



we had a piece of this star on earth, we should call it a pretty good vacuum.

Celestial Time Table for January

Friday, Jan. 3, 1:00 p.m., Earth nearest sun—distance, 91,300,000 miles. Sunday, Jan. 5, 8:40 a.m., Moon in first quarter; 12:00 p.m., Moon farthest, distance 251,260 miles. Tuesday, Jan. 7, 2:11 a.m., Moon passes Jupiter; 7:17 a.m., Moon passes Saturn.

Friday, Jan. 10, 5:00 a.m., Saturn changes from westward to eastward movement through sky. Monday, Jan. 13, 6:04 a.m., Full moon. Thursday, Jan. 16, 1:04 a.m., Cunningham's comet nearest sun. Sunday, Jan. 19, 3:00 a.m., Moon nearest, distance 229,970 miles. Monday, Jan. 20, 5:01 a.m., Moon at last quarter. Thursday, Jan. 23, 4:48 a.m., Moon passes Mars. Saturday, Jan. 25, 3:10 p.m., Moon passes Venus. Monday, Jan. 27, 6:03 a.m., New moon.

PHYSIOLOGY

1840 Americans Could Drink Quart of Whisky a Day

Harm From Alcohol Comes From Increasing Calories In Proportion to Vitamin B₁ Intake; Diet Worse Now

THE AMERICAN of 1840 could drink nearly a quart of whiskey (29 ounces) every day and still keep his health and live to a good old age, but the average American of today cannot, Dr. Norman Jolliffe, of New York University, told the American Association for the Advancement of Science.

The immunity of our great grandfathers to the diseases of alcohol was due to their superior intake of vitamin B, Dr. Jolliffe explained. The vitamin deficiency that scientific study has recently demonstrated to be the real basis of the so-called alcoholic diseases, is due not so much to an absolute lack of vitamin B₁ as it is to a vitamin intake which is too low in proportion to the calories. Increasing the calories consumed by experimental animals that are getting too little vitamin B₁, only increases their liability to deficiency disease. Those that eat too few calories are safest.

The average American of drinking age today consumes more than 200 calories every day just from his alcohol in addi-

tion to the non-alcoholic calories in his drink and the calories in his food. This extra 200 calories cuts the important ratio between vitamin B₁ and calories from the alcohol-free 3.32 to 3.13. This means an 18.2 per cent reduction in the already slim margin of safety for this vitamin.

The average American of 1840 had a ratio of 7.2 and a margin of safety of 230 per cent.

It is a mistake, Dr. Jolliffe emphasized, to assume from the recent demonstration of the part of vitamin B deficiency in alcoholic diseases that alcohol itself is harmless—a mistake made by those opposed to drinking as well as those who like it. Although these diseases do unquestionably develop as a direct result of nutritional deficiency, he said, it is the consumption of too much alcohol and too little food that is responsible for the nutritional lack.

The alcohol acts in still another way to cut down the individual's ration of vitamin B₁—by irritating the intestinal tract so that food is lost or avoided.

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internal forces is likely to reach the utmost limit . . . Again observe that security is a primary objective. In a world where predatory nations, powerfully armed, are ready to attack, the ideal of security is not adequately respected. Internal forces are not trained for action. Protective instruments of warfare are lacking. At a time of crisis industry is obliged to begin to construct buildings and design tools and machines to manufacture the instruments which the crisis demands. Compare this unpreparedness with the preparedness of our bodies which through many generations of little use still retain the elaborate reactions of defense."

The physiological balance of the body would further suggest that stability is more important than economy. Excess of water or salt or sugar is thrown away when derangement of a steady state is approached. In personal and governmental practices, also, the principle of preferring security to economy has to some degree been recognized, in fields all the way from peaceful fire insurance and police departments to warlike armies and navies. These are not economical, in the narrow sense, but they are considered worthwhile because they contribute to the safety of the body politic.

The principal of the protection of the most vital organs, even at the expense of others, is observed to some extent in the body politic when national emergencies arise: we keep key men at home and exempt skilled workers and technicians from military duty, and even at the front we shelter the General Staff and the Service of Supply as much as possible.

However, lest this point be stretched in an attempt to justify dictatorships, Dr. Cannon cautioned his hearers against jumping to the conclusion that the brain is the all-dominant, and therefore the all-precious organ of the body. True, the brain can, by implementing an act of will, destroy the body by suicide and the other parts cannot save themselves. But in normal functioning, the whole body cooperates in self-direction, through the hormones or gland secretions that act with, and react upon, the brain and nervous system.

Likewise, in a democratic society, "the diffused functional groups have possibilities of continuing the life of the social organization and of controlling their own circumstances," Dr. Cannon said in conclusion. "When an arbitrary dictator seizes power these possibilities vanish . . . Experience has shown that the social body, like the human body, is integrated

