and means to combat its ravages. The epidemic died of itself, finally, and so did public terror. There have been less epidemics since then; 15,000 cases were reported in 1931, and 10,000 each in the years 1927 and 1935.

Medical science recognized infantile paralysis as one of its most challenging problems and redoubled its efforts to find an answer. Foundations, research laboratories both public and private, universities and individual physicians and research workers concentrated their attention upon it.

But it remained for a layman, Col. Henry L. Doherty, to begin the most novel move in the battle, one which popularized the fight among all classes of Americans. President Franklin D. Roosevelt, himself a victim of infantile paralysis, inspired the move. President Roosevelt's previous interest in the cause of fellow sufferers had been repeatedly manifested by activities on behalf of the Warm Springs, Ga., foundation where victims are treated.

First President's Birthday Ball.

Visiting Warm Springs in 1933, Colonel Doherty also became deeply interested, and acquired a firsthand knowledge of the research and after-treatment work going forward in this country. He saw the need for more widespread co-ordination of effort. After discussing the mat-

ter with the President, he conceived the idea of a gigantic series of parties which would enable millions of Americans to do their share in the war on polio.

Under Colonel Doherty's direction the mammoth party-organizing task was started. A national headquarters was established in New York and civic-minded persons were called upon to help. The first series of parties was held on January 30, 1934, the President's birthday.

Funds Aid Experiment.

So far more than \$4,000,000 has been raised by the annual parties. Seventy per cent remains to fight infantile paralysis in the community where it was raised, while 30 per cent goes to the national fund, to be used for research or rehabilitation work.

One important use to which the receipts from the parties was put was the development of the nasal spray preventive for poliomyelitis.

How this spray came to be discovered is a dramatic episode in medical history. The subservient microbes have ever defied scientists to follow their meanderings. Yet, after long and brilliant experimentation, scientists in laboratories in New York, Chicago, Stanford university and London at last found out that the nose was a doorway to the polio virus.

In the laboratories of the United States public health service, Charles Armstrong, a "microbe hunter," decided that if he could find some means of blocking that doorway, there would be no way for the deadly germs to attack. For three years he experimented with a whole drove of rhesus monkeys. Finally he found what he wanted. By washing the insides of the monkeys' noses with a weak solution of picric acid and alum, he was able to save 24 out of 25 monkeys exposed to a hot, exceptionally dangerous infantile paralysis virus!

Confusion Hampers Test.

Armstrong was confident that if his solution worked with monkeys it ought to be effective on humans. But he was forced to wait for an opportunity to make the test. It apparently arrived last summer, when an epidemic broke out in Alabama, Mississippi and Tennessee. Rushing to the scene, he won widespread support to his plan of spraying the solution into the children's noses.

He planned to have the doctors supervise the spraying and keep careful records. Unfortunately the experiment got out of hand: the doctors became swamped with demands upon their time and many parents used the easily procurable solution without bothering about scientific counsel on its use.

After salvaging what records he could and making extensive records of his own, Armstrong decided that a more powerful solution was needed. Two California scientists, working on funds supplied by the President's Birthday Ball commission, supplied it. They were E. W. Schultz and L. P. Gebhardt of Stanford university, and they offered a 1 per cent zinc sulphate solution. Zinc sulphate had been used for years as an eyewash. They discovered it was virtually 100 per cent effective in preventing infantile paralysis when sprayed into the noses of monkeys.

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Floyd Gibbons' ADVENTURERS' CLUB

HEADLINES FROM THE LIVES OF PEOPLE LIKE YOURSELF!



"Soft and Deadly"

By FLOYD GIBBONS
Famous Headline Hunter

THE trouble with Leo Caron was that he had it too soft, in fact, so soft it doggone near killed him. That's a new sort of complaint for an adventurer to be making. But it's a fact, just the same.

Leo lives in New York City, but in 1916, when he was a kid, his home was in New Bedford, Mass. He was twelve years old then, and just a few blocks away from the house he lived in were the Gosnold Cotton mills—a collection of great, rambling buildings full of all sorts of things that a kid would be interested in.

All the kids in Leo's neighborhood played around those mills—that is they did when the mill people didn't catch up with them. Some of the workers didn't mind. But if the bosses saw them they were chased out. Leo says he didn't blame those bosses much. "We weren't any Little Lord Fauntleroy around our neighborhood," he says, "and some of our pranks must have cost the mill owners a lot of money."

There was one place in that mill that the kids liked better than all the rest. That was a big room that was used to store the cotton in after it was unbaled. The bales were pulled apart and the cotton blown through tubes into a huge pile in the middle of the storeroom floor. It came out of the blower all fuzzy and soft—the softest stuff Leo had ever seen. That was the trouble with it—as Leo was to find out later. It was so doggone soft that it almost killed Leo.

Boys Liked to Dive Into the Cotton.

There was little work to do in that big room. Its only occupant was a big fellow who weighed in the neighborhood of three hundred pounds, and his sole duty was to push the cotton down through a great tube when it was needed in the room below. But he only had to do that at certain intervals. A good part of the time he wasn't there at all. And in those intervals, kids used to run all over the place.

The kids had one favorite stunt that they did in that room. They would sneak through the mill yard, run for the big room full of cotton, climb up on a partition that divided the room into stalls, and jump down onto the edge of the big soft pile of fluffy stuff.

They always jumped feet first, and like as not they'd sink in up to their knees before their feet came to rest on the solid floor. That was near the edge where the cotton wasn't very deep. They never got near the middle of the pile. They had no time for that. That big fellow might come back any minute and catch them. They always jumped, and then ran as fast as they could for the door.

One day, when none of the other kids were around, Leo Caron sneaked into the mill alone. It was just about half an hour before closing time as he went up the stairs, ducked into the store-room and climbed onto the partition. As he was ready to take the jump a thought occurred to him. Here was his chance to try out a new trick and show it to the other kids the next time they all came up together.

Leo Couldn't Get Out Again.

Leo poised himself on the top of the partition. But instead of jumping he raised his arms and dived head first right into the middle of the pile of cotton.

That pile was ten or twelve feet high in the middle. "I had dived," Leo says, "with my arms together, palms touching over my head. That wedge-like formation of my arms carried me deep into the cotton. From where I lay I couldn't see anything, but it seemed to me that I had penetrated that mass of fluff until I was buried completely."

It was hard to breathe, under all that cotton, and the topsy-turvy position I was in was most uncomfortable. I knew I would suffocate if I stayed there long, and I decided that it wouldn't be a bad idea to get out of that pile as soon as possible.

But getting out of that pile wasn't going to be so easy as getting in! Leo tried to get out—and found that he could hardly move a muscle. The cotton had packed down tight against him, and all his wriggling only served to put him deeper into the pile. That soft stuff was like quicksand—and slowly but surely it was smothering him.

Says he: "No one had seen me come in—and it was almost time for the mill to shut down for the night. I realized that my chances of rescue were small and I became panic-stricken. In my frantic efforts to free myself I became exhausted and gasped feebly for air which, all the time, was becoming more and more scarce. In my childish horror of death, all sorts of ghastly visions arose in my imagination. Memories of my youthful past flashed before my mind, and I even pictured my four best friends as my pallbearers."

How He Was Saved by a Rat.

And now, into our story comes—a rat! Doggone few people ever have a good word to say for rats, but Leo will give them a boost any old time. For it was a rat—a great big factory rat that saved his life that day.

The one man working in the store-room—the big three-hundred-pounder—was making his last round of the day, closing windows and locking the place up for the night. As he approached the pile of cotton, he espied a rat and began looking around for something to throw at it.

There was only one solid object in the place—a black thing that seemed to be lying on the side of the pile of cotton. He reached over and grabbed it. It was a shoe and it seemed to be attached to something. The big fellow gave a hearty tug, and out of the pile came a twelve-year-old boy, limp, exhausted—unconscious.

The big fellow called for help. They gave Leo artificial respiration, and it took a full half hour to revive him. It was several days before he was completely recovered—but he never would have breathed again if it hadn't been for—a rat.

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Rock Dunder Bombarded by British Fleet in 1776

Strangers who visit the Lake Champlain area and take the trip across the lake invariably inquire what that peculiar object is which rises above the waters of the lake several miles from Burlington.

"It is Rock Dunder," they are told, relates a Burlington, Vt., correspondent in the New York Times.

Then this story, which is accepted by local residents as the origin of the name, is told:

On October 12, 1776, a British fleet sailed up Lake Champlain on a close watch for American ships. The British encountered the little fleet under Benedict Arnold near Valcour island and a spirited battle ensued. The British ships were far superior to those of the Americans in size and carried heavier guns. The little American fleet was badly battered. After nightfall, and in a thick fog, the American ships slipped through the lines of the British and escaped.

But at some time during the night a sentry on one of the British ships called out that he saw a ship through the fog. Knowing that no British ship lay in that position the British commander thought Arnold's fleet was trying to spring a surprise attack and ordered his guns to open fire.

Throughout the night the British guns boomed intermittently. The strange "ship" remained in the

same position. As the shadows of the night were dispersed by the coming dawn so that it was possible to see more clearly the "ship" was disclosed as a huge rock rising from the surface of the lake.

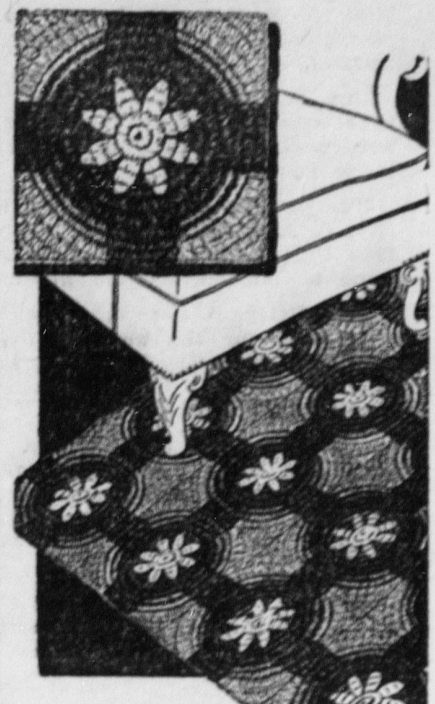
The crestfallen British commander, in dismay, attempted to utter the exclamation "By thunder" but was so excited that he said instead "By dunder!" and the rock has been known as Rock Dunder ever since.

The rock rises 36 feet above the surface of the lake.

Morgan Horse Dates to 1793

The line of the Morgan horse goes back to 1793 when the sire of the breed, Justin Morgan, named after a farmer who bore that name, was sired. Morgans are noted for their ruggedness, style, courage, intelligence and general usefulness both in harness and under the saddle. For years they have been used as remount stallions by the army. In the United States many of the great trotters and saddle horses carry Morgan blood; and on the Western plains they have been crossed with native range stock to produce good "cow horses." Morgan blood also is scattered in other parts of the world. Morgan horses have been sent to Japan, China, Central and South America, Canada, Cuba, Puerto Rico and the island of Guam. Wherever they have gone they have left their mark.

A Crocheted Rug Is a Lifetime Joy



Pattern 5855

This rug that you can so easily crochet yourself will be a lifetime joy. See if it isn't! Do the stunning medallions separately—they're just 3/4 inch squares—and keep joining them till you've a rug the desired size. If you like, make each flower center a different color, keeping the background uniform. Rug wool or candlewicking make for a sturdy durable rug, or otherwise useless rags will also serve the purpose. In pattern 5855 you will find instructions for making the rug shown; an illustration of it and of all stitches used; material requirements; color suggestions, a photograph of the actual square.

Send 15 cents in stamps or coins (coins preferred) for this pattern to The Sewing Circle Household Arts Dept., 259 W. Fourteenth St., New York, N. Y.

Please write your name, address and pattern number plainly.

What You Seek

Have you ever thought how many objects you pass without even noticing them; how many voices and sounds fail to register with you?

It seems that one usually sees what he is looking for and hears that to which his ears are attuned.

Perhaps this is what Emerson had in mind when he said that no one brings back from Europe anything which he did not take over with him. (Excluding merchandise of course.)—Ohio Farmer.

HELP KIDNEYS

To Get Rid of Acid and Poisonous Waste

Your kidneys help to keep you well by constantly filtering waste matter from the blood. If your kidneys get functionally disordered and fail to remove excess impurities, there may be poisoning of the whole system and body-wide distress.

Burning, scanty or too frequent urination may be a warning of some kidney or bladder disturbance.

You may suffer nagging backache, persistent headaches, attacks of dizziness, getting up nights, swelling, puffiness under the eyes—feel weak, nervous, all played out.

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