

Mother's milk – could there be a suitable equivalent?

The feeding of human beings depends on the geographic environment, the specific climate conditions, the utilization of food resources and the development of trade. It is influenced by the economic status of family and society but also by the habits and traditions forming the Chinese, French, Bulgarian and other cuisines.

In contrast with the feeding of adults, the feeding of nurselings is standardized to a great extent, so that the Chinese, French, Bulgarian and other babies are fed in one and the same way – they are breastfed by their mothers and the milk of all mothers contains one and the same elements. That is why the mistakes made in nursing feeding and their consequences are a world-wide problem, which is particularly topical for the children in the states with limited economic resources as unfortunately is our country at present.

The mistakes in feeding of nursing arise most often in cases of lack or insufficiency of mother's milk, when it is necessary to look for an alternative.

Is there a satisfactory equivalent of mother's milk?

Although this question seems quite basal, humankind has searched for its answer for thousand years. Before the development of animal-breeding, the baby lacking mother's milk was doomed to death if no other woman was found to breastfeed it. Since people started to breed domestic animals it was quite natural to try to feed the baby lacking mother's milk with animal's milk. But these attempts proved to be completely unsuccessful and the reasons are the great differences in the ingredients of mother's milk and various kinds of animal's milk.

Contents of the various animal's milks in comparison to the mother's milk

Ingredients	Mother's milk	Cow's milk	Goat's milk	Sheep's milk	Ass's milk	Buffalo-cow milk
Water/ml/litre	880	880	873	820	827	900
Dry substance	120	120	127	180	173	100
Proteins/g/l	12	33	41	57	41	18

Fats/g/l	34	33	34	72	77	17
Carbohydrates/g/l	72	4	44	42	48	60
Salts/g/litre	2	7	8	9	7	5
Energy Kcal/litre	660	660	640	1050	1055	450

Except the above mentioned quantitative differences, there are many qualitative differences of much more significant nature, which make the animal's milk an unsuitable food for the small baby, so that in the course of many years were used the so called "wet-nurses" – women who have mother's milk enough for breastfeeding not only their child but also a child born by another mother, usually for payment. But in such cases arouse moral and ethical, as well as hygienic problems that were resolved with difficulties.

In modern times with the clarification of differences between the ingredients of mother's milk and various kinds of animal milk started attempts for changing the contents of the latter and mostly the generally accessible cow's milk, so that it became identical to the mother's milk. By using modern technologies were achieved very good results and the modern adapted milks have identical biochemical contents to that of mother's milk, so that no firm answer could be given to the title question.

Yes, at present there are milks that are identical to mother's milk in biological respect and could be used as an alternative.

Contents of the most often used adapted milks in comparison to the mother's milk contents in 100 ml food ready for consumption

Ingredients	Mother's milk	NANI	Nutrilon premium	Similac
Water/ml/100	88	87,7	87,5	87,2
Proteins/g/100	1,2	1,6	1,4	1,55
Fats/g/100	3,4	3,4	3,6	3,6
Carbohydrates/g/100	7,2	7,4	7,1	7,35
Salts/g/100	0,2	0,3	0,3	0,4
Energy Kcal/100	66	67	66	68

The adapted milks contain all macro and micro elements and vitamins in quantities

which satisfy the nursing necessities in the way the mother's milk does. Notwithstanding, the specialists including the creators and producers of adapted milks, support the idea that **MOTHER'S MILK IS THE BEST FOOD FOR THE NURSELING**. People should do their utmost to provide mother's milk to the baby. This is the obligation of his/her blood mother, mother's relatives and medical specialists, the latter being liable to maintain and stimulate lactation by competent advices.

Unfortunately, in our country due to objective and most often subjective reasons it is not always possible to provide mother's milk for the baby. Then what is the way out?

1. To make an attempt for stimulation of lactation. There are such methods and they are applied.
2. To use donor's milk. This is possible in some of the big cities where still exist milk-collecting centres and most of all in Sofia where operates a modern and well-developed centre that searches for clients – baby consumers of mother's milk.
3. However, in practice the majority of babies are forced to resort to an equivalent of mother's milk that is why quite reasonably is asked the question:

WHICH IS THE MOST SUITABLE EQUIVALENT?

Categorically should be answered that this is not the cow's yogurt. Undoubtedly, it is a very wholesome food for children of more advanced age and adults but not for nurselings. Instead of mother's milk could be used the milks adapted to the mother's milk.

Their contents both in quantitative and qualitative aspect resemble mother's milk. These ingredients not only satisfy the necessities but also live up to abilities of the baby. They are harmless from epidemiological point of view and if the rules of their preparation and serving are observed, there is no danger of infection. They may be held in store for long periods of time and are easily transported.

The disadvantages of the adapted milks are the presence of an alien protein, which may cause allergization, the lack of anti-infectious factors and some other biological ingredients. As well, they are more expensive.

More often than not mothers who are not able to breastfeed their children for various reasons, ask the question: which is "the best" adapted milk?. This question is absolutely

pointless because all adapted milks use mother's milk as a standard and that is why their contents, as is clear from the above data, is almost identical.

The differences, if any, are insignificant and the choice which milk to choose instead of mother's milk is to be made by the mother. She, however, should not be misled by the advertisements, should not believe in the advantages of one or another milk, as suggested in a particular advertisement and the words that "this milk is the only one for her child". In my capacity of consulting expert of NESTLE I would not write or say that NAN is the best adapted milk for your child, but please believe me the NESTLE foods are no way inferior to the other ones because they are being produced for 133 years and the experience and tradition are not to be neglected. Make sure yourselves.

So, dear mothers-to-be, get ready for breastfeeding, dear present mothers, breastfeed your children, mother's milk will give them the best start in life.

Prof. N. Mundjiev,

Consulting Expert of Nestle

Mother's milk provides the best feeding for the nurselings, as well as the best protection from diseases.