

DAILY MAGAZINE PAGE FOR EVERYBODY

Secrets of Health and Happiness

Lipovaccines the Newest Aids in Warding Off Disease

By DR. LEONARD KEENE HIRSHBERG,
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DR. HIRSHBERG

A vaccine is usually a watery mixture of killed or living germs. As a rule, vaccines are used to prevent the disease associated with the germ used. For instance, typhoid bacilli and paratyphoid bacilli are killed, counted and mixed with water, 1,000 million to each 15 drops, and to ward off these fevers are used in three different vaccinations, a week apart.

Smallpox is prevented by scraping a few glycerinated mucous of cowpox, weak cousin of smallpox—into the skin. A local cowpox, called the eruption, vaccines and makes you immune to smallpox.

At the army medical school in Washington, D. C., Lieut. Col. E. R. Whitmore of the department of pathology and Lieut. E. A. Fennel and W. F. Petersen have attempted to make a new vaccine for several human ailments, which have hitherto been failures both in the preventive vaccination and antitoxin treatments.

What They Are.

Antitoxins differ from vaccines in many respects. They are made from the blood of animals or men, which has successfully withstood the bacteria or poisons of diphtheria, lockjaw, type I pneumonia, gas bacilli infection and other diseases. Antitoxins are useful both as preventives and as treatments. Vaccines are admirable preventives, but generally failures in the treatment of a disease. Whooping cough and apne vaccines, however, are useful in this latter respect. They diminish the intensity of these maladies.

The army doctors mentioned point out that oils and fats have proved to be better than water or salt solutions as a means with which to mingle germs to be made into vaccines. They call these lipovaccines, because word fat or lanolin, soap fats, vaseline or vegetable oils may be profitably substituted for water in the manufacture of vaccines.

Oil vaccines have also proved to be less harmful as well as less powerful than the watery ones now in use—so much so, indeed, that vaccination may be completed in one big dose instead of three scattered doses over two weeks. The fats, it appears, diminish the disturbing effects sometimes evidenced. Moreover, they allow the vaccine to remain at the point of inoculation over a period of time with slower absorption, and thus immunize the individual gradually without the discomforts of the other method.

How They're Made.

The opportunity to give the entire vaccination and immunity in one dose is a great advantage for all concerned. Lipovaccines, since they are absorbed steadily from one spot, may be preferred to be used to protect human kind against such diseases as colds or pneumonia, immunity to which has been found to be of only a transitory value. With lipovaccines this slowly vaccinating from their fatty, walled-off cells at the point injected, this fleeting immunity can be greatly extended. Vaccines for pneumonia, gonorrhea, diphtheria, meningitis and colds hitherto have been failures, because their immunity is fleeting and evanescent.

Dr. Whitmore, Fennel and Petersen grow the bacteria from pneumonia and meningitis patients for 20 hours or so in a broth of meat, starch agar and rabbit's blood. This food bacterial soil is removed as a paste and dried at 53 deg. centigrade in an oven over which a current of sterilized air is passed.

Some 45 minutes later the bacteria are dried and remain in the form of fine, glistening, brittle scales. The dry weight of these for each thousand million is easily estimated, and they are then ground up in a ball mill for 24 hours. A teaspoonful of ether and chloroform are mixed with them to insure the complete killing of any germ that might have possibly escaped.

Use by Army.

Sterile lard—wool fat—enough to make a 10 per cent mixture, is warmed and half the value of olive oil is added to the mixture in the ball mill. Then the sticky mass is mixed a few hours and enough oil is added to make the amount you wish.

The germinations of pneumonia has a definite relationship to the type of pneumonia germ; there are four types, one of which has an anti-serum, in their first lipovaccine the army doctors made

It contains types I. and II., omitting the others. According to a blood test used by doctors for this purpose, vaccination of some men with this mixture made them immune to pneumonia for six weeks. Meningitis vaccines were made with four different races of meningococci, which is the bacterium concerned in this disease. Ten thousand million of the different strains mixed together were allowed to the 15 drops. Thus whole companies of soldiers were saved from the long quarantine which is generally necessary whenever even one victim of the malady is discovered in camp.

Answers to Health Questions

S. O. P. Q.—I live near a sanatorium for consumptives. Do you think this a safe place to live, and would you advise me to stay there?

A.—Near a tuberculosis sanatorium is the safest place in the world to live.

T. B. Q.—What can be done for a nervous, weak heart?

A.—This may be due to several causes. You should have an examination made to find the cause.

ANON. Q.—What can I do for a rash on my hands and wrists. It burns and itches painfully, and is very red also.

A.—Try a little of the following calamine lotion:

Pink calamine 2½ drams

Zinc oxide 2 drams

Glycerine 2 drams

Lime-water 30 drops

Phenol 30 drops

Rosewater 2 ounces

D. F. J. Q.—What can be done for a bad breath?

A.—Your nose, teeth, tonsils or throat may be the cause of this foul breath. If you are not at all constipated and are fairly active with your limbs, foul breath may be communicated by the use of a good tooth brush, a disinfecting tooth paste, dental floss or silk floss and a few times a day between the teeth, and a nasal wash something like the alkaline antiseptic solution. Peroxide of hydrogen swirled and sucked back and forth between the teeth, or milk of magnesia used for its mechanical effects may act as a makeshift. You may find relief from this annoying feature by taking half a dozen 5-grain charcoal tablets two or three times a day.

L. K. H. London, Ont. Q.—1. What can be taken for gas on the stomach? 2. Also please suggest something for itching thighs.

A.—1. Avoid all fried foods, pastry, cake, sweets, thickened soups and gravies. Be sure that your food is properly masticated and have dental defects remedied. Have your druggist make up twenty powders of subgallate of bismuth, each containing ten grains, and take one after each meal. If, after a week of this treatment, you find that you have not entirely recovered, you should consult your family physician about this.

2. Apply a little of the following to the affected parts:

Pink calamine 2½ drams

Zinc oxide 2 drams

Glycerine 2 drams

Phenol 30 drops

Lime-water 30 drops

Rosewater 2 ounces

PETE, London, Ont. Q.—Would you please tell what could be done for stiffness caused from rheumatism?

A.—Dry heat, hot applications, Swedish movements, electric battery, manipulation and massage, may help you.

Dr. Hirschberg will answer questions for readers of this paper on medical, hygienic and sanitation subjects. He cannot always undertake to prescribe or offer advice for individual cases. Where the subject is not of general interest letters will be answered personally. If stamped and addressed envelope is enclosed, address all inquiries to Dr. L. K. Hirschberg, in care of this office.

In England, since the time of Edward III., the way the tails are set on ermine has been a matter of royal regulation. The method of arranging the tails designate the various ranks of officers.

If the driver of a motor car is a chauffeur, and the pilot of an airplane is an aviator, what is the name for the man who works and fights with the tanks? The French have already christened them, says an exchange. The man in a tank is a "tanker."

ADELE GARRISON'S NEW REVELATIONS OF A WIFE

WHY IS THE OLD INN SO CHANGED?

I was thoroughly angry at myself as I walked slowly down the winding road through the woods that lead to the little inn at which I had planned to get luncheon.

"Dick's comment must be true. I must have a one-track mind," I said to myself bitterly, as I thought of the number of miles I was from home, and the prospect that the interurban trolley car regulations would forbid my getting aboard because of Pete.

To be sure, I supposed that it would be possible to secure a taxi somewhere, but I knew that conditions were such in that neighborhood that I could not expect an exorbitant price, and perhaps hours of delay if I ordered one.

Why had I forgotten all this and accepted the offer of a lift from the young army officer who had rescued me from the trolley conductor's annoyance? Why had I not instead turned toward home, even at the risk of again encountering my neighbor on horseback?

But all questioning was futile now. As I considered this fact, and also realized that I had outwitted the mysterious horseman my spirits rose.

On High Ground.

"Nothing shall spoil my holiday, Pete," I said confidently to the bullterrier frolicking by my side, and his answering bark showed that Pete fully approved of my decision.

I began to have pleasant anticipatory thoughts of the luncheon I meant to order as soon as I reached the inn. I had eaten at the inn once before, and I realized that my tramp and the ride in the motor car had put a keen edge on my appetite.

It had been months since I had seen the place, but I could visualize every angle of it long before I reached the inn. The place had been there for many years, and passed through the rustic gate that leads to the high knoll, probably the highest spot in the district, the level ground stretches upon which the level knoll inn was situated.

It had been one of the big old farm-houses which abound in Long Island, and the clever Viennese couple who had bought it and opened the inn had transformed it into one of the most attractive

five places to be found for those who wished to dine well and quietly.

An Interruption.

Ah, there it was! I caught my breath with sheer artistic pleasure as I saw it through an opening in the giant pines which jealously guarded it, completely hiding the inn and its outbuildings from the casual view. Only those who had been privileged to be its guests and the friends they had told of its charms knew of the existence of the inn. It never advertised and capitalized its quiet exclusiveness.

I walked slowly toward the house, entering to the utmost the vision it presented. Every appearance was in keeping with the main building. A few yards from the house an old windmill towered, and against its base a rustic bench at its foot, upon which Dicky and I had often rested while waiting for our dinner to be cooked.

I was sorry to see that the Viennese proprietors evidently had decided that the windmill should be decorated with its own rugged lines. The lower part of it had been screened, and the vines trained thickly against it, so that it must have been obtained at great expense from a greenhouse to give such luxuriant foliage so early in the season.

And against the vines, flowered with scarlet blossoms made of the red and white roses, an ornamental rustic seat had disappeared. Instead a decorative rustic gate had been placed at the foot of the grounds in front of the windmill stood from those around the house. An ornamental gate separated the fence into two parts, but instead of standing invitingly open

I wondered vaguely at this arrangement, for one of the chief charms of the place had been this grassy slope bordering the little woodland stream. Now the gate had been placed in the park with its formal flower beds and its stately peacock spreading his glittering plumage in the sunlight.

My curiosity was aroused, and with it a wish to see the little stream once again. With the ambling in dignified fashion beside me, I walked toward the gate and tried to open it. It was locked. As I shook it slightly, to make sure, I heard a slight noise behind me.

I turned sharply, and saw in two of the windows of the inn scowling faces furiously watching me, screened as they thought by the fluttering curtains. At the same moment a waiter came out of the door of the inn and advanced quickly toward me.

FEMINISMS

By Annette Bradshaw



Annette Bradshaw

WARTIME CHANGES.

MRS. PASSENGER—And do you like this as well, my dear, as being a waitress in a restaurant?
MISS CONDUCTORETTE—Oh, yes! But I do miss the tips!

INCIDENTS IN THE LIVES OF FAMOUS WOMEN

BY ELOISE FARRINGTON.

How a Beautiful Heathen Princess Lost Her Kingdom and Yet Attained Biblical Immortality.

Caractacus was the most powerful of all the kings of ancient Britain. For eight years he withstood the legions of Rome only to be betrayed in the end by Cartimandua, Queen of Brigantes. When Caractacus heard that his wife and only daughter, Claudia, had been taken prisoner of Rome his misery was complete. He loved his only child with all the power of his great and noble heart. The thought that she was to grace a Roman triumph was almost more than he could bear.

Claudia, whom the historians describe as possessing the beauty of a Greek goddess, was the proudest descendant of a long line of kings. Caractacus longed, above all else, to pare her the humiliation of having to appear as a prisoner before Caesar and all Rome. But the Emperor Claudius demanded that Caractacus and his family come before him on the field of Mars.

Do you remember the first little garden you ever had—your very own garden, I mean, out in the corner of the side yard?

Let us go back to it, and reminisce and little green onions, all cool and white, and the roses were just beginning to show. Sometimes you sat and looked at that garden, but when there was company and your mother was in the kitchen, and these are Sisters—she raised them herself—weren't you proud and happy?

And how cool and green the lettuce looked when you went out to pick it just at sundown, and the wind began to blow and all the trees in all the gardens round about seemed to be whispering invitations to a wonderful ball to be given that night in the moonlight when all the stupid human beings were in bed and fast asleep.

Things We Learn.

Did you know how low primrose in your garden? We did in ours. And the evening primrose was the moon rose. "Pop," said the primrose, and there it was, like a yellow star in the moonlight, and the perfume of it rose and made the world an Eden, and someone you loved very dearly plucked a yellow primrose in her hair and lentened upon the gate and hummed under her breath an old song that you knew she was singing to someone very far away, and had forgotten all about you.

Nowadays I never see a yellow primrose or get the fragrance of one without seeing again in the moonlight the face of the one I loved so dearly and hearing again her voice, that was always sweet to me.

What a dreadful thing it must be not to have any flowers or growing things in your memory.

I wonder if it doesn't make it harder to be kind and forgiving sometimes when the evening primrose is in bloom? "Pop," said the primrose, and there it was, like a yellow star in the moonlight, and the perfume of it rose and made the world an Eden, and someone you loved very dearly plucked a yellow primrose in her hair and lentened upon the gate and hummed under her breath an old song that you knew she was singing to someone very far away, and had forgotten all about you.

Nowadays I never see a yellow primrose or get the fragrance of one without seeing again in the moonlight the face of the one I loved so dearly and hearing again her voice, that was always sweet to me.

What a Wonderful Opportunity.

I've thought sometimes that it would be a good thing for this whole nation if we could all of us go back a little to the old times, and at least to the ways of the old times, and live in simple little gardens and get back sometimes to the realities of life and make ourselves realize what is important and what is only a passive fancy.

This war has already done marvelous things for the people of this country. I have just crossed the continent for the thirtieth time in my life, and I never before saw so much kindness and courtesy everywhere as I have seen this time. Strangers speak to strangers. Little courtesies are ex-

think you that all the world will welcome servitude?

"Had I not resisted your power, neither my capture nor your triumph would have won their present distinction. Condemn me to death, and my story will be forgotten. Release me and your clemency will live forever."

As the last word fell from his lips, Claudia again smiled proudly upon her father, knowing that he had not pleaded in vain.

The multitude shouted: "Spare him! Pardon him, because of his bravery!"

Claudia looked proudly at her father and smiled as his voice rang clear and rich as the tones of a bell through the field of Mars.

"Had my prosperity been equal to my noble birth, Oh, Caesar, I should have welcomed me as a king—an ally. My misfortune is your glory. Your determination is to rule the world, but I would be a Roman."

WINIFRED BLACK

Writes About the Children's Garden Army.

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changed. The tired mother finds someone to help her with her brood. The old man who is going to bid his grandson good-bye before he sails for France finds a dozen strong young arms to help him on his way.

The sweet girl who looks wistfully after the tall figure in khaki when the train moves out of the station—with what sympathy and kindly feelings every heart follows her!

Oh, it's a good world and the kind world and the generous, loving world today, as it never was before since the great sin against Adam and Eve. And somehow I can't help hoping that this idea of the children's garden army is going to grow and bring us all simple and good into all our lives again.

And how happy six or seven, sixteen, or anything in between, and I would volunteer in the children's garden army, which is going to make vegetables for the nation—before the sun went down today!

I wish I were happy six or seven, sixteen, or anything in between, and I would volunteer in the children's garden army, which is going to make vegetables for the nation—before the sun went down today!

One day Doty and Bobby were playing house in the shade of the maple tree. Mamma had fixed them bread and jam for their play dinner.

"After we eat, let's take a trip to the zoo," exclaimed Bobby. "Of course there isn't any, but we'll play that the children's garden army is here."

"Oh, let's do," laughed Doty. "I'll dress all the dollies up in their best clothes and we'll take them."

The bread and jam quickly disappeared, and the dressing of the dollies was almost completed when Doty gave a cry of dismay.

"Oh, who took my doll's string of blue and red beads?" she cried. "If you're hiding them, Bobby, give them here this minute!"

"I never saw the beads," replied Bobby, looking all around for the lost beads.

"You know you did!" cried Doty, tears coming to her eyes. "I know you're telling what might have happened if Happy Giggles hadn't poked his head around the tree just then and asked the cause of the quarrel."

Doty told him her doll's beads were lost, ending: "I know Bobby has them, and he won't give them up!"

"You're sure of it?" laughed Happy Giggles. "Yes, because he's always hiding



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