

NUTRITION

More Protein for Pre-School Children

➤ **FEED THE** toddlers, or pre-school children, plenty of protein if you want them to develop strong muscles and good posture.

This advice to parents can be gleaned from advice to medical students and interns given by Dr. Philip C. Jeans of the State University of Iowa's College of Medicine.

Children with less than the best muscle mass are far more common than those with the normal amount, he says. More often than not, such children have average weight for their height and age. They have been getting plenty of calories but not enough of the calories come from muscle-building protein foods, such as meat, eggs, fish, milk and the high protein vegetables.

The muscle mass of such children, Dr. Jeans reports, has been increased, in special experiments, by as much as 25% without increasing the child's body weight. This has been done by feeding more protein, which substitutes muscle for fat.

In MD, a medical journal for residents, interns and medical students, Dr. Jeans says: "Usually babies are well fed and when they first stand and walk they have good posture. Between two and six years of age growth in height slows, but normally most of the growth in this period is of muscles.

"Nevertheless, it is uncommon to find a four-year-old with good posture for the reason that the diet has been deficient in protein and muscles have not had the expected normal increase.

"Milk is the most important source of protein at this age and very commonly the milk intake is inadequate. Many mothers are content if their children of pre-school age take one pint of milk daily. Such a diet is almost certain to be low in protein."

Science News Letter, March 8, 1952

A History of the Theories of Aether and Electricity

by Sir Edmund Whittaker

Sir Edmund Whittaker, FRS, Professor Emeritus of Mathematics in the University of Edinburgh, presents a historical exposition of the 'classical' theories of the aether and electricity from the early Greek surmises up to the discoveries associated with such scientists as Ohm, Faraday, Maxwell and Lorentz. \$12.00

Expedite Shipment by prepayment

PHILOSOPHICAL LIBRARY

Publishers

15 East 40 St., Desk 35, New York 16, N. Y.

**Untamable Cattle**

➤ **WHEN THE** first human migrants came into this continent by way of Alaska, they brought with them only one domestic animal, the dog.

They were hunting tribes, and had no use for other animals except to kill and eat them. Indeed, it now seems probable that these first comers made their memorable trip at so early a date that no one anywhere on earth had learned how to tame any animal other than the dog.

But whereas Old-World peoples domesticated horses, cattle, sheep, goats, camels, elephants, reindeer, chickens, ducks, geese, pigeons and a whole Noah's Ark of other beasts and birds, the natives of the Americas had almost nothing in the way of tamed work or food animals.

In the Andes they had two representatives of the camel family, the llama and the alpaca. In Middle America they had the turkey. Elsewhere Indians had domesticated the mallard duck and the cavy or

guinea pig. And that is about the whole list.

Lack of ability on the part of the Indians cannot be argued as a reason for this small showing. They developed several civilizations that reached a level comparable with that of the ancient Egyptians and Babylonians. They had considerable skill as astronomers and mathematicians. They had done notably well in domesticating native plants, with corn, potatoes, tobacco, peanuts, vanilla, red peppers and a long list of others to their credit.

They took to European domestic animals readily enough when the white man introduced them—too readily in the case of some of the white man's horses. Their failures to tame any animals must be sought elsewhere than in lack of talent or patience for the job.

It seems not at all unlikely that the Indians tamed so few animals because most of the animals on this continent just would not be tamed. The bison, only American member of the ox tribe, is at once one of the biggest, one of the stupidest and one of the most truculent of all cattle.

The pronghorn, nearest thing we have to an antelope, is just as untamable as its Asiatic and African "opposite numbers." Although horses had originated and evolved on this continent, they had become extinct here and the Indians saw their first horses when Spanish cavalry made its terrifying appearance. Deer and elk are alike untamable in Old World and New. The Indian just played in hard luck, so far as animals were concerned.

An interesting case is that of the Asiatic reindeer and its near relative, the North American caribou. Reindeer are rather unruly, but they have been successfully domesticated. But the caribou is unrulier still, and is enough bigger than reindeer to make him impossible to "wrangle." So the only way you can use him is to shoot him.

Science News Letter, March 8, 1952

PHYSICS

Cyclotron for Japan

➤ **THE JAPANESE** are replacing the cyclotron which was destroyed by American troops early in the occupation, it has been learned.

The old cyclotron which was completed before the war was a duplicate of the one then under construction at the University of California. It is a research instrument, used to "smash" atoms with electrons.

This cyclotron, at the Institute of Physical and Chemical Research in Tokyo, was destroyed by American troops whose commanding officer was under the impression that it could be used to help make A-bombs. American scientists at the time expressed indignation at the destruction of the very expensive research instrument. A move was started to have it replaced, either with government or by private funds.

Both plans were dropped, however. The State Department unofficially pointed out that contribution of a new cyclotron to the Japanese might be made use of for propaganda by the Russians. They would, it was believed, tell the Asians that the Americans were bringing atom weapons to their territory.

At a recent meeting of the council of the Federation of American Scientists, the question of whether Americans should, either privately or through the government, pay for the new cyclotron was dropped.

Approval for replacing the cyclotron was given some time ago by the American occupation authorities. However, it is only recently that the Japanese have been able to provide the money for the new cyclotron.

Science News Letter, March 8, 1952