

MEDICINE

Caries More Prevalent Than Any Ill But Cold

DENTAL caries or decayed teeth are more prevalent than any other ailment except the common cold, the U. S. Public Health Service announced, following a survey of a typical town not far from Washington, D. C.

At the age of 15 years, 19 out of every 20 persons have or have had decayed teeth. The figure may be even higher among adults, but the survey was limited to school children.

There is as yet no scientific answer, the federal health service states, to the questions, Why do teeth decay? and, How can one prevent their decay?

"For the present at least," the Public Health Service advises, "the best that can be done is to feed the expectant mother, the infant and the child tooth-building foods and to visit the dentist early and often for the control of the extension of dental decay."

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CHEMISTRY

New Plastic Made From Coffee Will Aid Brazil

EVERY nation in the world, favored by nature to produce some major agriculture crop, now finds this factor a handicap as well as an asset. America's struggles with its surplus cotton are well known and Brazil has a comparable problem with its coffee.

For coffee, however, chemical research has developed a new plastic material which should not only do something about the coffee surplus but should spur, incidentally, other industries which employ plastics.

Invented and developed by the H. S. Polin Laboratory of Research in Physics, New York, the new coffee plastic is the kind that Brazil has long needed. The plastic can be made with Brazilian raw materials and with the importation of chemicals and reagents.

In many ways the coffee-plastic manufacture is a self-contained industry because the coffee not only provides its own chemical plasticizers and catalysts but also because the by-products of the process are sufficiently valuable to defray much of the cost of production.

Developed in both thermo-setting and thermo-plastic types, the new material from coffee is no hard-brown, coffee-looking material. It can be produced in green, red, mahogany, brown, yellow

and ebony black hues merely by the chemical development of its own coloring materials, in which the green coffee bean is unusually rich.

Varying degrees of hardness and resiliency can be achieved and the material can be molded, drilled, machined, sawed and polished. It has good dielectric strength for insulator use and is resistant to weak acids, fruit juices, alkalis, oils and other chemicals. Moreover, it is odorless and tasteless.

Brazilians see the new coffee plastic as only the entering wedge for other industries. Its use in low-cost radio cabinets should stimulate the making of radios. The building trades should benefit by the production of flooring materials, wall board, roofing and other useful materials whose starting point is coffee plastic.

Science News Letter, May 20, 1939

AERONAUTICS

Lockheed to Build Four-Motored Airliner

THE Lockheed Aircraft Corporation, builders of fast transports and bombers and of the Army's new twin-engined pursuit plane, announces plans for construction of a four-motored airliner to carry 28 passengers. The prototype will fly in the spring of 1940 and deliveries will be made during the same year.

Entrance of the 27,500-pound 220-mile-an-hour luxury liner into the transport field in the United States indicates that American commercial operators will be flying four-motored equipment on their main routes within two years, as the Excalibur, as the plane will be called, is the third plane in its class. The Boeing Aircraft Company has a 33-passenger 45,000-pound ship, the 307, and the Douglas Aircraft Company plans to introduce the Goliath of them all, the 42-passenger 65,000-pound DC-4.

Four 600-horsepower Pratt and Whitney engines will be fitted to the ship, which will carry a crew of three in addition to its passenger load. A tricycle landing gear—now bidding fair to become universal transport equipment—will be built into the plane.

Though no comment was immediately available, it appears that the Excalibur has been designed to achieve the safety of four-motored airplanes and overcome a widespread criticism of the other two ships of the same class: that they were too big. Its wings will measure 95 feet across, and the fuselage will be slightly more than 74 feet long.

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IN SCIENCE

Dying Indian Tribe Claim They Were "Chosen People"

THE "chosen people" who should have ruled the earth are the Yaruro Indians, primitive Venezuelan tribe. So these Indians themselves have declared to Dr. Vincenzo Petruccio, former University of Pennsylvania anthropologist who visited them, and who has just reported on their strange beliefs in a U. S. Bureau of American Ethnology publication.

The white man's sheer wickedness is the only explanation Yaruros can offer to account for present economic domination of the world, Dr. Petruccio finds.

Yaruros believe in a great mother in heaven named Kuma, who created mankind, starting with the Yaruros. Kuma originally gave all domesticated plants and animals of the white man to the Yaruros, but the size of horses and cattle frightened them, so that they refused to tame either. The white man having seized the opportunity they threw away, the Yaruros philosophically have abandoned hope of bettering themselves, Dr. Petruccio explains. They fix their eyes on a heaven where they will recapture their ancient mode of life—and foreign people will be excluded.

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GEOLOGY

Australian Iron Meteorite Received At U. S. Museum

ATON of iron that fell out of the sky and plunged into the earth in Australia 36 years ago will be placed on display soon, at the U. S. National Museum. It is probably a part of the great Cranbourne meteorite, for it was found in the same general region where other pieces of that body fell.

The largest fragment of the Cranbourne meteorite, which burst high in air as it was falling, is now in the British Museum in London. It weighs more than three tons. The second largest fragment, weighing about half that much, is now in the Melbourne Museum in Australia.

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E FIELDS

Widows Marry Younger Men Than Do Spinsters Over 30

THE JUNE bride may not realize it, but the age of the man she marries is conditioned by her own age and previous marital status. The men who marry widows and divorcees, for example, are younger than those who marry spinsters.

The data on age at marriage and re-marriage have been compiled by statisticians of the Metropolitan Life Insurance Company.

Widows or divorcees under the age of 30 tend to take slightly older husbands than do spinsters of the same age, the figures show. Above age 30, however, the situation is reversed, widows and divorcees who marry at this age tending to take somewhat younger husbands than do spinsters marrying above age 30.

This statement still holds, the life insurance company statisticians report, when special account is taken not only of the bride's but also of the bridegroom's previous marital status. The grooms who had been previously married are, however, about seven years older on the average than the corresponding bachelors.

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PSYCHIATRY

Mental Ills Not Inherited Like the Color of Eyes

YOU don't inherit mental disease as you do the color of your eyes or hair.

But for all that, mental illings do "run in families." The discovery of this seeming contradiction is reported by a trio of experts on the statistics of mental disease, Drs. Horatio M. Pollock, Benjamin Malzberg and Raymond G. Fuller, in a new book "Hereditary and Environmental Factors in the Causation of Manic-Depressive Psychoses and Dementia Praecox". (*State Hospitals Press*)

Studying all the available relatives of mental disease patients — sisters and brothers, uncles, aunts, parents and grandparents—these scientists found no evidence of any exact theory of inheritance that would fit the facts. Certainly it is no clear-cut case of Mendelian inheritance.

A mentally diseased father or mother cannot hand on this trait as eye color is handed on.

But, equally certainly, mental disease occurs among the relatives of mental patients more often than it occurs in the general population. Perhaps what is inherited is a predisposition toward mental breakdown—a sort of constitutional weakness that makes a person succumb to strains that another could withstand.

But in addition to this possible predisposition the parents of the mentally diseased also bequeathed them a particular sort of family circle in which to grow up. It is very difficult to sort out the effects of physical heredity and those of the home into which the individual is born.

Personality, which is intimately tied up with mental disease or health, is a product, probably, of both heredity and the psychic environment into which one is born.

The "shut-in" type of personality is, these scientists observed, "encouraged as a result of the extremely restricted social lives of the patients and their families. A high percentage of these families were described as having no social contacts with persons outside the restricted family limits. As they grew older, the patients demonstrated lack of a normal degree of aggressive and adventurous spirit by failure to strike out for themselves and to create new careers and new homes."

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PHYSIOLOGY

Running Fits of Dogs Due to Lack of Vitamin B₁

LACK of vitamin B₁, which results in polyneuritis and beriberi in human beings, has been identified as the cause of a mysterious and serious ailment of dogs, running fits, by Dr. John W. Patton of the Patton Biological Laboratories in East Lansing, Mich.

Dogs fed on a diet deficient in the vitamin, known chemically as thiamin, but adequate in all other respects, developed typical symptoms of running fits or fright disease—loss of appetite, nervousness, irritability, running, convulsive seizures and howling, Dr. Patton reports (*Veterinary Medicine*, June)

Doses of the vitamin in concentrated form promptly checked the symptoms and, following a return to an adequate diet, no further difficulty was experienced. The experiments were repeated several times, using altogether more than 60 dogs.

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AERONAUTICS

Sixty Enroll in First Airline Apprentice School

THE FIRST airline apprentice program for training aviation mechanics to be operated by a U. S. airline will be opened shortly at several of its maintenance bases by American Airlines.

Sixty young men, whose minimum age is the legal working age, and maximum is twenty-five years, have already been signed to a four-year course of study, for which they will be paid by the airline, it was said. Enrollment for the course is already filled and has been closed. It will not be opened for eight or ten months.

Headed by T. J. Healy, former maintenance supervisor for the line at Cleveland, the school is one of the steps now being taken by government, manufacturers and others to fill an anticipated shortage of properly trained aviation mechanics as America's air defense and air industry expand. Lack of sufficient numbers of sufficiently skilled workmen has been widely feared as the most serious bottleneck faced in the growing aviation field.

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PUBLIC HEALTH

Human and Cattle Ailments Fought in Panama

DOWN in Panama, now a world's crossroads for commerce and civilian travelers as well as for battleships, a vigorous campaign against human and animal plagues is being carried on by the staff of the Gorgas Memorial Laboratory.

Advances in the fight were reported by Dr. Herbert C. Clark, director of the laboratory, at the Gorgas Memorial Institute.

A slow but steady fall in malaria infection among the rural population, with cases almost at the vanishing point, has been accomplished by measures described by Dr. Clark. The "human seed bed" of malaria, however, has not been entirely eradicated, he said, indicating that the fight against this plague must go on.

Chagas' disease, relapsing fever and filariasis were unexpectedly discovered in Panama during the malaria surveys, Dr. Clark reported.

Moon blindness and the real "sleeping sickness," trypanosomiasis, of horses are also being fought by the Gorgas laboratory.

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