



## Breastfeeding and childhood leukemia incidence in developed countries

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**Introduction:** The prevalence of breastfeeding decreased in modern countries due to the social changes that happened in the last century. It is thought that breastfeeding for six months or longer (which is suggested by WHO) may reduce the risk of numerous childhood diseases. In modern countries, cancer is one of the leading causes of death among children. One of the most common cancer types is leukemia, accounting for around 30% of all childhood malignancies.

**Aim:** The purpose of this review was to summarize the current evidence on the relation of breastfeeding with the risk of childhood leukemia in developed countries.

**Materials & Methods:** We analyzed various studies on PubMed and JAMA, published after 1995, using the keywords “breastfeeding”, “childhood leukemia” and “protective effect”, and found 11 of them strongly related to the topic. To be included in the review, studies had to be case-control and to be conducted in developed countries.

**Results:** 8 of the 11 reviewed studies suggest that breastfeeding is associated with a decreased risk of childhood leukemia. The largest conducted study showed that any breastfeeding compared with never breastfeeding is associated with a 9% lower risk for childhood leukemia while being breastfed for 6 months or longer reduces the risk of the disease by 21%. Moreover, 5 studies suggest that prolonged breastfeeding significantly reduces the risk for leukemia. Additionally, one study found that being breastfed for 7-9 months has the best protective effect against leukemia.

**Conclusion:** While results have shown the positive effect of breastfeeding, greater and more recent studies are needed to suggest firm conclusions on the connection between lack of breastfeeding and the occurrence of childhood leukemia. In addition to all the previously known benefits, these findings provide additional reasons for health professionals to promote breastfeeding, a low-cost public health measure.

**Keywords:** breastfeeding, childhood leukemia, protective effect