

PUBLIC HEALTH

Your Handkerchief Enemy

Scientists estimate that a used handkerchief is probably the most important single method of spreading germs. Best aerial disinfectants appear ineffective.

➤ YOUR HANDKERCHIEF is a powerful weapon of germ warfare.

A scientific estimate is that your handkerchief can unleash a bombardment of 136,000 germ particles.

This is the average for 211 handkerchiefs which were scientifically shaken by a group of British scientists. They shook the handkerchiefs mechanically and by hand. "Gentle manipulation" of a used, dry handkerchief will distribute an average of 15,000 particles and as many as 50,000, they found.

Even more alarming was the discovery that common aerial disinfectants do not kill these germs.

The handkerchief experiments were made at Harvard Hospital, Salisbury, and are reported in the British journal, *THE LANCET* (July 31), by K. R. Dumbell, J. E. Lovelock and E. J. Lowbury.

In the experiment, they used cotton handkerchiefs which had been issued to volunteers and used two days. The handkerchiefs were shaken in a special room with an air blower. The air blower proved to be five times as effective as hand-shaking of the handkerchiefs.

When the scientists discovered the huge particle count, they tested the germs with the "best available" aerial disinfectants. Three chemicals and ultraviolet rays all failed to kill the germs under normal conditions.

Using your handkerchief, the scientists conclude, is probably the most important single method of spreading germs, with the possible exception of bed-making. Talking and nose-blowing, they add, probably contribute few germ particles.

The real villain is your handkerchief.

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translates as "little green one."

Although Mr. Davis' study was conducted solely with an eye to learning more about the biochemistry of chlorophyll and its action, there is a possible point of interest in it for students of plant evolution. It has long been supposed that fungi, which must find their food ready made, were once self-supporting algae, properly equipped with chlorophyll. This study gives a hint of how the shift from green independence to pallid dependence may have started.

Mr. Davis' results are reported in the journal, *SCIENCE* (July 30).

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WILDLIFE

Expedition Will Study Strange Animals and Birds

➤ THE HIGHLAND FLOWER MOUSE, somersault-turning ratel, white-faced wagtail and the blue-bearded bee eater are not characters out of fairy stories. They are animals and birds that really exist in the little-known kingdom of Nepal which lies between India and Tibet and will be investigated by an expedition sponsored by the National Geographic Society, Yale University and the Smithsonian Institution.

The highland flower mouse is a sort of rodent, somewhat like a rat, which lives in grass nests in the hollows of decayed trees. The somersault-turning ratel is also called the honey badger. It is a form of mammal related to the bear. Both the white-faced wagtail and the blue-bearded bee eater are birds.

Nepal has been known chiefly as the source of the British Empire's fighting Gurkas and as a famous hunting region. A great variety of animals live in its high grass and jungles, including the elephants, tigers, wild oxen and the great one-horned rhinoceros. Only lately has Nepal entered into diplomatic and direct trade relations with the United States. The new Maharaja of Nepal, Sir Mohan Shum Shere Jung Bahadur Rana, has given his personal approval to the expedition.

Dr. Dillon Ripley, Yale University zoologist, will head the expedition which sails from Seattle, Wash., Sept. 15.

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MEDICINE

Cure for Abscesses

➤ A PAINLESS CURE for abscesses which leaves no scars is reported by Dr. Harry J. Cohen of New York in the *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION* (Aug. 21).

Pus is drawn from the abscess with a large needle to which a syringe is attached and replaced with approximately the same amount of penicillin solution. No bandages are required.

This procedure was first tried on a newborn infant with abscesses covering the entire back, buttocks, abdomen, thighs and legs treated at the Harlem Hospital. The child had a fever, and abscesses continued to form after 11 days of treatment with sulfonamide drugs. The accepted procedure of puncturing the abscesses to allow drainage was impractical because the whole body was involved which would create a problem with dressings and nursing care.

First, 10,000 units of penicillin were injected into the muscles every three hours until the child's temperature returned to normal, after two days. Then each abscess that had become soft was treated by replacing the pus with penicillin. One such treatment was sufficient to heal the abscess. In three weeks the infant was entirely well with no scarring of the body.

Fifteen other children with abscesses of various parts of the body were cured by this method, Dr. Cohen states.

Advantages of the new treatment to the pediatrician, Dr. Cohen points out, are: treatment can be given in the office or

home; anesthesia is unnecessary as it is painless; it eliminates the need of dressings which are difficult to keep in place and, depending on the site of the wound, difficult to keep from getting contaminated by body wastes; it facilitates nursing care; and it prevents scar formation which is important when the infection is on the face or neck.

This treatment has been used in other conditions marked by infected cavities, including acute osteomyelitis, inflammation of the bone.

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BIOCHEMISTRY

Ultraviolet Rays Hinder Food Production in Fungi

➤ ONE-CELLED green plants were deprived of their power to make their own food by irradiation with short-wave ultraviolet, in experiments performed at Yale University by Edwin A. Davis. Strains of their offspring showed themselves permanently handicapped in this way; they could survive and reproduce only when supplied with ready-prepared foods, practically as if they were fungi. As the supply of glucose was depleted they lost their color, but regained it when fresh glucose was added.

There is a certain irony in the plight of this microscopic green plant that is unable to use its chlorophyll in the natural way, for its botanical name is *Chlorella*, which

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