



# Can residential pesticides be one of the risk factors for developing diabetes in infants?

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## Abstract:

Exposure to pesticides may result in abnormal glucose metabolism, increasing risk of diabetes. The study was to investigate the relationship between maternal and infants residential pesticides exposure and the onset of diabetes in these infants. Both the diabetic infants and the control groups were recruited from the Outpatient Clinic for Diabetic children and Well Baby Clinic, Assiut University Children Hospital. The study included 72 infants divided into 2 groups study group (40 diabetic infants) and the control group included (32 infants). A structured questionnaire sheet was designed to collect data about mothers and their infants. The study showed that there was statistically significant difference considering the items of no consanguinity among parents of infants in the study group compared to those in the control group (52.5 % Vs. 40.6%, respectively  $P \leq 0.02$ ). The percentage frequency of maternal exposure to residential pesticides was significantly higher for the patients group in comparison to the control group. (65% Vs. 31.2%, respectively,  $P$ - value 0.0001). Similarly, the percentage frequency of the diabetic infants exposed to residential pesticides was significantly higher than that for the control group. (47% Vs. 28.1%, respectively,  $P \leq 0.01$ ). Moreover, the percentage frequency of exposure of infants to residential pesticides per week was significantly higher among the study group in comparison to their partners in the control group.  $P = 0.0001$ . In conclusion: Exposure of infants to residential pesticides both during pregnancy and after birth may be considered as a risk factor for developing diabetes mellitus in these infants. The study recommended that, further studies are needed to study the relationship of exposure to residential pesticides for developing diabetes by using the biochemical markers to detect the level of metabolites of these pesticides in these populations.

## Keywords:

residential pesticides, diabetes, infants

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