

## Adding Olive Oil to Milk to Weight Gain in Critical Preterm Babies

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### COLUMN ARTICLE

Nearly 1,500,000 premature babies (< 2500 gm) are born annually, most of them from South Asia and Africa, where annual statistical data showed that more than 1,000,000 of them die as result to the complications of prematurity [1]. When the mother gives birth prematurely, the supply of nutrients intended for the fetus that supports and maintains its growth during intrauterine life is suddenly stopped [2]. Accordingly, it is necessary to work to restore the necessary nutrients as quickly as possible after birth to achieve a growth pattern that is at least comparable to the growth of the fetus within the mother's uterine [2]. Since these babies have little nutritional needs different from full-time babies, it is necessary to improve nutritional status and calories per kilogram of weight [3]. And since a mother must breastfeed his/her baby for at least two years [4], it does not provide all the beneficial nutrients, so when a small amount of special supplements are added to breast milk either in the form of powder or liquid that may be strongly recommended [3]. In 1943, Benjaminetal., *et al.* compared a group of premature babies fed a breast milk with another group fed a skimmed milk plus an appropriate amount of olive oil, and the results of the study showed that breast milk even if supplied with vitamin D is not the best food for building and forming of the skeleton in preterm babies [5]. Since proper nutrition is essential in promoting the growth and development of

the child, including preterm infants [6], the addition of olive oil to the milk of those born prematurely it may help to gain more weight [3]. This may be because olive oil is not only a good source of essential energy made up of fatty acids, but it works to provide the body with vitamin A, D, E, K, e and its ability to dissolve them [7]. Growth studies in preterm infants have expressed concern about the quality and quantity of breast milk alone [8]. Investigating scientific evidence regarding the addition of olive oil to the milk of premature babies to gain weight is very scarce or almost non-existent, although Elaheh., *et al.* in Iran has proven that adding olive oil to the premature milk contributes to increasing their weight and reduces the duration of the hospital stay [3]. Moreover, the unsaturated fatty acids found in vegetable oils such as coconut oil and olive oil like (linoleic acid and linolenic acid) have a positive benefit on the neurological development of infants [8]. It is preferable that the added amount of olive oil be 0.5 ml per 30 ml of milk, whether breast milk or Pre Nan milk, provided that all hygiene requirements is applied in the process of preparing the mixture [3]. The daily intake is increased several days after birth to reach the ideal volume of 200 ml/kg of breast milk and 150 ml/kg of Pre Nan milk [3]. Many physicians do not recommend starting enteral nutrition until maturation of gastrointestinal motor function [9]. If the premature baby is unable to take nutrients orally, it will be compensated by Parenteral feeding, through which the foods made up of amino acids, fatty acids, vitamins,

and others are given to preserve the premature's life [9]. It should be noted that mothers should be advised to consume an appropriate amount of olive oil during pregnancy as this increases the chances of giving birth to a baby with a better weight and length even if the birth is premature [10]. Finally, the researcher advises careful monitoring of the growth of preterm infants throughout their stay in the hospital, and making monitoring of their growth part of routine follow-up with the necessity to avoid over or under-nutrition and prefers to adding some beneficial and healthy nutrients for the growth of preterm infants and giving these nutrients by trained health professionals to get satisfactory results.

### ACKNOWLEDGEMENT

I am very grateful to my Colleagues (Ahmed Yousef, Sarmad Qassim, Mohammed Khudhair, Idriss Saleh and, Saif Ali) for encouraging me to complete the editor's column and to meet the request of the Journal of Emergency Medicine and Critical Care on alternative medicine topics.

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