

Spotlight

By M.O.

Time Children Spend with Children

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What do daycare and siblings have in common? Both foster social contacts among children and enhance chances that infectious pathogens are being exchanged. A new study performed at the University of California Berkeley provides intriguing evidence that longer hours spent in daycare and having a sibling protect children from acute lymphoblastic leukemia (ALL). Interestingly, exposure early in life (daycare by the age of 6 months) was critical to protect from ALL later in life. This risk reduction was not observed in Hispanic children, who generally lived in larger households and attended daycare less frequently before the age of 6 months than non-Hispanic white children.

However, when the researchers examined ear infections during infancy as a direct measure of exposure to infection, they found that having ear infections by the age of 6 months was associated with a marked risk reduction of childhood ALL both in Hispanic and non-Hispanic children (OR 0.45 and 0.44, respectively). No association with other types of infections, i.e., diarrhea, cough, or eye infections, was observed, pointing to a unique role of early immunological responses to ear infections in the protection from childhood ALL. The question as to how this works mechanistically remains open. But the study provides important support for the “delayed infection” hypothesis, in which a delay in common infections caused by a “sterile” environment where children are isolated from each other is associated with an enhanced risk to develop ALL, and shows initial evidence that this hypothesis is operative in different ethnic groups.