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# EFFECTIVENESS MUNG BEAN EXTRACT FOR INCREASE BREAST MILK

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## ABSTRACT

Maternal nutrition is one of the factors in the process of breast milk production. One of the causes of breast milk is not smooth due to nutritional factors. The amount and quality of maternal food greatly affects the amount of breast milk produced. Breastfeeding mothers are higly recommended to obtain additional nutrition for milk production and mother's energy. Increasing breast milk can be done by consuming foods that are high in protein such as mung beans. Mung beans contain active compounds, namely polyphenols and flavonoids that function to increase the hormone prolactin. When the hormone prolactin increases, milk secretion will be maximized so that the quantity of breast milk will increase. This study is to analyze effectiveness mung bean extract for increase breast milk at Cibeureum Health Center, Cimahi City in 2021. This type of research uses a quasi experimental design with a one group pretest and posttest design research. The analysis of this study uses paired T test analysis. The sample in the study was 32 nursing mothers. The analysis showed that the mean volume of breast milk before being given mung beans extract was 44.22 ml, the average volume of breast milk after being given mung beans extract was 70.13 ml and the value was 0.000, which means mung beans are effective for increasing breast milk. The results of this study showed that there was an effect of mung beans extracting on the production of breast milk.

**Keywords** : **mung bean extract, breast milk, brestfeeding mother**

## INTRODUCTION

Breast milk is the most important for baby especially in the first months of life (Sukarni, 2013). UNICEF, World Health Organization (WHO) and the Ministry of Health recommend that babies be breastfed immediately after birth and not given any food other than breast milk for the first 6 months of life, not given water, or other foods, only breast milk (UNICEF , 2016). Breast milk production is a process of releasing the hormone oxytocin to drain milk that has been produced through the inner tubes of the breast. Breast milk production and breast milk production are influenced by two hormones, namely prolactin and oxytocin. Prolactin affects the amount of breast milk production, while oxytocin affects the process of breast milk production (Marni, 2015).

The way to increase breast milk is to eat nutritious foods, drink honey milk, drink water at least 8 glasses a day, green vegetables can help produce breast milk (for example, katuk leaf vegetables and spinach, banana heart vegetables and papaya, eat a lot of fruits that contain water, do not stress, sadness, anger, or other negative feelings, additional vitamins when needed, and nuts are also good for breast milk production (for example, soy beans, green beans, etc.) (Walyani, 2010).

The decrease in breast milk production can be caused by the lack of stimulation of the hormones prolactin and oxytocin which play a very important role in the smooth production of breast milk. Breast milk production is influenced by several factors, including: hormonal influence, and Let down reflex. But there are also several other factors that can affect breast

milk production. Such as, the frequency of breastfeeding, nutrition of breastfeeding mothers, psychological, rest and sleep, breast care, oxytoxin massage, contraceptive use, and breastfeeding techniques (Amimah, 2017).

Maternal nutrition is one of the factors in the process of breast milk production. One of the causes of breast milk is not smooth due to nutritional factors. The amount and quality of maternal food greatly affects the amount of breast milk produced. Breastfeeding mothers are higly recommended to obtain additional nutrition for milk production and mother's energy. Increasing breast milk can be done by consuming foods that are high in protein such as mung beans. Mung beans contain active compounds, namely polyphenols and flavonoids that function to increase the hormone prolactin. When the hormone prolactin increases, milk secretion will be maximized so that the quantity of breast milk will increase (Suskesty, 2017).

## METHOD

In this study using the research design of the Quasi Experimental method with the One Group Pretest-Postest design approach. The population in this study was all breastfeeding mothers 0-6 months who did not smoothly breastfeed in the Cibeureum Health Center Working Area, Cimahi City in October 2021 with a total of 32 mothers. The sampling technique in this study used total sampling, namely sampling with a total of 32 breastfeeding mothers 0-6 months who were not smooth breastfeeding. Analysis of data used in using quantitative analysis. The analysis of this study uses paired T test analysis.

## RESULT

**Table 1. Average Value of Breast Milk Volume Before Being Given Mung Bean Extraction**

| Variable | Mean | SD | Min | Max | Sample |
|---|---|---|---|---|---|
| Breast Milk Volume Before Being Given Green Bean mung bean Extraction | 44.22 ml | 14.091 | 22 ml | 85 ml | 32 |

Based on table 1 it can be explained that the average volume of breast milk of a nursing mother before being given the extraction of mung bean is 44.22 ml, and it was known from 32 respondents before being given the extraction of mung bean extract, the least volume of breast milk was 22 ml and the volume of breast milk was at most 85 ml.

**Table 2. Average Value of Breast Milk Volume After Being Given Mung Bean Extraction**

| Variable | Mean | SD | Min | Max | Sample |
|---|---|---|---|---|---|
| Breast Milk Volume After Being Given Green Bean mung bean Extraction | 70.13 ml | 17.616 | 37 ml | 95 ml | 32 |

Based on table 2 it can be explained that the average volume of breast milk of a nursing mother after being given the extraction of mung bean is 70.13 ml, and it was known from 32 respondents before being given the extraction of mung bean extract, the least volume of breast milk was 37 ml and the volume of breast milk was at most 95 ml.

**Table 3. T-Test Results of Breast Milk Volume in Breastfeeding Mothers 0-6 Months Before and After Being Given Mung Bean Extraction**

| Variable | Mean | Beda Mean | SD | SE | Sig | Sample |
|---|---|---|---|---|---|---|
| Breast Milk Volume Before Being Given mung beans extract | 44.22 ml | 25.91 ml | 14.091 | 2.491 | .000 | 32 |
| Breast Milk Volume After Being Given mung beans extract | 70.13 ml | | 17.616 | 3.114 | | 32 |

Based on table 3, it is known that the results of the T-test analysis that the mean difference was 25.91 ml, the average volume of breast milk after being given mung bean extraction was much greater than the average before being given mung bean juice extraction, and a Sig value of 0.000 was obtained with a ρ value <α (0.05) which means Ha was received, meaning that there was an effect of mung bean extraction on breast milk production in breastfeeding mothers 0-6 months.

## DISCUSSION

Based on the results of research conducted in the Cibeureum Health Center Working Area, Cimahi City in 2021. There are differences in the volume of breast milk in breastfeeding mothers that I have met On average, the age of the baby is 2 months, the average value of breast milk volume before being given mung bean extraction is 44.22 ml, and the average milk volume after being given mung bean extraction is 70.13 ml using a paired T-test with a p value of 0.000 < α (0.05) which means that there is an effect of mung bean juice extraction on breast milk production in breastfeeding mothers 0-6 months. Mung beans contain 20-25% protein. Protein in raw green beans has a digestibility of about 77%. The digestibility that is not too high is due to the presence of anti-nutritional substances such as antitrypsin and tannins (polyphenols) in mung beans. When the baby sucks the nipples of the mother's breasts, stimulation occurs in the nipples and areolas of the mother. These stimuli are passed to the pituitary through the nerphosvagus, then to the anterior lobe.

From this lobe will secrete the hormones prolactin and oxytocin, the increase in these two hormones is influenced by proteins, namely polyphenols and amino acids as well as vitamin B1 in mung beans. Polyphenols and amino acids affect the hormone prolactin which works to produce breast milk. Once breast milk is produced, the hormone oxytocin makes the cells around the alveoli contract, so the milk is pushed towards the breast nipple. The hormone oxytocin can work well because it is influenced by the content of vitamin B1 in mung beans which can make the mother's feelings calm and happy. The increase in the hormone oxytocin will make breast milk flow faster than usual (Widyastuti, 2014).

Breastfeeding mothers who consume mung bean extract directly will increase their nutritional and nutritional needs every day. This means that the more you consume mung bean extract, the more breast milk production will be and the smoother the milk production will be. So that for breastfeeding mothers, it is recommended to consume additional foods such as mung bean juice to be able to meet nutritional and nutritional needs every day.

Factors that can affect breast milk production are that mothers must have sufficient and extensive knowledge, because it is very important to be possessed by a mother who is breastfeeding. Breast milk production is also greatly influenced by the food that the mother

eats, if the mother's food regularly and sufficiently contains the necessary nutrients, it will affect breast milk production, because the breast milk-making glands cannot work perfectly without sufficient food.

To form a good production, the mother's diet must meet a sufficient amount of calories, proteins, fats, and vitamins and minerals. In addition, mothers are recommended to drink more approximately 8-12 glasses / day. And the dietary factors consumed in breastfeeding mothers are also very influential on breast milk production in breastfeeding mothers, as many mothers consume vegetables, nuts, and meat, mineral water can help to increase breast milk production in breastfeeding mothers.

## CONCLUSION

1. The average volume of breast milk of the mother before being given Mung Bean Extraction is 44.22 ml.
2. The average volume of breast milk after being given Mung Bean Juice Extraction is 70.13 ml.
3. There is an effect of Mung bean extraction on breast milk production in breastfeeding mothers at the Cibeureum Health Center in Cimahi City in 2021.

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