

NUTRITION

More Good from Food

A tenth to a third more nourishment obtained if one of the new antibiotics is taken with it. Suburban soil contains vitamin.

► A TENTH to a third more nourishment can be obtained from food if one of the new disease-fighting wonder drugs such as penicillin, aureomycin, streptomycin and terramycin antibiotics is taken along with it.

Experiments in animal feeding suggest that humans too can have their growth and health improved by these discoveries, Dr. C. G. King, scientific director of the Nutrition Foundation, reported in summarizing this year's food research.

Yet why these wonder drugs and recently discovered vitamins such as B₁₂ are effective is still a mystery.

Several groups believe that antibiotics can exert a stimulating effect on growth, beyond the effect of all known vitamins. Dr. King said there is widespread agreement that natural protein foods of animal origin such as liver, milk, meat and eggs contain essential nutrients beyond those now identified.

The number of new vitamins yet to be identified cannot be stated with any sense of finality, but from studies with chickens, turkeys, minks, cats, rats and pigs, research men are convinced that at least two and perhaps as many as four or five factors remain to be identified.

There is a great deal of interest in discovering the real function of the antibiotics when they stimulate growth. The scientists

ask: (1) are they suppressing microorganisms that normally retard the animals' growth as a result of their poisonous end-products? (2) or, are the antibiotics, by suppressing the growth of some organisms, encouraging the growth of others that provide greater quantities of unknown nutrients? (3) or, is the suppression of bacterial growth making available a greater supply of the known vitamins and amino acids that are contained initially in the food?

Whether any of these answers have practical significance lies in the future. Many scientists believe that they will have, Dr. King said, although it is too early to predict how useful the results will be.

When antibiotic supplements are fed to turkeys, chickens and pigs, several groups report gains in weight in the range of 10% to 30% above the expected performance on "good rations." Preliminary tests are also under way with children.

It was disturbing to "pure minded" chemists to discover that feeding two to five percent of just ordinary farm dirt to pigs on test diets caused improvements in growth and health. Again it was surprising when research men testing the vitamin B₁₂ content of good clean suburban New York soil found that after stirring water with the dirt and filtering, the water had a vitamin B₁₂ content comparable to milk.

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least, Dr. Shumacker explained, because it shortens the period during which tissues are frozen and temporarily bloodless.

Recently the Association of Military Surgeons, meeting in New York, were reminded of other experiments showing the value of the anti-blood clot chemical, heparin, for treatment of frostbite.

One frostbite victim had been saved by heparin given when he reached the hospital after he had been lying in the street at least 14 hours in below freezing temperature with only low shoes and thin socks on his feet.

His feet and legs were ice cold up to the knee and remained so for five hours. Heparin was injected into his veins for five days. He developed considerable blistering, but was saved from any permanent loss of tissue or parts.

This and other cases were reported by Dr. Kurt Lange of New York when announcing their results with heparin treatment of frostbite in 1945.

Referring to this work at the meeting, Dr. Irving S. Wright of New York predicted that an anti-clotting drug which could be taken by mouth and be effective within an hour might be developed.

Use of the anti-blood clotting chemical prevents thrombosis or clot formation in blood vessels which ultimately leads to gangrene. The dangerous thrombosis does not occur early in frostbite, Dr. Lange and associates found, but anti-clot treatment must be started before this stage of thrombosis is reached.

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MEDICINE

"Dry Ice" Treatment Cures Most Acne

► A NEW treatment for acne involving the use of cakes of "dry ice," or carbon dioxide snow, was reported to the Southern Medical Association at its meeting in St. Louis.

Cures in from 70% to 86% of the patients, depending on the types of acne, were achieved, Dr. William L. Dobes of Atlanta, Ga., reported.

The cakes of dry ice are first dipped in a mixture of acetone and a liquid sulfur preparation marketed under the name of "Intraderm Sulfur." The cakes are then applied with moderate pressure to the skin of the acne sufferer.

The acetone dissolves the greasy film on the skin and allows the sulfur to be carried into the pores, Dr. Dobes explained. The sulfur has a drying effect on the oil glands of the skin and also has a bacteria-checking action, thus healing many infected pimples or sores.

The method is particularly useful, Dr. Dobes said, for young patients who should not be given X-ray treatments and for patients with whom X-ray and other treatments have failed.

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MEDICINE

Best Frostbite Treatment

Old treatment of rubbing frozen feet with snow increases chances of gangrene. Modern method is fast thawing with injections of heparin.

► IF the hundreds of soldiers and marines reported to have frozen feet during the latest advances in Korea followed the old treatment of rubbing snow or cold water on their feet, they may have increased their chances of getting gangrene.

But their chances of escaping this and consequent loss of toes, feet or legs should be good if they are gotten quickly enough to hospitals equipped to give them treatment with heparin.

This anti-blood clotting chemical and rapid thawing of frozen parts are the two latest methods reported for treatment of frostbite.

The fast thawing method is contrary to

medical views and practice as recent as World War II. Experiments showing that it gives best results in treatment of frostbite were reported only a year ago by Dr. Harris B. Shumacker of Indiana University Medical Center.

The ideal temperature for thawing, he and his associates found, is one slightly above body temperature. Too much heat is bad, they cautioned.

Their findings came from experiments in which the tails of mice were frozen. When the frozen tails were rapidly warmed, no gangrene set in, but it did when cold was applied.

The rapid thawing is effective in part at