MEDICINE

Eat, Drink, Be Merry Without Any Stomach

➤ SOME PEOPLE without any stomachs at all can eat, drink and be merry and some cannot. Physicians at the University of California Medical School are trying to find out what this difference is. In some cancer patients the entire stomach has to be removed.

Some of these patients, Dr. H. J. McCorkle said, develop nutritional deficiencies because they are unable to digest the food with what they have left in their abdomens. The scientists are, therefore, making precise studies in animals of the best methods of connecting the esophagus, leading to the stomach, with the intestines.

Uusally surgeons bypass the duodenum, section of small intestine directly below the stomach, Dr. McCorkle said. However, at the University of California they believe the duodenum can be useful in helping to digest the food. Therefore in many cases, the esophagus is connected directly with the duodenum. In some of these cases the stomach is hardly missed at all.

When it is missed, that is, when nutritional difficulties develop, special foods are sometimes given. These contain concentrations of amino acids, carbohydrates, vitamins and other supplements. The only trouble is the mixture tastes horrible, so the scientists are trying to find a way to make it taste good.

Science News Letter, May 2, 1953

INVENTION

Location Indicator Spots Position on Map

➤ VACATIONING MOTORISTS some day may profit by two auto accessories recently patented. One device tells the motorist exactly where he is, pointing out his position on a ribbon map. The other device clicks a warning when tires are underinflated.

The location indicator is designed to be attached to the car's steering post. It is mechanically driven like a speedometer by a cable running to a wheel of the car. As the wheel turns, the narrow ribbon map is pulled past a small window. Moving in proportion to the speed of the car, the map indicates the momentary geographic position of the car, states inventor Forrest S. Field of Pittsburgh, Pa.

Maps for the indicator can be printed on paper, plastic or other material that does not conduct electricity. Holes can be punched in the ribbon near points of danger or points of interest. When the car approaches one of these points, a light flashes and a buzzer sounds to attract the driver's attention. Ordinary paper staples that conduct electricity can be used to make the warning circuits work. In that case, the staples replace holes punched in the tape.

Mr. Field received patent No. 2,635,372 for his invention.

Richard R. Schmitt of Kansas City, Mo., invented the clicker that warns motorists of under-inflated tires. The little metal device clamps to the car's wheel, touching the tire. If the tire is under-inflated, it bulges under the weight of the car each time the wheel goes around. This bulging action causes the tire pressure indicator to click. The device is protected by patent No. 2,635,577.

Science News Letter, May 2, 1953

PUBLIC HEALTH

Find Multiple Sclerosis More Common in North

➤ MORE PEOPLE have multiple sclerosis and there are more deaths from the disease in Canada and the northern states than in the south, Dr. Leonard T. Kurland of the U. S. National Institutes of Health, Bethesda, Md., and Dr. Knut B. Westlund of the Johns Hopkins School of Hygiene and Public Health, Baltimore, reported at a conference in New York held by the New York Academy of Sciences and the National Multiple Sclerosis Society.

Although Boston, Winnipeg and Denver had more cases per thousand of population than New Orleans, the life expectancy for the patients was about the same in the different cities. The average life expectancy is 20 to 25 years.

In Winnipeg, multiple sclerosis patients did not differ from the population in general in national origin, place of birth, diet, economic status, education, or in having had head injuries, infections, inoculations or something similar just before the disease started.

These and other findings make up the final report on a study sponsored by the National Multiple Sclerosis Society and the Public Health Service to learn whether climate, national origin, diet, and so on could give any clues to the cause of the disease.

Science News Letter, May 2, 1953

MEDICINE

Aspirin Ups Cortisone To Stop Rheumatic Fever

➤ THE REASON aspirin helps stop an attack of acute rheumatic fever may be that it stimulates the adrenal glands to produce more of their anti-rheumatism hormone, cortisone.

"Indirect evidence" for this was reported by Drs. Vincent C. Kelley, Alan K. Done and Robert S. Ely of Salt Lake City at the meeting of the American Heart Association in Atlantic City, N. J.

Aspirin has long been the established medicine for the heart-crippling disease, rheumatic fever. Lately doctors have been giving cortisone and the other famous anti-arthritis remedy, ACTH.

Science News Letter, May 2, 1953

IN SCIEN

AERONAUTICS

New Work Plane Uses Short Runways

➤ A NEW high-flying, more economical work plane has been created at Lockheed Aircraft Corporation. It will give the Air Force a long-range personnel and cargo carrier that can take off and land on "short" runways.

Powered by four turbo-prop engines, the plane is designed to fly assault and ground-support missions. Performance details of the C-130, as it is called, are secret, but it is said to "fly faster and higher" than any current military transport.

Prototypes now are being built at Lockheed's factory at Burbank, Calif.

Science News Letter, May 2, 1953

MEDICINE

Sex Habits Probed For Relation to Cancer

➤ THE SEX habits of 1,000 women are being investigated in Los Angeles in the interests of cancer research.

Five hundred women with cancer of the cervix, one of the two leading types of cancer in women, and 500 cancer-free women are being asked about their sexual partners, the frequency of sexual intercourse and their sex hygiene habits in an effort to determine the part these things play in cervical cancer.

The Kinsey-like survey is being carried out among patients at Los Angeles County Hospital by Drs. Edward G. Jones and Ian Macdonald.

So far, about 300 women have been interviewed, half with cancer, half without. Answers so far suggest that early marriage and bearing children before the age of 20 are more common among women with cervical cancer than women without the disease. Their findings also confirm other studies showing that low economic status, divorce, separation from husbands and widowhood seem to have some relationship to the disease.

One big factor in cervical cancer seems to be pregnancy. Therefore the physicians are undertaking to ask questions about everything connected with having a baby to try to show whether there is a cause-effect relationship from any one of these factors to cancer of the cervix.

Previous studies have shown, for instance, that Jewish women suffer less cancer of the cervix and that Jewish men suffer less prostate cancer. It is speculated that this might be because of the almost universal practice of circumcising Jewish male babies.

Science News Letter, May 2, 1953

CE FIELDS

BIOCHEMISTRY

Pituitary Hormone May Help Treat Anemia

➤ A HORMONE that may one day be a help in treating anemia and that is manufactured by man's pituitary gland has been isolated for the first time by a team of scientists at the University of California.

The substance, which was extracted from the anterior lobes of the sheep's pituitary, has been used on rats whose rate of formation of red blood cells had been cut 45%. This cut was produced by taking out the animal's pituitary. After an extremely tiny dose of the new substance, called erythropoietic hormone, the rate of production of red blood cells went up and the anemic condition disappeared.

Most of the decrease in red blood cells in an anemic person is because the cells die or are destroyed before their normal life span of 120 days. In addition the rates of formation of new cells by the bone marrow goes down. While the newly discovered hormone cannot prolong the life of blood cells, it can increase the rate of production, according to the scientists.

The hormone has not yet been tested on man but if it works in helping to control human anemia, small doses would probably have to be given daily.

Scientists who worked on the problem include Drs. N. I. Berlin, Donald Van Dyke, Rex Huff, Alex Contopoulos, John H. Lawrence and Herbert Evans.

Science News Letter, May 2, 1953

MEDICINE

Five-Drug Mixture Treats Nasal Misery

➤ A FIVE-DRUG mixture for treating nose and sinus infections has given results that "seem very promising" in the hands of Drs. Sidney N. Busis and Louis L. Friedman of the University of Pittsburgh and Montefiore Hospital.

This new promise of relief of nasal misery is made of: 1. phenylephrine hydrochloride, a blood vessel constrictor and nasal decongester, better known under its trade name of Neosynephrine; 2. thonzylamine hydrochloride, an antihistamine trade named Neohetramine hydrochloride, put in to help the decongesting effect of phenylephrine; 3. and 4. neomycin and gramicidin, two antibiotics or so-called mold remedies which are active against a wide range of bacteria; and 5. thonzonium bromide, a synthetic wetting agent put in to help the drug penetrate evenly over all the infected surface and through the mucus in addition to doing some germ-killing.

The Pittsburgh doctors tried this combination in 95 patients, though only 65 came back after the first treatment. The drug was used as a nasal pack at the first visit and after the packing, the nose was carefully suctioned. Patients then were told to use the medicine at home as a spray three times a day.

Patients said they got prompt relief of congestion and the doctors' examination at subsequent visits showed improved condition.

Bacteriological examination of 18 patients showed the new drug to have a "remarkably effective and prolonged action" in promptly killing bacteria.

The new drug, reported in *Antibiotics and Chemotherapy,* is called Biomydrin by its manufacturer, Nepera Chemical Company of Yonkers, N. Y. It is available only on doctor's prescription.

Science News Letter, May 2, 1953

MEDICINE

Jumping Wild Mice Caught for Cancer Study

➤ MICE SO wild they can jump clear out of an ordinary garbage can, starting from its bottom, are being brought into the laboratory to see whether they differ from the laboratory animals in the kinds of cancer they have.

They are caught by University of California students on the salt flats of San Francisco Bay. So far, 50 of them have been caught and they are a real problem to handle, according to Dr. Kenneth B. Deome, director of the Cancer Research Genetics Laboratory at the school.

Special problems developed in handling them because they were so wild. Tough cages had to be built and particular precautions had to be taken against their sharp teeth. "They bit us all the time," Dr. Deome said. Laboratory mice are as gentle as pets.

The wild mice are being studied to see whether nature has given mice protection against certain kinds of cancer or whether that protection is the result of breeding in the laboratory mice. Dr. Deome has to wait a few generations yet to find his answer.

Science News Letter, May 2, 1953

TECHNOLOGY

Three Do Work of Four With Titanium Mortar

➤ THE NEW wonder titanium metal allows three men to do the work of four in putting the Army's 81 mm. mortar into action.

A lightweight base plate for the mortar made of titanium, half the weight of the old iron plate, was revealed by Paul Zinner of the U. S. Bureau of Mines in hearings before the House Appropriations Subcommittee.

Science News Letter, May 2, 1953

GENETICS

Gene Companion Causes Seeming Cancer Heritage

➤ A NAUGHTY companion rather than any change in the character of the gene itself may cause apparent inheritance of cancer.

No one has ever been able to say definitely that cancer in human beings is inherited, although the way it sometimes runs in families is suspicious. Now studies done on fruit flies at the University of California at Los Angeles make it appear that an influenced rather than a changed or mutated gene might be the cause of this.

Dr. Taylor Hinton, geneticist, said that he has induced by X-rays a flip-flop in position of a chromosome part called heterochromatin. This seems to influence a gene —genes are responsible for the inheritance of all physical characteristics—so that the fruit flies can carry a tumor from generation to generation. In addition, the X-ray flip-flop of the chromosome started the tumor in the first place.

The change caused by the X-ray also seems to make the fruit fly lose its ability to produce nucleic acids, basic living matter without which no creature can live. A high concentration of nucleic acids added to the diet takes care of that. Dr. Hinton suspects, but has no proof as yet, that the two effects are related.

Science News Letter, May 2, 1953

MEDICINE

Could Save Twice as Many Cancer Patients

➤ ABOUT 140,000 cancer patients could have been saved from death in 1952 instead of the approximately 70,000 that were saved, officials of the American Cancer Society have declared in New York.

Their statement came with the annual report of the society on the eve of the "educational fund-raising crusade in April, designated by presidential proclamation and congressional resolution as Cancer Control Month."

The additional 70,000 lives could have been saved, the society states, if every cancer case had been treated early and by the most effective methods.

To show still further the many "unnecessary" deaths from cancer today, the society gives the following figures for present and possible cure rates in cancer in six common sites:

At present cancer of the female generative sites is cured in 30% of the cases, could be cured in 80%; cancer of the lung now cured in five percent of cases, could be 50%; breast cancer now cured in 35%, could be cured in 70% of cases; cancer of rectum now cured in 15%, could be cured in 75% of cases; cancer of the mouth now cured in 40%, could be cured in 65% of cases; skin cancer now cured in 85%, could be cured in 95% of cases.

Science News Letter, May 2, 1953