



the southeast. Between Sirius and Aldebaran are the three stars of Orion's belt. Above the belt is Betelgeuse, below is Rigel. Procyon, in Canis Minor, the little dog, is above and to the left of Sirius, while still higher is Pollux, in Gemini, the twins. Almost directly overhead is Capella, in Auriga, the charioteer. All of these stars mentioned by name are of the first magnitude. So also is Deneb, in Cygnus, the swan, low in the northwest, and Regulus, in Leo, the lion, to the west.

Celestial Time Table for January, 1942

Friday, Jan. 2, 10:42 a. m., Full moon; 2:00 p. m., Earth nearest sun—distance 91,314,000 miles. Saturday, Jan. 10, 1:05 a. m., Moon in last quarter. Wednesday, Jan. 14, 5:00 p. m., Moon nearest—distance 225,670 miles. Friday, Jan. 16, 4:32 p. m., New moon. Sunday, Jan. 18, 8:06 a. m., Moon passes Venus. Saturday, Jan. 24, 1:35 a. m., Moon in first quarter; 3:22 a. m., Moon passes Mars. Sunday, Jan. 25, 7:00 a. m., Mercury farthest east of sun, sets about an hour after sunset, but difficult to see; 12:23 p. m., Moon passes Saturn. Monday, Jan. 26, Noon, Moon farthest—distance 246,790 miles. Tuesday, Jan. 27, about 2:00 a. m., Moon occults Aldebaran; 4:44 a. m., Moon passes Jupiter.

Eastern standard time throughout.

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PHYSIOLOGY

Enzyme in Body Prevents Squandering of Food Store

AN ECONOMIZER enzyme of the body which, like a thrifty housewife, helps to prevent squandering of foodstuff reserves, is giving scientists clues to some unsolved cancer riddles, it appears from the report of Dr. Kurt G. Stern, of Yale University School of Medicine, to the American Chemical Society.

The economizer enzyme has been christened the Pasteur enzyme by Dr. Stern and his associates, Dr. Joseph L. Melnick and Delafield DuBois, in

honor of Louis Pasteur, French bacteriologist and chemist who discovered the power of oxygen to throttle fermentation processes and thus protect food

AERONAUTICS—MEDICINE

Mayo Doctor Urges Pilots To Take up Hobbies

Men Trying To Adapt to Super-Powered Machines and Extreme Altitudes Must Learn To Rest and Relax

TODAY'S high and fast flying pilots will take up stamp collecting, gadget making or the study of foreign languages if they listen to the advice of Mayo Clinic nerve specialist, Dr. M. N. Walsh.

The modern pilot's nerve-splitting profession not only requires that he groom his body like Joe Louis, but that he save every possible milligram of his nervous energy by learning how to relax, Dr. Walsh declares.

Although men still have horse-and-buggy bodies, they are trying to adapt themselves to super-powered machines piercing the new and startling environment of the icy upper air. Science is inventing devices to help—the oxygen mask—but, as one veteran pilot told Dr. Walsh, "man is so far behind the airplane in efficiency that it will be difficult to catch up."

Dr. Walsh points out "that altitudes to which certain of the high-powered airplanes of today will take their pilots exceed by 300 to 400% the peak . . . altitude (which human beings can endure) without additional supply of oxygen. The rate of climb is so fast that human beings may not be able to accommodate themselves . . . (without the formation of) air bubbles in the tissues."

stores of the body from needless destruction. It is the Pasteur enzyme which keeps the oxygen at this thrifty task. Otherwise food combustion in the body would be so uneconomical that each adult would have to consume daily more than 10 loaves of bread.

Shortage of the thrifty Pasteur enzyme, Dr. Stern believes, is responsible for the fact that all cancer cells form lactic acid in air from foodstuffs instead of following the more efficient food combustion process of normal cells.

How the shortage of the Pasteur enzyme comes about in the cancer cells is not known, "but," Dr. Stern said, "we do know that the Pasteur effect is impaired if cells suffer chemical or mechanical damage and that tumors frequently arise in the wake of serious injuries sustained by normal tissues."

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"In addition, the factors of intense cold, bulky and uncomfortable clothing, and the necessity of combating the well-known decrease in mental efficiency and the feeling of malaise common at high altitudes, all tend to produce a state of exhaustion in the pilot and crew which may become chronic if work at high altitudes is often necessary."

To combat excess drain on nervous energy, Dr. Walsh urges perfect physical condition aided by frequent rest periods and hobbies.

"The importance of hobbies in securing mental relaxation is much underestimated," he says. "The chief value of hobbies . . . lies in their capacity to release pent-up nervous tension."

"The most satisfactory hobbies are those which involve making something with the hands or forming collections, so that the individual can enjoy the feeling that he has created something worth having, and can spend a quiet and restful hour with his hobby in forgetfulness of the worries of his daily occupation."

Dr. Walsh suggests carpentry, shop work, model making, the formation of scrapbooks, and the study of foreign languages.

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