

# New study of youth with type 1 diabetes connects 'honeymoon period' with lower LDL cholesterol

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A new study by UMass Medical School physician-scientist Benjamin U. Nwosu, MD, finds that children with type 1 diabetes who experienced a partial clinical remission, or "honeymoon phase," had significantly lower low-density lipoprotein (LDL), or "bad" cholesterol, five years after diagnosis. The honeymoon period is the brief period when some children with new onset type 1 diabetes are able to produce some insulin resulting in improved glucose control. This new finding makes the case for initiating lipid profile monitoring when type 1 diabetes is first diagnosed, rather than waiting for as much as five years, as recommended by current clinical guidelines.

"This is the first study to delineate the differences in lipid profiles of children with type 1 [diabetes](#) after stratifying them by [honeymoon](#) status," said Dr. Nwosu, associate professor of pediatrics in the Division of Pediatric Endocrinology. "We found that patients who went through the honeymoon period showed a lipid pattern similar to that of healthy children, as opposed to the nonremitters who had significantly higher LDL levels."

Previous studies showed that children who are newly diagnosed with type 1 diabetes and begin to receive treatment may experience a period during which they are still secreting some insulin on their own and their blood glucose levels can temporarily be restored to normal or near normal levels. However, patients who do not undergo this honeymoon may experience worse outcomes over the long term—including cardiovascular disease, which this study shows may be presaged by high LDL [cholesterol](#).

Published by *PLOS ONE* on May 16, the study of 123 subjects ages 9 to 14 with type 1 diabetes of four to five years duration, found significantly lower LDL cholesterol in those who underwent a

honeymoon phase, after adjusting for patients' age, blood sugar control, body mass index or onset of puberty. This early divergence in the levels of [bad cholesterol](#) may explain the dichotomy in the prevalence of long-term complications in type 1 diabetes between remitters and nonremitters. It also offers a pathway for early and targeted lipid monitoring in type 1 diabetes.

"We are the first group to report a significant difference in LDL cholesterol between remitters and nonremitters within the first five years of diagnosis of T1D in [children](#)," said Nwosu. "That opens a big area of research to explore the dichotomy further."

**More information:** Benjamin Udoka Nwosu et al. Children with type 1 diabetes who experienced a honeymoon phase had significantly lower LDL cholesterol 5 years after diagnosis, *PLOS ONE* (2018). DOI: [10.1371/journal.pone.0196912](https://doi.org/10.1371/journal.pone.0196912)

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