

# Regular breakfast helps reduce lead poisoning in children

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It is known that fasting increases lead absorption in adults and consequently regular meals and snacks are recommended for children to prevent lead poisoning. New research published in BioMed Central's open access journal *Environmental Health* demonstrates that having a regular breakfast is associated with lower blood lead levels in children.

Data from the China Jintan Child Cohort Study compared blood lead levels to social factors, eating patterns and intake of micronutrients. While there were no differences in breakfast patterns for age or gender of the child there were differences in blood lead levels. The risk of lead poisoning in boys was almost twice that of girls, and four and five year olds had twice the risk of lead poisoning than three year olds. Nevertheless, when variables, such as age and the gender of the child were taken into account, [children](#) who ate a regular breakfast had 15% lower blood lead levels than those who skipped breakfast.

Breakfast habits were determined by family tendencies with both the parents and grandparents of children who ate breakfast tending to be professionals or more educated. Dr Jianghong Liu said, "Parental or caregivers' characteristics, including education and occupation, are major determinants of breakfast frequency. Consequently improving parent's knowledge about the links between nutrition and blood lead might help to prevent [lead poisoning](#) in these children."

This NIH/NIEHS-funded study was carried out by scientists led by Dr. Jianghong Liu of the University of Pennsylvania.

**More information:** Regular Breakfast and Blood Lead Levels among Preschool Children Jianghong Liu, Linda McCauley, Charlene Compher, Chonghuai Yan, Xiaoming Shen, Herbert Needleman and Jennifer A Pinto-Martin *Environmental Health* (in press)

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