Advice on Health (No. 268)

HUMAN v. COW'S MILK

(Written for "The Listener" by DR. MURIEL BELL, nutritionist to the Health Department)

THERE is a consensus of opinion among doctors who specialise in infant feeding that "breast milk is best milk." Breast feeding should be the method of choice, not only because its nutritional factors give the baby a flying start, but also because it promotes the proper psychological attitudes both in the child and in the mother.

It is therefore a matter for regret that a certain proportion fail to be able to accomplish this, anxious though they are to do it. A table in the 1945-1946 Report of the Plunket Society shows that only 70% of babies were fully breast-fed when first seen by the Plunket Nurse at two to three weeks of age, and the Report draws attention to the fact that the "management of breast feeding in the early days of lactation plays an important part in insuring successful breast feeding." In Britain, too, there is a disquietingly high percentage of failures recorded, there being only 50% at the end of three months and 40% at the end of six months continuing with breast-feeding.

When artificial feeding has to be resorted to, cow's milk is modified by dilution, at first with an equal volume of water, later with less water, together with the addition of carbohydrate and fat, to bring it to the approximate composition of human milk.

In the past, undue dilution of cow's milk with water was not always a successful basis for infant feeding, and of late years, the strength of feeding mixtures has been increased in Plunket regimes, with more universal success. A baby formerly given 17½ozs. of cow's milk at six months now gets at least 23ozs.—more if it needs it; indeed, a large proportion get 25ozs. at that age.

The scientific reason for improved results with stronger milk mixtures was formerly thought to be the presence in human milk of three times as much of the sulphur-containing amino-acid cystine as in diluted cow's milk. However, an even more important amino-acid that contains sulphur has been discovered, called methionine, and it is present to a greater extent in cow's milk. When the total sulphur-containing amino-acids are compared, it is found that there is no significant difference between human milk and diluted cow's milk in this respect. Therefore the other components of milk proteins have been examined, and it has been reported that human milk is richer in the very important amino-acid called tryptophane, in the proportion of 31 to 24 when compared with diluted cow's milk.

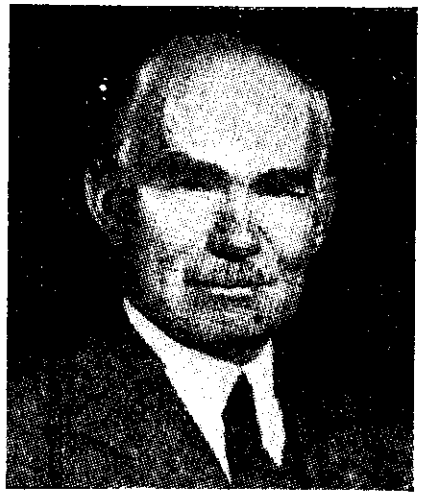
Regarding the vitamin and mineral constituents, neither breast milk nor cow's milk contains enough vitamin D to provide the 400-800 International Units considered necessary for infants. Moreover, even if the nursing mother is taking vitamin D (which is advisable for her own sake) it is not transferred to her milk to any great extent. All babies should therefore receive a supplement of cod or other fish-liver oil. This at the same time supplies plenty of vitamin A. Cow's milk is particularly defective in vitamin C. Vitamin C is emphatically required at an early age by artificially-fed infants, and we are also of the opinion that for New Zealand conditions, it is wise to safeguard the breast-fed baby also by giving it vitamin C. Therefore all babies should have orange juice or rose-hip syrup.

As to iron, all infants should get egg-yolk, liver-juice, and vegetables at six months. Some paediatricians advocate the early use of medicinal iron for all infants. It is without doubt desirable for premature infants because they start life with a lesser store of iron; and provision is made for this in Plunket feeding regimes.

EMBITTERED PARENT

Outburst by De Forest

NEW parents can have spoken harsher words about their progeny than those uttered recently by Lee De Forest, aged 73, who fathered modern radio by his invention of the audion tube in



LEE DE FOREST

1907. In a letter to mark the 40th anniversary of that event which he wrote to the National Association of Broadcasters of America, De Forest said:—

"What have you gentlemen done with my child? He was conceived as a potent instrumentality for culture, fine music, the uplifting of America's mass intelligence. You have debased this child, you have sent him out on the streets . . . to collect money from all and sundry . . . .

"You have made him a laughing stock of intelligence, surely a stench in the nostrils of the gods of the ionosphere: you have cut time into tiny cubelets . . . wherewith the occasional fine program is periodically smeared with impudent insistence to buy or try.

"This child of mine has been resolutely kept to the average intelligence of 13 years . . . . as though you and your sponsors believe the majority of listeners have only moron minds. Nay, the curse of his commercials has grown consistently more cursed, year by year."