

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

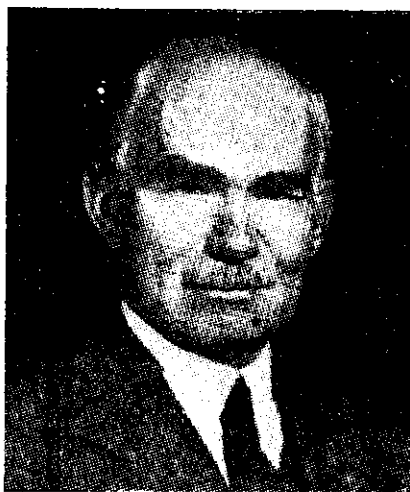
early age by artificially-fed infants, and we are also of the opinion that for New Zealand conditions, it is wise to safeguard the breast-fed baby also by giving it vitamin C. Therefore all babies should have orange juice or rose-hip syrup.

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

FEW 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."

OIL MYTH EXPLODED

The Truth About S.A.E. Numbers

Commenting recently on the buying of lubricating oil by S.A.E. numbers, Mr. T. H. Innes, Automotive Engineer of the Vacuum Oil Company Pty., Ltd., stated that for some time there had been a marked tendency on the part of motorists to regard S.A.E. numbers as being indicative of lubricating quality.

"Such a trend," said Mr. Innes, "should be corrected, as it places an interpretation on S.A.E. ratings which is entirely foreign to the reason for their introduction."

Mr. Innes pointed out that the S.A.E. rating of motor oils was brought into general use in 1926 by the Society of Automotive Engineers to provide a standard form of reference for oil body or fluidity.

However, when announcing its numbering system the Society of Automotive Engineers stressed that S.A.E. numbers could not be used in any way to indicate the quality of a lubricant.

As the S.A.E. number assesses body at one temperature only, it gives no indication of an oil's behaviour above or below that temperature. All oils thin out when heated, some more than others. The most desirable oil is that which thins out least when subjected to high engine temperatures and yet remains fluid when cold. An oil of these characteristics will ensure ready distribution and maximum protection when starting up the engine, and will retain its body when hot to give equal protection at full load.

An appreciation of this "double-range" quality as an essential requirement in a good engine oil, explodes the myth which has become associated in the minds of some motorists that S.A.E. numbers may be taken as a safe guide to lubricating quality.

"From the motorist's viewpoint," concluded Mr. Innes, "the best advice is first to choose an oil of known brand made by a refiner of outstanding reputation, and second, select from that manufacturer's range of oils the grade for your car as recommended in oil charts at garages and service stations."

—P.B.A.

ANNOUNCING!

TIMARU SOUTH SCHOOL JUBILEE CELEBRATIONS EASTER, 1947

APRIL 5th to 7th, inclusive

All information available from the SECRETARY,
A. S. TONEYCLIFFE,
18 Market St., Timaru.

Jubilee Celebrations

THE MILFORD SCHOOL, SOUTH CANTERBURY (not Auckland), is marking its Seventy-fifth Anniversary with Jubilee Celebrations extending over Easter, and the Jubilee Committee requests the assistance of ex-pupils in tracing the addresses of their contemporaries in the earlier decades.

The Secretary is

MR. E. MAUGER,
C.o. The Schoolhouse, Milford,
South Canterbury.