

centage than in mother's milk. The fats and sugar are not so widely divergent, and may quite easily be regulated. But the proteids are what almost invariably give rise to gastric and intestinal disturbances in artificial feeding. Dilution of the milk with water easily reduces the percentage of proteid to correspond with the same constituent in human milk. This, however, only partially solves the problem.

Clinical experience teaches that although the proteids are reduced, perhaps, far below the amount in mother's milk, still there may be trouble with the digestive function.

Chemical analysis shows cow's milk to contain a larger amount of caseinogen than mother's milk, while the lact-albumen is about the same proportion in each.

The result is the formation from the former of very large tough curds, whereas, the proteids from human milk forms small flocculent curds. Consequently, the digestibility of cow's milk is much more difficult, even though the amount of proteids is reduced much below the standard. Added to this there appears to be a different atomic structure of the proteid matter of cow's milk, which the infant stomach is unable to properly and satisfactorily manage.

But, while diluting the milk, say six times, to reduce the proteid to suit the infant's digestion, the sugar and fats have also been proportionately lowered. These may again be raised to any percentage desirable, the sugar by the addition of either cane or milk sugar solution of known strength, and the fats by adding cream of a known richness.

These constituents rarely give rise to gastric disturbances, and if they do, the source of error can be easily rectified.

The fat of cow's milk is in the form of an emulsion quite similar to that of human milk, and although the chemical composition is somewhat different the variation is so slight as to cause no appreciable disturbance. If there is excess of fat, the food will be regurgitated in small quantities an hour or so after taken, or else by increasing peristalsis, frequent loose stools will be passed containing globules or curds of fat. Colic may be evidenced.

Hence, if a child suffers from constipation, increase of fat in the food is indicated, and will immediately relieve the bowels.

On the other hand, fat poverty in the food is evidenced by failure of increase in weight, constipation and emaciation, a very serious condition if allowed to continue.

The foregoing applies only to the addition of cream obtained by the gravity method. Cream obtained by centrifugal processes has the fat emulsion destroyed, the fat cells are broken down so that they now become aggregated into a conglomerate mass, and appear on the surface