



Women's milk throughout history

Paulina Szczygiół^{†,*}

[†] Regional Human Milk Bank, Jan Mikulicz-Radecki University Teaching Hospital, Poland

* Correspondence: paulaszcygiol@interia.eu

Human milk properties

Human milk, due to its unique and species-specific composition, which fully adapts to the current needs of the baby, is called the "gold standard" in the nutrition of newborns. Breast milk is not only a source of nutrients (proteins, fats, carbohydrates, vitamins, minerals) necessary for proper growth and optimal nutritional status of a newborn, but also provides a number of biologically active compounds, including enzymes, hormones, immunoglobulins, growth factors, cytokines, stem cells. These compounds show direct antimicrobial activity, protecting the immature immune system of a child, and have anti-inflammatory and immunomodulatory properties. Breastfeeding has immediate and long-term health benefits for both mother and baby. Immediate effects for a child include a reduction in the incidence of diarrhea, infectious inflammation of the respiratory tract, necrotizing enterocolitis, bacterial meningitis, and urinary tract infections. In addition, breastfeeding prevents the development of overweight, obesity, type II diabetes, hypertension, and asthma in later life.

Short story of breastfeeding

Human milk has not always been considered as the best food option for a newborn baby. Throughout history, the popularity and perception of breastfeeding has been influenced by many factors, such as the economic, social, scientific and political conditions as well as the current fashion.

In prehistory, breast milk was the only food for a newborns. A milk-based diet was continued until the child was 4–6 years old (the moment of molars teeth appearing). In the Neolithic period, the change from the nomadic to the settled



mode caused that women were forced to spend more time on farming and animal husbandry. The period of breastfeeding has shortened to 2–3 years, and the female food began to be replaced with the first forms of feeders.

In ancient times, breastfeeding was considered as an important and intimate activity. Its significant position is evidenced by many paintings and literature works, where nursing mother represents a symbol of charity, patient and sacrificial love towards another human being. Women often were forced to breastfeed their offspring—they were considered as uniquely adapted and properly endowed to this form of nourishment by the nature. In a situation where the woman was unable to breastfeed, the child was given to wet-nurse. The institution of wet-nurses was particularly successful in Ancient Rome and Greece, where women from the upper classes did not care about breastfeeding. The wet-nurses were carefully selected, and the selection criteria included their beauty, health, quality, quantity and even the smell of milk.

From the "Canon of Medicine" we can learn about the habits regarding infant feeding during the Middle Ages. "Canon of Medicine" was a textbook used in medical schools until the end of the 18th century and was written by the Persian physician and philosopher Avicenna. Breastfeeding was recommended until the child reaches 2 years of age. Then Avicenna urged mothers to slowly and gradually discontinued breastfeeding, while introducing and extending the diet with solid meals at the same time. Children who could not be breastfed were given food in animal horns or wet- mothers were given food.

In the Middle Ages, and then in the modern era, the profession of wet-mothers was the most popular and became a symbol of freedom and luxury. Despite the recommendations of scientists, natural feeding was not favored by prevailing beliefs. For example, following idea of the ancient physician, Soranus of Ephesus, people thought that breastfeeding deprive woman of her beauty and accelerate the aging process. Women willingness for being the hosts was not that strong because breastfeeding was associated with sexual abstinence. It was believed that male sperm had destructive influence on breast milk and could be life-threatening for the baby. Men had the right to use the services of prostitutes while their wives were breastfeeding their children. Women who decided for natural breastfeeding were often harassed by their families and discouraged from breastfeeding by their relatives. During this period, especially in the 19th century, pregnant and lactating women aroused disgust and aversion in society. Women were removed from public life and encouraged to stay at home. Breastfeeding was associated with lactation infertility. The desire of noble-born women was to possess the great number of children, which led to the rapid passing of infants to the wet-mothers. The requirements for wet-mothers became even more strict. In addition to the, the condition of the teeth of the feeder and her character was also considered. The character played the crucial role because people believed



that the baby inherited some of wet-mother features with milk. The poorer social classes used cheaper wet-mother services. Animal milk was given to children as a last resort. People were concerned about inheriting by their children some animal behaviour.

Whenever an economic crisis or financial problems of families appeared, the return to breastfeeding could be always noticed. Usually, it was connected with the loss of a job related with the return to the cheapest form of feeding the baby. The revolution in offspring's feeding took place in the second mid of nineteenth century, the time when the first artificial milk mixture was invented. The formula consisted of cow's milk and grain and was invented by the German chemist Henryk Nestle. Following him, the search for more ingredients that could serve as a substrate for new formulas had started. Unfortunately, the trials had tragic consequences because the child mortality rate increased sixfold at that time. The peak of the formula's popularity was noticed in the 1950s, when the first powder formula was introduced. In the popularization of that form of feeding marketing played a huge role. The commercials stated that feeding babies with formula is much healthier than natural feeding. The effectiveness of this message was confirmed by statistics—the percentage of mothers breastfeeding naturally decreased rapidly. Many myths and superstitions have arisen around breastfeeding, and even today, in the light of strong scientific evidence, breastfeeding remain controversial.

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