

MEDICINE

Acute Malaria Treated by Drug

➤ A "SUPERIOR" drug for treatment of acute malaria was announced at the meeting of the National Malaria Society in Chicago.

Name of the drug is hydroxychloroquine. It was developed by Drs. E. W. Dennis, F. C. Goble, J. O. Hoppe, J. P. McAuliff and E. W. McChesney of Sterling-Winthrop Research Institute, Rensselaer, N. Y.

The drug can be given by mouth or by hypodermic injections. When fed to White Pekin ducklings infected with malaria, it showed anti-malarial activity equal to that of chloroquine. But in ducks and also in rats and dogs, the scientists found, the new drug can be safely given in much larger doses than chloroquine. It also stays in the blood plasma in higher concentration and for a longer period of time than chloroquine.

These advantages, the scientists stated, suggest that the new drug should be given a trial in treatment of acute malaria in human patients and also as a prophylactic suppressive drug for malaria control in regions where men must work and fight where malaria abounds.

Neither antibiotics nor cortisone would be useful in malaria, according to laboratory tests reported by Drs. Edith M. Darrow, Wendell D. Gingmich and Joanna Hull Prine of the University of Texas Medical Branch, Galveston, and Dr. W. B. Redmond of the Veterans Administration Hospital, Chamblee, Ga. Dr. Redmond reported on the cortisone trials, while the University of Texas group reported on the antibiotic trials.

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MEDICINE

Do Not Take Chance On Appendicitis

➤ APPENDICITIS IS not the killer it once was, but the disease is still common and the complication of peritonitis from a ruptured appendix is still dangerous, even with sulfa drugs and penicillin to fight it.

The appendix is a small, apparently useless organ jutting out from the beginning of the large intestine. Normally it is located in the lower right forward part of the abdomen. Sometimes, however, it may be found nearer the back and in that case appendicitis pain comes in the back instead of the lower abdomen. When the appendix becomes inflamed, due to blocking of the organ by foreign matter or by infection, there is pain and nausea or vomiting.

Because the pain and distress associated with the disease closely resemble the symptoms brought on by constipation, patients sometimes resort to laxatives. Laxatives

increase peristalsis, the movement by which the contents of the intestine are moved along. This increased pressure may extend the swelling and cause rupture of the appendix, spreading the infection to the peritoneum, the lining of the abdominal cavity.

The first thing to do is call your physician when severe pain appears in the lower right quadrant of the abdomen, warns the Illinois State Medical Society. Let him decide what the trouble is and what to do about it. Do not take laxatives, cathartics or "physics." Do not apply ice packs or heat to the painful area. Do not rub or massage the abdomen. Do not swallow anything except water until you have consulted a physician.

If your physician decides that an operation is essential, trust him. Ignoring his advice may cost you your life. Once the appendix bursts, the damage caused by spreading infection is more difficult to repair.

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NUTRITION

Eat Vitamin C Every Day, Nutritionists Advise

➤ YOUR BODY cannot store much vitamin C, so you must get some every day in your diet, nutritionists advise. This vitamin, known also as ascorbic acid, prevents scurvy and is essential for keeping body tissues in good condition.

Many persons rely on the breakfast fruit juice for their vitamin C ration. If you do this, check your choice because some fruit juices supply more than others. Orange juice and other citric juices, fresh, frozen and canned, rank high in content of this vitamin.

Tomato juice is another good source of vitamin C, though unless fortified with added vitamin C, it takes more than twice as much canned tomato juice to match canned orange juice. Pineapple juice has much less of this vitamin, and only traces—unless the juice is fortified—are to be found in apple, prune, or grape juice, all popular for flavor and variety.

Extra vitamin C is sometimes added to apple juice and other canned, bottled and frozen juices which are short on it. The fortified juices may have as much or more vitamin C as citrus, the nutritionists explain, but be sure and check the label.

If your breakfast juice is short on C, be sure to get this vitamin in some other dish or later in the day. Among other vitamin-C-rich dishes are the fruit itself of citrus and tomatoes which can be served many ways in any meal. Excellent sources of ascorbic acid are strawberries, kale, turnip greens, broccoli, raw cabbage, green peppers and the dark-colored raw salad greens. Good providers are lightly cooked cabbage or collards, cantaloup, sweet potatoes, cauliflower, and spinach.

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IN SCIENCE

PLANT PHYSIOLOGY

Plants Injure Themselves By Mineral Selection

➤ PLANTS ARE not always so smart. They sometimes commit suicide or injure themselves.

Certain minerals, about 15 of them, are essential for proper plant growth. But often plants take up the wrong ones, Perry R. Stout of the University of California's College of Agriculture in Berkeley finds.

For example, in laboratory experiments it has been shown that strontium which is not essential will be absorbed by plants. Strontium is about the same size as calcium, an essential plant food. If a plant takes up this strontium, it becomes deficient in calcium and cannot grow normally.

Similarly, it has been shown that molybdenum, if present in large amounts, is taken up instead of essential sulfur. Plants need a small amount of molybdenum, but sometimes so much is taken up that it poisons livestock. In low sulfur soils where large amounts of molybdenum are present, enough molybdenum may be taken up by the plant to injure it.

Often two essential minerals such as calcium and magnesium will compete to be taken into a plant. If magnesium is relatively high in proportion to calcium, it usually wins out causing a calcium deficiency. The plant cannot tell the difference until the magnesium gets up into the stem and leaves. Then it is too late.

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NUTRITION

Enzymes Give Quality To Evaporated Milk

➤ HIGHER QUALITY evaporated milk is expected as the result of studies now being made in California.

N. P. Tarrasuk of the University of California's College of Agriculture at Davis has found that he can double the viscosity, or thickness, of evaporated milk by changing slightly the structure of the milk protein molecules.

He does this by using proteolytic enzymes. These enzymes, similar to those in our digestive system, are added in small amounts just before the milk is sterilized. Color and flavor are not affected by this change in the molecule.

Previously, excessive heating of the milk was the only way to increase the viscosity. Such treatment, however, produces undesirable flavor and color in the milk.

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E FIELDS

ACOUSTICS

Musical Scale Analysis Helps Modern Composing

► **CHARTING THE** relationship of notes and tones in the musical scale used since before the time of Bach may bring order out of the chaos into which some modern composers have fallen.

This is the theory of Dr. Howard Hanson, himself a modern composer. Speaking at a meeting of the American Philosophical Society in Philadelphia, Dr. Hanson, director of the Eastman School of Music, Rochester, said he believes that with the development of modern music, "as much new material has been added to the composer's tonal vocabulary in the last 75 years as had been added in the previous 300."

"The young composer, swept from the safe moorings of tonality, all too frequently flounders about in this vast sea of new material with the result that his music may sound both inconsistent and chaotic."

Dr. Hanson attempts to set up a complete analysis of all tonal material possible in the present system of tuning. No so-called "anarchist" in modern music, Dr. Hanson sticks to the scale used by Bach and Beethoven and practiced by every young piano student.

With the consideration of six basic relationships of tone, within this scale, he institutes a kind of "chemical" analysis and presents a chart of all the possible sounds and indicates their inter-relationship.

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EDUCATION

Teachers Should Teach Children, Not Courses

► **"TEACHERS SHOULD** teach children, not courses," declares Dr. Florence Clothier, child psychiatrist of Harvard Medical School, in a report to the National Association for Mental Health.

Dr. Clothier sees the teacher more as a personality-builder than as a knowledge giver. She says that the teacher's own maturity and emotional adjustment are a strong influence in the child's development as a mentally healthy individual.

The child's personality grows by a process of "identification,"—that is, by the child trying to be like the adults who are important to him, Dr. Clothier explains. His attitudes toward life and other people are shaped by these identifications. The teacher, like the parent, will therefore have a great impact on the formation of these attitudes.

"Wholesome teacher personality is particularly pertinent in our public schools.

In many, many cases, it is here that children have their only chance of establishing wholesome personality-building identifications."

Dr. Clothier criticizes the imparting of knowledge without any relation to the child's personality growth.

"Our greatest educational blunders, blunders that in many cases have produced psychic injury, have consisted in forced feeding of meaningless material. The enlightened teacher does not focus primarily on the transmission of facts or skills, but on what those facts and skills can contribute to the whole personality development," she believes.

Education should help the child to discover "useful work suited to his capacities," so he can get satisfaction out of the performance of these tasks, and from this, the self esteem essential to good mental health.

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METEOROLOGY

Colder Than Normal for Most of Nation Forecast

► **"MOST OF the nation"** can expect colder than normal weather until the middle of next month with the "most unseasonably cold weather" hitting the lower Great Lakes region and the central Mississippi and Ohio valleys.

This is the prediction of the Weather Bureau's Extended Forecast Section for the period up to mid-December. Only New England, the southwest and Florida can expect normal or above normal temperatures.

East of the Mississippi it will be a snowy month, too, except in southern regions where, of course, it rains. Rain and snow in the east are expected to exceed normal. There will be considerable snow over the central and northern inland regions of the east. Elsewhere there will be about the usual or less than usual amounts of snow or rain.

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WILDLIFE

Audubon Society Award To Oil and Gas Companies

► **HELPING TO** preserve from extinction America's 32 remaining whooping cranes has won for the Continental Oil and Western Natural Gas companies a citation of merit from the National Audubon Society. The companies had planned to place a loading dock on the edge of the whooping cranes' winter nesting place, but changed their plans in order to keep from disturbing the birds. The U. S. Fish and Wildlife Service and the Audubon Society are co-operating in a program to save the whooping cranes from extinction.

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NATURAL RESOURCES

Uranium Will Be "Mined" From Fertilizer

► **THE FERTILIZER** industry can make an "important and continuing contribution to our domestic supply of uranium," an Atomic Energy Commission official said.

For many years farmers have been spreading on their fields fertilizers made from phosphate rocks. These fertilizers contain small amounts of uranium, which neither help nor harm plants, tests have shown. Now the AEC is proposing to recover this uranium, add it to our stockpile of the valuable raw material.

The first production plant to recover uranium from phosphoric acid is now under construction by the Blockson Chemical Company at Joliet, Ill., Sheldon P. Wimpfen of the raw materials division told members of the National Fertilizer Association meeting in Atlanta, Ga.

Although the amount of uranium per ton of phosphate rock is very small, he said, so many millions of tons are mined annually for fertilizer that this source of uranium has been thoroughly investigated by the AEC. Two processes look most promising for recovering the uranium: from wet-process phosphoric acid and from solutions made in the course of manufacturing phosphate fertilizers by acidulation with nitric acid.

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INVENTION

Glass Beads in Paint Make Highway Lines Easier to See

► **PAINTED LINES** on the highway as an aid to traffic are more easily seen, particularly at night, with a special paint containing glass beads on which a patent has been issued.

The paint containing the tiny beads can be applied in a single operation by brush or spray, using hand methods or the road-stripping equipment now widely employed.

The inventor is Harry Heltzer, St. Paul, Minn. His award was patent 2,574,971. Rights are assigned to Minnesota Mining and Manufacturing Company of the same city. It is called a reflective paint because it contains brilliantly reflective pigment as well as the tiny transparent glass beads.

Glass beads have been applied to highway painted lines in the past but they have been applied after the lines were painted and before the paint was dry. This paint has a varnish base and contains titanium oxide, which acts as a brilliant white reflective material, and asbestine which is a paint-making grade of talc and is chemically a magnesium silicate.

When the paint is first applied the glass beads are buried in it, but wearing action of passing vehicles soon exposes their upper surface so that they reflect light.

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