contrary to the effects of repeated doses of syncurine on grip strength as reported by Macfarlane *et al.* (*4*). This may explain in part some of the clinical difficulties experienced with syncurine, since repeated doses are less effective in producing relaxation and at the same time respiration continues to be depressed.

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Liquid Nitrogen as a Tool for Obtaining Homogeneous Bacterial Suspensions

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In studies on the physiology, serology, and pathogenicity of microorganisms, uniform suspensions are necessary but frequently difficult to obtain. In some serological work with *Erysipelothrix rhusiopathiae* we experienced difficulty because of autoagglutination. In a search for better methods of preparing satisfactory antigens for agglutination studies, the use of liquid gases suggested itself. Liquid nitrogen was chosen because of its temperature, its chemical inertness, and its rapid evaporation. Other liquid gases would probably serve as well.

The method used for preparing suspensions was as follows: A washed suspension of killed organisms was centrifuged, the supernatant liquid removed, and the organisms transferred to a mortar. A small amount of liquid nitrogen was added, and the frozen organisms were ground with a pestle until they had thawed. The procedure was repeated, and the bacteria were resuspended in saline. Occasionally the organisms were dried by washing with cold acetone before being subjected to liquid nitrogen treatment.

As compared to controls, the preparations obtained by this method were more finely dispersed, and the organisms remained in suspension for long periods.

Living cultures of mycobacteria, both virulent and avirulent, harvested from slants of Petragnani medium, were successfully suspended by the same method. Microscopic examination showed clumping to be negligible. The organisms retained their viability as shown by growth on artificial media.

By this method we have also obtained homogeneous suspensions for other serological tests, for physiological studies, and for animal inoculation. Erythrocytes treated with liquid nitrogen were completely lysed, and from such cells large quantities of stromata could be obtained by centrifugation.

The rapid evaporation, the low temperature, and the chemical inertness of liquid nitrogen make it a valuable agent for producing homogeneous suspensions of bacteria.

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Free Selection of Nutrients by Hereditarily Obese Mice

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The production of a strain of mice throwing animals that show hereditary obesity has been recently described (*1*). It may be useful to recall that they originated from the crossing of "V stock" males to offspring of "V stock" males and "C57BL/6" females. The strain (Ob ob) throwing obese animals presents a variety of characteristics corresponding to V stock genes: "nonagouti," "leaden," "piebald spotting," "waltzing," and "waved-1," as well as the "fuzzy" gene.

Very marked differences in weight between "obese" and "nonobese" members of this strain are soon apparent. For example, young adult obese mice weigh 38–56 g, whereas the weights of young adult nonobese mice are in the 16–26-g range.

In order to discover a lead to possible nutritional and metabolic abnormalities associated with this hereditary obesity, a free-selection experiment was instituted, using 10 obese and 7 nonobese animals. The animals were placed in individual screen-bottomed cages at constant temperature and humidity. They received three "diets," I, II, and III, representing essentially pure fat, carbohydrate, and protein fortified with minerals and vitamins. Diet I consisted of casein, 75%; dried defatted liver powder, 15% (representing 90% of the total calories as protein); corn oil, 5%; cod liver oil, 1%; salt 4%. Diet II consisted of sucrose, 90% (representing 90% of the total calories as carbohydrate); corn oil, 5%; cod liver oil, 1%; salt, 4%. Diet III consisted of lard, 57%; corn oil, 15%; cod liver oil, 2% (representing 90% of the total calories as fat); casein, 15.5%; dried defatted liver powder, 3.0%; salt, 7.5% (*2*). In addition, the following vitamins were added to all

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