RICE DIET AND HEART DAMAGE

For some time now a rice diet, reinforced with vitamins, has been one of the few relatively successful treatments for hypertension or high blood pressure.

Why the rice diet should be so successful, no scientist is certain. Many medical men believe that the rice is simply a convenient way of feeding hypertensive patients a diet low in protein and salt. And because a rice diet is boring, finally becomes distasteful, most patients eat less than usual and eventually reduce their caloric intake from an average of 2,000 calories daily to about 1,300. The low caloric intake may also have its effect on hypertension—a fact demonstrated during times of famine, as at the Siege of Leningrad, where high blood pressure was virtually non-existent.

Some medical men, however, still believe that it is the rice itself which has special influence in benefiting hypertension. What that influence is they do not yet know, but they are still convinced that such exists.

That rice may possess a special protective characteristic for hypertension is possible. That it does not, however, protect the heart against damage induced in other ways has recently been demonstrated by an investigation made at the Experimental Biology and Medicine Institute of the National Institutes of Health.

Experimenting with rats, Doctors L. J. Pecora, L. I. Ashburn and J. M. Hundley of the Laboratory of Biochemistry and Nutrition, worked their experiment on the following basis: Since a deficiency of Vitamin B₁, or thiamine, was known to cause marked damage to the heart of rats, they decided to feed the rats two diets, both deficient in Vitamin B₁, one composed of rice, the other of purified ingredients. The question was: Would rice protect the heart any better than the other diet?

In fact the rice did—but only, the experimenters found, because the rice still contained traces of thiamine, which could not be removed for fear of altering the rice's nutritional value. When the same amount of thiamine was added to the diet of purified ingredients, the results for both sets of rats were much the same: they gave no evidence of any general heart protective property in rice.

Both sets of rats developed spasticity, ataxia (failure of muscular coordination) and convulsions. They also lost a good deal of weight, developed apathy, muscular weakness and abnormal weakness of the heart. Using a special electrocardiogram, Drs. Pecora, Ashburn and Hundley saw the pulses of their rats drop from 600 beats a minute to 100.

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VISITORS

According to the latest information, some 7,000 people visit NIH yearly. Largely professional people, scientists, doctors and professors, they come from everywhere: Australia, China, England, Liberia, Sweden, Siam or Guatemala.

By and large, most of these visitors make no tour, but usually arrange to see the scientist or scientists doing work in a particular field. Other visitors, the general public, peek at laboratory animals, especially the snails in the Microbiological Institute, peer through microscopes, but, impressed by the NIH professional climate, ask few questions.

Primary difficulty in handling visitors is the tendency for eighty to appear where forty were promised. On occasion, as recently with a group of visiting urologists, they may not appear at all: the urologists had wound up in the Naval Medical Center across the way.

Though children are not encouraged to visit busy NIH laboratories, some forty 14 to 18 year olds visit here yearly. Winners of Westinghouse’s Annual Science Talent Search, most of them have already decided what they want to be (astrophysicist or nuclear chemist) and ask intelligent questions. To date, in the past three years, there has been only one boyish mishap: the loss of a fairly expensive camera, which has never been found.

Most distinguished visitor and best remembered was Queen Helena of Rumania, who came here last year with her son, King Michael. Guided through the laboratories by Doctor Symeonidis of the Cancer Institute, an-old friend whom she had not seen for ten years, she greeted him with: “Haven’t you discovered a cure for cancer yet?”
In order to encourage brilliant and promising scholars in a career of research in the basic and medical sciences, the Surgeon General of the Public Health Service has established a series of research fellowships. This is part of the program of Research Grants and Fellowships authorized by act of Congress in 1944 (discussed in the preceding issue of the NIH Record).

Persons who have had postgraduate work in institutions of recognized standing in the United States or abroad may apply at any time during the year. Fellowships are effective for one year, and renewal for a second year is possible.

The awards are made for three levels of training -- predoctoral, postdoctoral, and special advanced research fellowships.

An applicant for a predoctoral fellowship should have a master's degree or its equivalent, although in a few cases applicants with only a bachelor's degree, but with exceptional qualifications, have received funds. Stipends range from $1,200 to $3,000.

An applicant for a postdoctoral research fellowship should have his degree in science. For a person without dependents, the stipend is $3,000, and for one with dependents, about $3,600.

The special research fellowship can be awarded to a person who has a doctor's degree, and in addition has demonstrated unusual competence for research or has had specialized training for a research problem. The stipend is determined by the Surgeon General at the time of award. Research may be done in any qualified institution or Federal laboratory.

A fellow may teach or lecture if it does not interfere with the proposed research work. In fact, up to ten percent of the duration of the fellowship may be spent in teaching.

Vacations are allowed in accordance with the rules of the institution in which the fellow is working, but not more than 30 days in the fellowship year is permitted.

The awards are considered to be prizes or gratuities, and at present are income tax free.
ROSEMARIE ROBERTS

One of eleven translators in the Translating Section at NIH, Rosemarie Roberts, can translate GEWISSENSCHAFT into ten other languages, including English. GEWISSENSCHAFT in any language means "science."

Before Rosemarie Roberts (tall, shy, attractive) came to NIH with Mrs. Norris, the Section Head, some eight years ago, she had a good translating command of "only" four languages - French, Dutch, Spanish and German. Largely as a result of her stay at NIH, plus what she shyly guesses to be an "aptitude," she has learned seven more, including the Scandinavian languages and Russian ("the most difficult").

She hastens to point out with excessive modesty that with the exception of Dutch and French, she is really only capable of reading these languages; "a considerable difference from speaking them, you know." But considering the fact that she has learned them in what for most humans is the hard way, by plain, hard application to grammatical rules, her achievement seems even more remarkable.

She learned her speaking knowledge of Dutch as a child in South Africa, where she lived until she was eleven; her French, from Bethany College, Bethany, West Virginia.

Like any duffer, she says she still consults a dictionary. ("I sometimes confuse a Portuguese word with a Spanish one.") But by and large she always finds her vocabulary too small out of the peculiar nature of the work she does at NIH - the translation of scientific documents, a challenge not only for the terrifying range of scientific material but also because the scientific language itself is constantly expanding.

As with the other translators in her section (there are also six clerks), Miss Roberts on any given day may find herself translating a volume from the Russian on Tula-remia (as she has for Dr. Porter) or a translation from the French on Epidemic Icterus in French Equatorial Africa (as she has for Dr. Workman).

She does this, luckily, with a twofold interest in science; she just likes it (she mixed chemistry with her French in college), but she also admits to a sentimental absorption in the fate of any patient's case history. Though she doesn't cry, "as I do at the movies," she is still touched by the failure of any medical experiment that involves human life.

While scientific periodicals make up the largest proportion of work done in the Translating Section, Miss Roberts, like everyone else, does her share of translating letters addressed to the Surgeon General, Dr. Dyer, or to other government units such as the Bureau of Employees' Compensation (FSA), which receives claims from civilian government employees abroad.

Such letters are frequently tragic; they include requests from people who have heard of new cures in America and who hope to come here. One letter to the Bureau of Employees' Compensation was from a Belgian woman whose husband had died. She had hired an English-speaking lawyer to make a claim for her pension; and the lawyer had charged her more than the pension's total income. What should she do?

Other letters are crackpot; such as that one from a Frenchman who had finally found the cause for cancer. The disease, he claimed, was due to electrical currents running through the ground. When these currents crossed (say under a bed), it was then that the human became susceptible to cancer. Wouldn't the United States Government like to pay his fare across so that he might explain this phenomenon more clearly?

By and large, however, Rosemarie Roberts and the Translating Section deal with sterner stuff. They are open to requests from scientists anywhere in the Federal Security Agency as well as in PHS or NIH. And because most scientists like to keep in constant touch with foreign scientific developments, the requests for translations come thick and fast.

Generally speaking, says Miss Roberts, the scientists seem well-satisfied with the work of the section. And on those occasions when a medical man comes stomping into section offices in T-6, crying, "This can't be true!" more often than not the translation is correct; the original had simply stated an unexpected or displeasing result.

For those who have suffered through but have never managed to learn a language, Miss Roberts brings a kind of hope. The beginnings of any language, she says - the verb, conjugations and the declension of nouns - are the most difficult and boring. At the present time, however, Miss Roberts only suffers the occupational disease of all translators: "Say I'm translating from French to English. I glance at the French text, then translate it into English at my typewriter. Glancing back and forth, however, I sometimes find myself translating from the French, then to the English, and by the time I've entered it...well, there it is in French again."

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Here and There

Mice, Murder, and Morals

According to some correspondent, we don't know who, two mice of no particular size, weight or grade, recently ran free in the National Heart Institute. "Perhaps seeking to escape personnel cuts," our correspondent wrote, "one mouse wandered into the Biometrics Research Section, the other into Heart Information."

Mouse A, it is told, wanted to be incorporated into a social science study; a proposal which was rejected out of hand by a biometrics man, who rendered the beast senseless with a loaded statistical table.

Mouse B, who was looking for information on high blood pressure (caused by an overloaded research schedule) was quickly dispatched through the mails after proper clearance through channels.

As it turns out, our correspondent notes, there was no reason for disposing of either mouse A or B. A review panel of NIH scientists from Research Grants and Fellowships had investigated the animals and had ruled that they were non-experimental mice and were, therefore, imposters.

We do not make too much of this story, nor apparently did our correspondent who left the moral up to us. We haven't any moral, as it happens, but we are still wondering who the correspondent is. Having presented the story in such detail, we suspect, in fact, that he's the double mouse-murderer, and that he has unloaded the burden of guilt on us without being willing to take the blame.

We are now asking for a direct confession.

Visions and Revisions

As a further note on the progress of the Clinical Center, we recently ran across an official looking piece of paper which went like this:

"Receipt is herewith acknowledged of delivery of 3286 grams of drawing of sketch-lay-out of laboratories of Clinical Center."

We checked with Dr. Allen Eschenbrenner in Building 6, who is coordinating all the laboratory planning for the Clinical Center, and found out that these sketches represented plans for just one-fifth of the proposed laboratory space. These plans, moreover, were just preliminary and would go through three more stages before the contractor got hold of them some months hence. They would become tentative, revised tentative and finally working drawings.

Getting back to the receipt, itself, we found out that 3286 grams is just about equal to seven pounds - approximately the average daily grocery load for a housewife with two healthy children.

HAMSTERS AGAIN

Scientist: At last!
I have isolated the Thingummy virus.

Assistant: No!

Scientist: Yes!
Assistant: What is it?

Scientist: It is the cause of Thingummy, the disease which afflicts 98% of all the unicorns imported into the United States and is highly infectious to man. Any human being handling a unicorn is likely to catch Thingummy.

To those who, for one peculiar reason or another, do not remember the above lines, they come from last year's Hamster production: "LIFE AT NIH."

While life at NIH this year is only slightly different from last, the Hamsters are promising an entirely new show for this fall (or it may be winter).

At their June 16 meeting, last year's cast and production people appointed a nominating committee and announced that they would welcome suggestions and lyrics from each and all. The person to talk or sing to is Zelda Schiffman, Room 137, Building 1.

Hints as to what is now titillating the collective Hamster imagination are vague. However, lyrics tailored to the music of Bizet's "Carmen" (Toreadora...), and any pungent ideas on (a) the relations between the administration and the scientists, (b) the scientists and the scientists (in the various institutes), and (c) the plans for the Clinical Center would be thrice welcome.

LEAKING GAS TANKS

Now that the summer sun has finally arrived, it has caused an epidemic of leaking gasoline tanks.

If your car has a full tank and you must park on a sloping surface, it is suggested that you position your vehicle on the high side of the slope, so that the gasoline tank is higher than the engine.

Call the Guard Office if you notice a leaking tank. Those persons notified should promptly move their vehicles away from the congested areas to eliminate the possibility of passer-by smokers igniting the fuel.

RECOMMENDED READING


Dr. Gerard, Professor of Physiology at the University of Chicago, shows how the basic sciences, such as physics, chemistry, and biology, are applied to the study of life as manifested in the basic building block, the cell.

Cellular processes are described in terms of thermodynamics (Fuel for the Lamps of Life), biochemistry (Cell Substances), colloid chemistry (Architecture in Miniature), enzymes (Master Craftsmen), metabolism (Molecular Traffic), and genetics (Inherited Molecules).

COMING EVENTS

July 7. Movie, "Feeling of Rejection," Noon and 1 p.m., Wilson Hall.


RICE DIET Cont'd

minute to as low as 200. On autopsy the rats' hearts showed degenerative changes of the muscle fibres and growth of fibrous tissues in the heart's auricles.

The significance of this experiment was not startling. It did not reflect in any way on the value of the rice diet in controlling hypertension. It did, however, provide a bit of scientific evidence against the theory that rice has some special capacity to protect the heart. And for victims of hypertension it encourages hope that other foods may be found which can be added to the rice diet without impairing its value in treating hypertension.