

# Human Milk Banking in Poland



Dr Aleksandra Weslowska



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In 2012 Poland opened its first Milk Bank. Today there are 16 Milk Banks in the country. This development has to a large extent been possible by the efforts of the community and the creation of the “For Life” initiative. Miris Interviewed Dr Aleksandra Wesolowska, Head of Laboratory of Human Milk and Lactation Research at Regional Human Milk Bank in The Holy Family Hospital in Warsaw and President of Human Milk Bank Foundation of Poland to learn more about human milk banking in Poland.

## **How did milk banking start in Poland and how are milk banks organized?**

The first advanced human milk bank in Poland started in 2012. Today there are 16 human milk banks operating across the whole country under the support of the Human Milk Bank Foundation.

All of them are located within hospitals with high-level neonatology units (usually a level III NICU). Most of them are providing their services locally based on the agreement with other hospitals in the region. Depending on the local requirements, a regional human milk bank supplies donor milk for a few to a dozen neonatology units. The most extensive Human Milk Bank is located in the Holy Family Hospital in Warsaw and is affiliated with Warsaw Medical University. This milk bank also functions as a Laboratory of Human Milk and Lactation Research and is led by me.

## **Are all the milk banks in Poland analyzing their milk for macronutrient content?**

Almost all the human milk banks in Poland are equipped with a Miris human milk analyzer. It is a golden standard within Poland to assess the nutritional value for each pool of donor milk.

## **What are the results of macronutrient analysis used for?**

The results of human milk analysis are primarily used to evaluate how much energy and macronutrients that are provided by the donor milk

given to the recipient baby. The results are also a basis for making decision on fortification of human milk. It is especially important for assessing the nutritional value of milk intended for preterm infants. This diagnostic purpose can also be used for term babies with symptoms of undernutrition, but only under the recommendation of a lactation consultant.

## **How are the milk banks in Poland financed?**

The revival of human milk banks in Poland resulted from fruitful efforts of nursing mothers holding a firm belief in the importance of breast milk. This effort is gathered around the Human Milk Bank Foundation – an organization supported by neonatal physicians. The first milk banks in Poland were founded by cities governments with the support of local partnerships.

In 2016, Poland introduced a support program for families called “For Life”. This program ensures an increase in quality and availability of medical services for women with complicated pregnancies or babies who are diagnosed with severe disabilities during the prenatal period or during labor. One of the aims of the For Life program is the provision of better access to human milk for newborns and infants by creating the network of human milk banks in Poland. Between 2016 and 2019, 11 additional human milk banks were created with the support of the For Life program. This program does however not cover the running costs of milk banks.



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Human milk banks in Poland are part of the health care provided by hospitals to mother and babies. The National Health Fund (NHF) in Poland operates as the “single payer” in the health care system. NHF finances public health care through agreements with hospitals, which are the system’s beneficiaries and health care providers.

The cost of guaranteed medical procedures is fixed by the NHF and reimbursed at the same level to every hospital, based on an annual agreement for the provision of health care services. Enteral feeding is a guaranteed service in Poland during hospital treatment and tube feeding is reimbursed.

From 2017 a new product in tube feeding was implemented: feeding with human milk (Expressed

Own Mothers Milk and/or Donor Human Milk). The reimbursement point value for the product human milk amounts to 3.42 points, which equals 40 euros per day per preterm infant receiving tube feedings. Based on my best knowledge, Poland is one of the few European country where reimbursement for human-milk-based nutritional therapy has been implemented.

**Is there an age limit or weight limit for babies eligible to receive donor human milk?**

There is no age or weight limit for which babies that are eligible to receive donor milk, but as the cost spending for obtaining a portion of donor human milk is partially reimbursed only in the case of tube feeding a premature baby (born before 37 weeks of gestation), donor milk is usually offered only to

preterm babies, if the mother's milk supply is low. This causes some ethical concerns, as medical procedure availability cannot be based only on its reimbursement, and medical indications for donor human milk administration is various and health benefits are not only restricted to minimal enteral feeding or tube feeding.

### **Approximately what percentage of babies in the NICUs in Poland receive Donor Human Milk or Mothers Milk as compared to formula?**

In 2018, the first year where the product human milk was included in reimbursement, 85 (61.6%) service providers (i.e., hospitals with NICUs) in Poland reported tube feeding with Mothers Milk and/or Donor Human Milk. In total 5,530 patients. Of these, 2,323 newborns were fed Donor Human Milk as a supplement to mother's milk, not only by tube feeding but also by bottle, when infants could not breast feed. Only 1,925 newborns received formula tube feeding (source NHF). This is to be compared to 2015 when only 500 newborns received Donor Human Milk. Comparing statistic data on 2019 and 2020 the number of Donor Milk recipients was similar – above 3300 babies per year given about 4650 liters of milk but the number of Donors where reduced from 480 to 380.

### **Your research has looked at factors affecting macronutrient composition in human milk. What have you found?**

Indeed, in recent years we have performed several studies which aimed to identify the factors affecting macronutrient contents in human milk. The main results of our studies were as follows:

- Protein (total and true) and carbohydrate concentrations in human milk were significantly affected by the period of lactation - from the first to the sixth month of lactation, protein concentrations significantly decreased.
- There was no significant correlation between nutritional value of maternal daily food consumption (based on 3-days dietary record) and macronutrients composition of human milk, however we observed that the habitual intake of fatty fish affected omega-3 fatty acids concentrations in human milk.
- Maternal body mass index (BMI) and adiposity

were positively associated with the total protein content of human milk and what is more, pre-pregnancy BMI was positively correlated with milk energy content.

- Carbohydrate concentrations in human milk was correlated with infant sex - we reported that mothers of male infants produce milk with greater carbohydrate content than mothers of female infants ( $7.09 \pm 0.27$  g/100 ml vs  $6,9 \pm 0.41$  g/100 ml, respectively).

Overall, our findings revealed that maternal and infant factors, especially maternal nutritional status, and infant sex, interact and affect human milk composition. These findings suggest that macronutrient and energy content in Mothers Milk may be determined in pregnancy and may have unique compositional profile for every mother–infant dyad.

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### **What is the future for milk banking in Poland? Do you see an increase in the number of milk banks and percentage of babies in the NICU receiving a human milk diet?**

I am proud to have seen a constant strengthening of the human milk banks in Poland during the last decade. Based on the operation of human milk banks in Poland, adequate policies have been developed for operating procedures of these institutions. The “For Life” initiative allowed numerous hospitals to acquire funds essential to the development of new human milk banks. A sign of the increasing position for Poland in the human milk banking community is that the upcoming 6th European Milk Bank Association Conference will be



held in Warsaw in October 2021.

On the other hand, we still we have a gap in donor milk legal definition and regulation to establish a system that would effectively supervise human milk banks. The Human Milk Bank Foundation makes the best efforts to ensure its employees have access to all latest developments in this narrow, and interdisciplinary field. Today in the midst of the COVID-19 pandemic it is really important to take force. The requirement for donor milk is increasing for many reasons in this pandemic, such as serious

COVID-19 symptoms postpartum and loss of milk supply as a result of postpartum depression, which is more often seen in the third wave of the pandemic that we are experiencing right now. In Poland still, unjustified mother and baby separation is taking place in health care. I hope providing pasteurized donor human milk also to term newborns, deprived of mother's milk, will become increasingly widespread in polish hospitals as a bridge until the mother's supply comes in.

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Regional Human Milk Bank in the Holy Family Hospital in Warsaw



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