ARTIFICIAL INFANT FEEDING

GIVE THE BABY ENOUGH

MAURICE OSTHEIMER, A.B., M.D.

Associate in Diseases of Children, Medical Department,
University of Pennsylvania

PHILADELPHIA

Twenty years of experience in the practice of diseases of children has brought out how prevalent still are the old-fashioned ideas on infant feeding. In fact, after questioning many medical students, I learn that many of these old notions are still being taught; while few of the textbooks change much in regard to feeding, as edition follows edition.

There is the old plan of allowing a new-born infant one ounce every two hours. We know now that the average young infant will always take from three ounces up at each feeding, and can digest it well. Within one week most babies can take four ounces at each feeding; provided, that the interval between feedings is three hours or longer. Anyone who watches a baby at the breast, fed slowly and properly, with a few moments intervals between mouthfuls, which can easily be accomplished by removing the infant from the nipple off and on, knows that he takes three or four ounces, or more, at each feeding. And there is no doubt about his ability to digest it, as is shown by the absence of all symptoms, the well digested stools and the regular gain in weight each week. In spite of this, there still are teachers who give their students the old tables, beginning with one ounce every two hours, for the new-born baby.

Then there is the question "when should the amount of each feeding be increased?" Surely the baby can answer this himself. Just as soon as he can take four ounces well, digest it well and show no symptoms, he should be given another one-half ounce at each feeding; and when he takes that well, still another one-half ounce may be added to his mixture. It is very unfair to order four ounces at each feeding and then forget about it for weeks, as so often happens. It is so easy to omit increasing the baby's mixture unless one's attention is called to it. So many babies, nowadays, are treated thus. I can remember when most bottle fed babies got too much at each feeding. Yet one rarely sees that error now. And this seems especially true among the babies of physicians, usually the most starved of all infants.

Then there is the constant error of keeping the baby on a greatly diluted milk formula, although he may be nine months old or older.

To gain in weight, great quantities of the mixture must be given at each feeding, so we now must have bottles which contain twelve ounces. Surely, we can agree that eight ounces of a stronger milk mixture is far preferable for the baby's digestion.

And again, just as soon as the baby has four or more opposing teeth, he is physiologically ready for some semisolid food. By the age of nine or ten months, then, the modern infant ought to be ready and able to digest undiluted cows' milk, and very soon after that, he should be given cereals, strained at first; potatoes, baked and mashed well; stale bread, toast or zwieback, either hard or soaked in milk or water; stewed fruits, well mashed through the colander, and even a soft-boiled egg.

We have watched infants from 8 to 16 months of age digest these things readily and grow strong, and we marvel at some of the physical specimens presented to us, usually at the dispensary, who have been fed too long on weak milk dilutions and broths.¹

We have watched infant feeding pass through many stages; proteid, sugar and fat have all in turn borne the brunt of the fight. Yet, after all, breast milk remains the one ideal infant food. We know now that the next best substitute for it is cow's milk, certified, which we use, ordinarily, diluted at first with three quarters barley water; then gradually increased up to one half milk. By this time more fat seems needed, and the top twenty-four ounces off of one quart of milk are used; then the top twenty ounces from one quart are employed, still diluted one half with barley water; later whole milk is again used, diluted one quarter with barley water, and so on, increased gradually, until the baby, at nearly 9 months of age, or later, is digesting whole milk, undiluted. It is customary to add about 5 per cent. of sugar to each mixture, that is, 1 ounce to each 20 ounces of mixture.

By this means we simply carry out the idea that young babies, who have been unfortunate enough not to be breast fed, be given sufficient cow's milk mixtures at each feeding, from the very beginning, that each one be allowed an increase in quantity, from time to time, just as soon as they need it. Then, that their mixtures be increased in quality, too, from time to time, until they reach whole milk between 8 and 12 months of age. Then, again, as soon as each one has four or more opposing teeth, he should be allowed to begin on semisolid food.

Such has gradually become our practice in the children's dispensary of the University of Pennsylvania hospital, in marked contrast to the simple, old fashioned diet still advocated by Dr. Morse.²

1. Details of our investigations in this work appeared recently, *Med. Clinics N. America* **2**:841 (Nov.) 1918.

2. *J. A. M. A.* **74**:577 (Feb. 28) 1920.