

MEDICINE

# Tests on College Girls Show Minute Virus Causes Colds

## Organisms are Passed Through Finest Filters Before Infecting Girls in Johns Hopkins Experiments

**N**INETEEN college girls are the latest heroines in medical science's attack on the common cold.

Through their temporary suffering from the colds with which they were experimentally infected by Drs. Perrin H. Long and James A. Doull of the Johns Hopkins University Medical School, these volunteers aided in the discovery of the important fact that the infecting agent of the common cold is a filterable virus, so minute that it passes through the finest of filters and so difficult to grow that it can not be cultured by ordinary methods.

These are important steps toward the conquest of this disease that is particularly prevalent in the fall and winter, but much more research will be necessary before a prophylactic can be offered the suffering public.

The college girl subjects of the experiments are known in the reports only by their initials, as is customary in medical reports. One of them volunteered to be the subject of experiment twice, the others were the subjects of only one experiment each.

### Confirm Early Views

The results of the experiments of Drs. Long and Doull extend and confirm the views of earlier investigators who showed that the common cold is an infectious disease transmitted from one person to another by something present in the nasal secretions of people ill with colds. But the Johns Hopkins investigators have narrowed down the search for the guilty organism to one that is in the same class, so far as size is concerned, with the causative agents of smallpox, hoof and mouth disease, and even more dreadful diseases.

They proved that the filterable virus of cold is present in liquid that had passed through the finest of filters, the Berkefeld W porcelain filter and the Seitz filter of asbestos. These strain out organisms that are passed by filters that heretofore have been considered extremely fine, and the filtrate is actually sterile from the standpoint of ordinary bacteriological technique. Yet

this filtrate passed on the colds to the college girl subjects.

As it has been impossible to cultivate the cold virus in the way that ordinary germs are grown, the next step planned in the attack on the cold is to attempt tissue culture growth of the virus. By introducing the submicroscopic cold germs to the presence of living cells kept alive in test tubes, it is hoped that the cold virus may be grown artificially. That may give the experimenters a chance to try to develop a protective vaccine.

Because colds are prevalent in the fall and winter and infrequent in the summer, the experimental work is done in the summer to minimize the chance of human test subjects picking up colds accidentally. The researches just reported in the *Proceedings of the Society for Experimental Biology and Medicine* were made last summer and now continuing research is being planned for next summer.

The John J. Abel Fund for Research on the Common Cold, supported by the Chemical Foundation, conducted the

researches. Dr. Long will continue the work next year while Dr. Doull this fall joined the faculty of the Western Reserve University.

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GENETICS

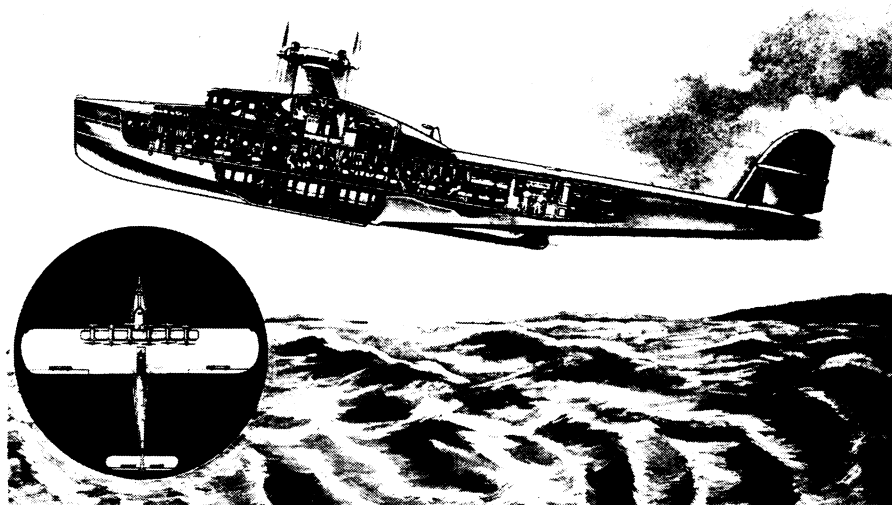
## Strange Goats Faint When Frightened

**A** FLOCK of goats having the very queer habit of falling over, stiff and unconscious, when they are frightened has just been reported to the American Genetic Association in Washington by Prof. Jay L. Lush of the Iowa State College.

The goats were observed by Professor Lush when he was in Texas connected with the Texas Agricultural Experiment Station. They were all bred from one stock which came from Tennessee. The strange behavior seems to run in this particular goat family.

The animals could be frightened in many ways, the principal element necessary being surprise. At a loud noise like the discharge of a gun or the sudden throwing down of an iron wash tub, the goats would become perfectly rigid.

"While in this condition," Dr. Lush said, "they can be pushed or turned over as if they were carved out of a single piece of wood. This spell or 'fit' usually lasts only a short time—about ten to twenty seconds. They recover the use of their muscles in the front end of the body first. Often one will see these goats, on recovering from fright, re-



THE SIZE OF THE HUGE DORNIER DO-X

Which has begun a flight from Germany to America where it will spend the winter, is well illustrated by this cut-away view of the craft in flight. This is the largest airplane ever built. It can rise with a 60-ton load, including fuel, but its fuel consumption is so great that the pay load decreases rapidly as the length of flight is increased. The plane has lifted as many as 169 people for a short flight.