NUTRITION

Pica Reflects Poor Diet

PREGNANT women who eat strange foods—such as clay and cornstarch—may unknowingly be making up for missing vitamins and minerals in their diets.

Although some researchers have considered these weird food cravings, or pica, as simply "cultural phenomena founded in superstition" and kept up by tradition, there is now more evidence the unusual foods are providing important nutrients.

A study of some 86 women in rural Alabama, described in *Nutrition Reviews* (Feb., 1960), indicates clay supplies missing iron and calcium while cornstrach contributes calories. The women, grouped as pregnant and nonpregnant clay-eaters, pregnant and nonpregnant cornstarch eaters, and, as controls, pregnant and nonpregnant women who ate neither, were rated according to whether their diets were excellent, good, fair or poor.

Generally, the diets of women eating the strange foods were considerably poorer than the control group. More than one-half the clay-eaters and one-third of the cornstarch-eaters had poor diets. In contrast, only 14% of the women eating normal foods were rated as having poor diets.

The preferred clay was light gray, usually obtained from river or stream banks although it could be purchased in some areas. Laundry cornstarch was consumed at an average weekly cost of some 15 cents. Interviews with the women brought out the fact that clay, usually eaten uncooked, was eaten at various times of the day. Cornstarch was eaten before meals. Some women ate as much as two pounds of cornstarch a day.

"Craving" and relief of nausea associated with pregnancy were among the reasons given for eating the clay and cornstarch. When deprived of these foods, the women testified to feeling "crazy," "awful," "troubled," "irritable," and "worried."

Almost all of the women rejected clay or cornstarch upon completion of pregnancy.

Several women reported that men were also known to have these cravings for strange food. Two were said to eat clay, while one ate cornstarch. This seems to support a theory that some forms of pica may be sex-linked habits.

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CHEMISTRY

New Reactor May Make Commercial Chemicals

COMMERCIAL chemical products, such as ethylene glycol, can be made in a new type nuclear reactor at a cost competitive with conventional chemical manufacture.

Hercules Powder Company, Wilmington, Del., developer of the reactor design, says that it could make possible the first peacetime application of atomic energy capable of competing with standard chemical manufacturing techniques.

Nuclear reactors have been used to produce electrical or thermal power, but at a cost in excess of conventional methods. Chemical materials have also been made by radiation in a reactor, but the cost, using existing reactor designs, has been prohibitive.

Hercules research has been directed toward utilization of the fragment recoil energy of nuclear fission, which constitutes about 80% of the total fission energy. Normally, this energy is absorbed in the fissionable fuel and its container. In special types of nuclear reactors with finely divided fuel, however, this energy is available for chemical transformation. After the chemical synthesis, most of the energy is still available for electrical or thermal power generation.

The company believes the reaction is applicable to a wide range of organic chemicals. It was found that chemicals of lower molecular weight tend to give higher yields of easily separable products.

For example, yields of more than 65% of ethylene glycol have been obtained from methanol using the Hercules process.

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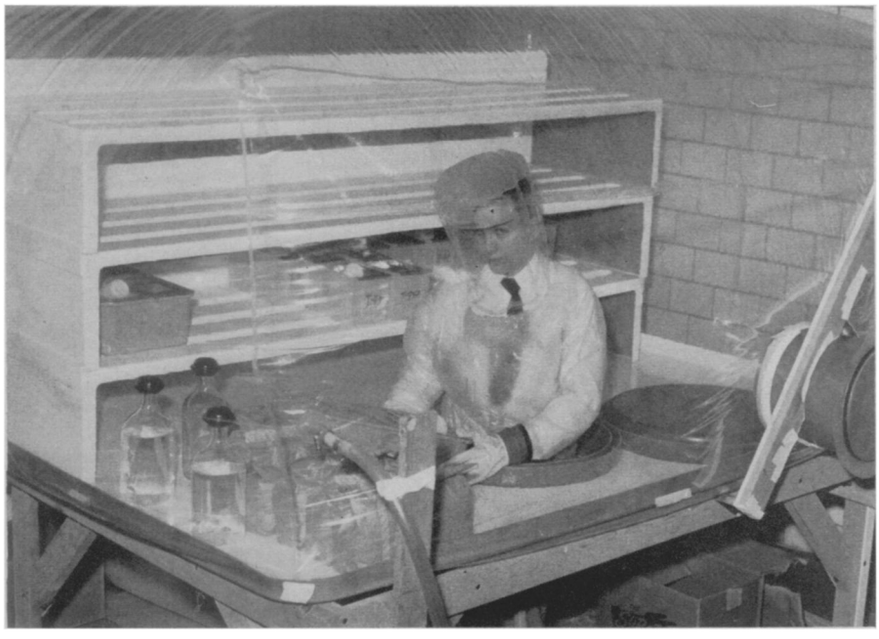

PLASTIC JACKET ISOLATOR—Germfree animals in plastic jacket isolators are examined by Prof. Philip Trexler who enters the isolator from below. He wears a plastic jacket and hood, sealed to the rim of a "port hole". This prevents contamination of the germfree atmosphere. The device was developed by Prof. Trexler at the University of Notre Dame's Lobund Laboratories.

VIROLOGY

Isolate "Polyoma" Virus From Mouse Leukemia

A VIRUS has been isolated from a mouse with leukemia that will produce many different tumors in mice and hamsters.

When young mice, rats and hamsters were inoculated, the virus produced heart, lung and kidney sarcomas, and mammary tumors as well as lesions, a team of British scientists reports in the *British Medical Journal* (Dec. 19).

The virus, which is now being studied by electron microscopy, is similar to one isolated earlier by other researchers, report Drs. G. Negroni, R. Dourmashkin and F. C. Chesterman of the Imperial Cancer Research Fund.

Although cell-free extracts of hamster tumors are apparently not infective for newborn or adult hamsters, some virus must be present in these tumors. The researchers explain that these extracts injure mouse embryo cells, and cell-free cultures from these embryo cells will again produce bloody lesions and tumors in hamsters.

The researchers are attempting to relate infectivity of the cultures with the number and type of particles.

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AERONAUTICS

Rocket Booster Re-entry Seen Possible with Flaps

A METHOD for bringing back through the earth's atmosphere rocket casings and cylindrical satellites has been devised.

Drs. Vernard E. Lockwood and Linwood W. McKinney of the National Aeronautics and Space Administration's Langley Research Center, Langley Field, Va., made the wind tunnel tests on which the method is based. It consists of attaching small flaps to tail end of the circular cylinder. These flaps would swing down into position upon re-entry. Two additional flaps would be used for the glide and landing phases.

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