

# Breastfeeding may offset leukemia risk

March 20 2015, by Carys Garland

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“We asked mums [in both groups] whether they breastfed and for how long, whether they used formula, when they introduced solid foods and so on,” Professor Milne says. Credit: Aurimas Mikalauskas

Breastfeeding could help reduce the risk of acute lymphoblastic leukemia in children, according to a WA-led study.

Acute lymphoblastic leukemia (ALL) and childhood [brain tumours](#) (CBT) are two of the most common childhood cancers.

Researchers examined whether [breastfeeding](#), introducing solid foods, or early diet were linked to a risk in developing these diseases.

Telethon Kids Institute Head of Cancer Epidemiology Elizabeth Milne says mothers of both healthy children and children with cancer completed a questionnaire about their child's nutritional intake until they were up to two years of age.

"We asked mums [in both groups] whether they breastfed and for how long, whether they used formula, when they introduced solid foods and so on," Professor Milne says.

"Then we looked at the proportion of mums of the kids with cancer who did these things, and the proportion of mums who did these things among the healthy controls, and determine whether there were statistical differences between the two groups."

They examined leukemic cells under a microscope and subjected the cells to genetic tests to determine any genetic abnormalities in the cells and determine the type of leukemia the child has.

Prof Milne says when researchers know the different sub groups of leukemia, they can study different risk factors to determine if breastfeeding or any other exposure has an effect on some sub types of the disease and not others.

## **Leukemia knowledge informs treatment**

"As we get more and more knowledge about genetics, it's coming to light there are distinct forms of leukemia and brain tumours," she says.

"Fifty years ago a child had lymphoblastic leukemia and that was one big group but now there are specific genetic characteristics of [leukemia](#) that determines the likely outcome and also points to which treatments would be most effective."

While there was a strong protective association between breastfeeding and ALL, the researchers could not find a link between breastfeeding and CBT.

Prof Milne says ALL is a disease involving lymphocytes, which are part of the immune system.

"Breastfeeding confers great benefits in terms of the development of the baby's immune system, and the protective association is likely due to these mechanisms," she says.

"Brain tumours are likely to develop through different mechanisms."

Prof Milne says children who were formula-fed were more likely to develop ALL, likely due to the absence of breastfeeding.

She says evidence linking a particular diet to ALL and CBT was only suggestive, and there was no reason to believe the factors could be linked to the diseases.

Provided by Science Network WA

Citation: Breastfeeding may offset leukemia risk (2015, March 20) retrieved 20 April 2024 from <https://medicalxpress.com/news/2015-03-breastfeeding-offset-leukemia.html>

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