

MEDICINE

Try Orange Juice For That Tired Feeling

FOR that tired feeling—try orange juice.

No, it's not an advertisement, and for orange juice you can substitute any other fresh fruit or vegetable that contains plenty of anti-scurvy vitamin C. The list of such foods runs from apples and cabbages to tomatoes.

Tiredness, along with "rheumatism, anemia and other common afflictions" may result from lack of vitamin C, it appears from an announcement of research by Dr. Lawrence E. Detrick, research associate in chemistry on the Los Angeles campus of the University of California.

Dr. Detrick believes that the "deep-seated cause" of these conditions is borderline scurvy, due to not eating enough vitamin C. Violent scurvy, due to complete lack of vitamin, is a disease of past history, but borderline scurvy is "more prevalent today than is generally realized," Dr. Detrick stated.

Wounds of animals fed plenty of vitamin C in orange juice healed much faster and withstood greater pressure than those of animals that were given scanty amounts of orange juice, although the latter animals got enough vitamin C to escape severe scurvy.

Dr. Detrick is conducting his research under a grant from the California Fruit Growers Exchange.

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PSYCHIATRY

Not Always Best To Be The Life of the Party

MOST of us have at some time or other watched with amusement and perhaps a touch of envy those gay persons who are the life of the party. But have you ever stopped to think of what lies back of the gaiety or of what it really means to be the life of every party?

The other side of the picture is a dark one, it appears from an analysis of the life of the party recently given by Dr. Minna Emch, lecturer in psychiatry at Northwestern University, in an address under the auspices of the Illinois Society for Mental Hygiene.

The life of the party is a child at heart, Dr. Emch says. His gaiety and activity are like the antics of a child who is constantly striving for approbation, admiration and attention. They are

like a mask to cover his doubt of his own ability and worth and his fear of appearing inadequate.

An unfortunate feature of this mask is that it convinces no one, least of all the life of the party himself. Even in the moment of success and happiness he is driven by the fear that he will be outdone by someone else and after the party is over he is tormented by wondering whether he really was good or whether the laughter he excited was admiration or derision. So his success is unsatisfying and he must drive himself still harder at the next party. The old saying, "there is no rest for the weary," applies forcefully to him, Dr. Emch points out.

Worst of all, however, is the fact that the life of the party wastes his energies, intellectual interests and emotions in a constant struggle for small successes which do not really satisfy, instead of saving these valuable assets for what Dr. Emch calls "the real success which we all hope for—a sense of fulfillment in a 'good life.'"

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METEOROLOGY

Snow-Eating Chinook Winds Caused by Altitude Change

BANSHEE-WAILING winter winds, sweeping across the Colorado Front Range, evaporating the snow from the leeward slopes and raising the temperatures fifty degrees in a few hours, are less of a puzzle to climatologists today as a result of the work of Ronald L. Ives, geologist, who took a thermometer out into the storms, and recorded the temperatures in the high country while the winds were blowing.

Reporting his findings in the *American Journal of Science*, Mr. Ives explains the temperature changes as caused by losses and gains in the wind's moisture. While they are rising up the west-facing slopes of the range, the winds are losing moisture, and being warmed thereby; while when they descend, the air is warmed by compression, but losing heat as it evaporates the snow.

Thus, when all the unsheltered snow on the leeward slopes is gone, the winds are very warm, often changing a sub-zero spell to springlike weather in a few hours.

The research was done while Mr. Ives was at the University of Colorado. He is now on the staff of Science Service.

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IN SCIENCE

POPULATION

War Fails to Bring Larger Proportion of Boy Births

YOU HAVE probably heard the oft-repeated statement that during times of war and national emergency boys are born in much greater numbers than are girls.

The story, it turns out, is just another old wives' tale.

In the United States, for each thousand girls coming into the world, there are something like 1,057 boys born. In some years, to be sure, the ratio is higher than in other years, but study of the statistics explodes the theory that boy births increase in times of stress.

Neither war, nor economic upheaval, nor climatic nor geographic differences nor infant death rates, caused the ratio of boy births to go up or down, it is concluded by Dr. Antonio Ciocco of the Johns Hopkins University in reviewing the figures for *Human Biology*.

Although in 1918 over three million men were mobilized for military duty, no marked change in the sex ratio occurred at any time during or immediately after the war, he said. Neither did any great increase take place during the recent economic depression.

Comparison of birth statistics for 33 different states shows that the different geographic and climatic conditions existing within the United States do not affect the proportion of male children born. A small increase in sex ratio during June, July and January is so small that it is not statistically significant.

The ratio is lower among colored than native white parents.

It is lower among younger children in the family and when parents are more than 30 years of age.

What explains these odd facts? Biologists now realize that there is no one simple explanation.

Because, in deaths before birth, boys outnumber girls, and yet more boys than girls safely reach the birth date, it is concluded that the majority of conceptions are of boy babies. But no one yet knows why.

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E FIELDS

DENTISTRY

Average New York Dentist Idle Fourth of Time

THE average dentist of New York City has eight "office hours" per day out of which he is idle for two hours and ten minutes, it was announced on the basis of first returns from a questionnaire sent out by the First District Dental Society of the State of New York.

Two-thirds of the dentists replying so far are willing to accept patients from the low income group at low fixed fees. These patients are those said not to be receiving dental attention at present. Only 23 per cent. of the dentists replying said they would be willing to work on a full-time basis for a dental project if it were under the supervision of organized dentistry.

The questionnaire is part of an attempt to solve the problem of reducing dental disease through provision of adequate care for the low-income group.

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PHYSICS—PHYSIOLOGY

Thermal Noise Being Used In Studies of Hearing

SOME of the newer experiments on fundamental problems of human hearing are using one of the strangest sounds in the world—the sound without a pitch. Or said another way, the sound that is all sound.

No, this is no riddle! There really is an unpitched sound which contains all the sound wave frequencies from about 20 vibrations at the lower limit of hearing to 15,000 vibrations a second which is near the upper limit of human audibility.

Few people have ever heard this sound which can create a continuous acoustical spectrum of frequency. Scientists call it thermal noise. Its origin is in the haphazard motions of the tiny electrical charges known as electrons, as they move in chaotic, bumping paths within an electrical conductor. Cause of this electron motion is the temperature of the wire.

You will have no chance of hearing thermal noise merely by holding a wire

close to your ear and listening. The thermal noise is electrical rather than acoustical noise. To hear it you must amplify it millions of times and make the electrical energy operate a loud speaker. If you amplify sufficiently there will finally come a dull roaring which becomes stronger and stronger with increased amplification. This is thermal noise.

In electrical and radio engineering thermal noise represents the limit of useful amplification just as the appearance of grain in a photographic picture represents the useful limit of photographic magnification. If you have a powerful radio part of the background noise is thermal noise. It is somewhat similar to the surface noise of phonograph records.

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PUBLIC HEALTH

Convalescent Serum Will Protect Against Measles

A MEASLES epidemic reaching record-breaking heights is leading the U. S. Public Health Service to prepare a statement on preventive measures.

Convalescent serum, taken from blood of recovered measles patients, is suggested as a preventive for all infants under 1 year old in families where a case of measles occurs. This should prevent the disease in about half the infants who are thus exposed to it. Babies need special protection because measles is very often a fatal disease in infants. Whole blood of the infant's parents may be used if convalescent serum is not available, but is not as satisfactory.

Closing of schools is not considered necessary. Public Health Service officials, however, warn that parents and teachers during the measles epidemic should watch for the "first sneeze," and isolate the child in order to protect others. This is because measles is most contagious during the very first stages, before it is even recognized as measles.

For the week ending February 26, latest on which complete figures are available, 38,898 cases were reported throughout the country. The actual number is probably two or three times as many, health officials estimate. The epidemic is centered in the Middle West. The Chicago Board of Health announced 669 cases reported in a single day (February 28) in that city, an all time high record.

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PHYSICS

Stars and Electrons Linked In Single New Formula

A NEW link between the stars and those smallest atomic particles, the electrons, has been developed mathematically by Prof. Arthur E. Haas of the University of Notre Dame and reported to the scientific world. (*Science*.)

He finds that two fixed stars of average mass exert on each other at a distance equal to the radius of the universe a gravitational force that is as large as the electrostatic force acting between two fundamental charges, such as on electrons, at a distance equal to the classical radius of the electron.

Thus the stars and electrons are brought into the same physical universe, as it were. The stars are shown to be obeying laws compatible with happenings in the submicroscopic region of the subatomic, where recent progress in physics has suggested the laws might be different than they are in the larger parts of the universe.

From the use of relationships between the radius and age of the universe, the total number of protons and neutrons, Hubble's constant, Newton's gravitational constant, the fundamental charge on the electron, the masses of the proton and electron, and the classical radius of the electrons, Prof. Haas found this new relationship and also derived the fact that the mass of the average star is about twice that of the sun. This result agrees with astronomical observations.

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GEOLOGY

Fewer Pacific Islands After Five Thousand Years

THERE won't be so many Pacific Islands for nations to argue about 5,000 years in the future, if sea levels continue to rise as they have in the past, according to geologists, who point out that all but the most rapidly growing of the coral atolls of the South Pacific, now prized as air bases, will be submerged or greatly reduced in size in the future.

Sea levels are now rising at the rate of one inch every twelve years, due to the melting of the Arctic and Antarctic ice caps, left over from the most recent Ice Age, which began to decline only about 50,000 years ago. When this ice has all melted away, sea levels will be at least 100 feet higher than at present.

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