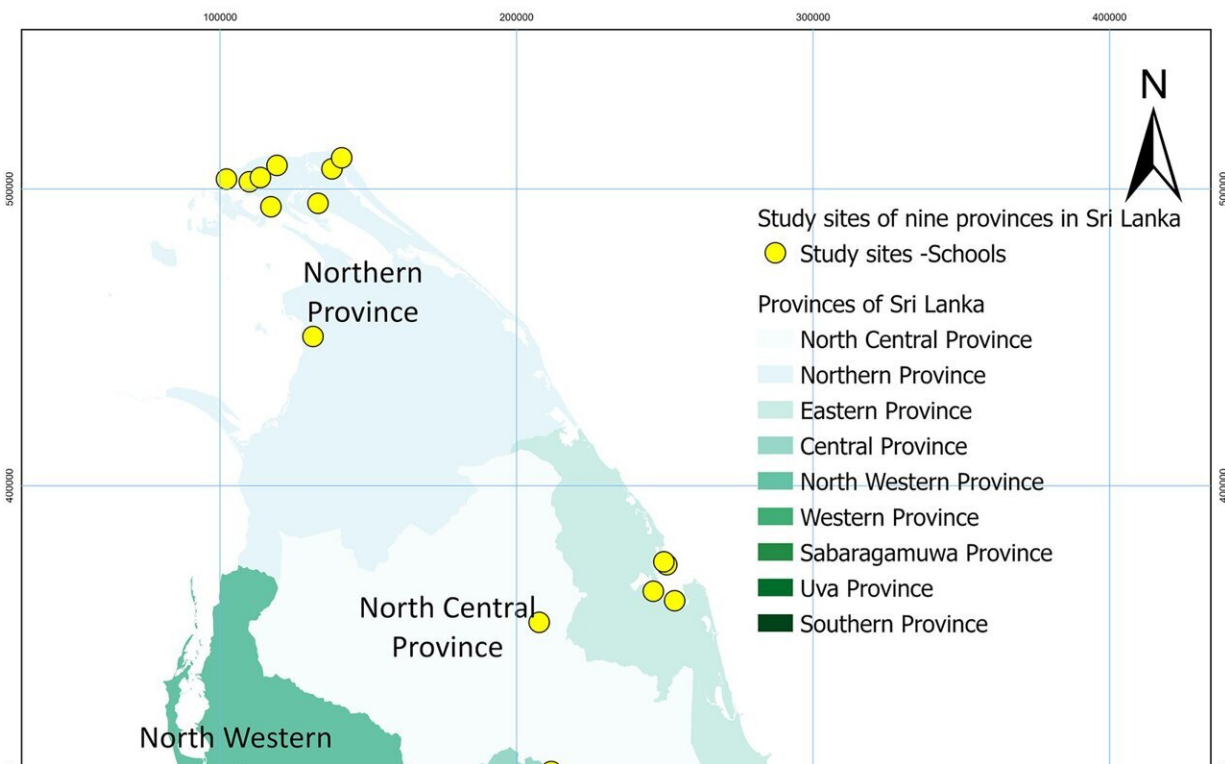


# Childhood obesity tied to double the risk of dengue hospitalization

July 2 2024, by Stephanie Soucheray

Map of the study sites of Nine provinces in Sri Lanka



A map of Sri Lanka showing the locations of recruitment of children from the 9 districts in Sri Lanka. Credit: *PLOS Neglected Tropical Diseases* (2024). DOI: 10.1371/journal.pntd.0012248

Obesity in children is associated with double the risk of hospitalization for dengue virus infection, according to a study published in *PLOS*

*Neglected Tropical Diseases.*

[The sero-surveillance study](#)

[is based on a cohort of 4,782](#)

[school children](#) from 10 to 18 years old in Sri Lanka from September 2022 to March 2023. Dengue is endemic in Sri Lanka.

During the study period, 182 children (15.8%) were hospitalized for dengue. The authors found that, of the seropositive children with body mass indexes (BMIs) higher than the 97th percentile, 12 of 66 (18.2%) were hospitalized, compared to 103 of 1,086 children (9.5%) with a BMI in the 96th percentile or less.

## **Girls also at higher risk**

Children with the higher BMIs were twice as likely to be hospitalized for dengue than children with lower BMIs, with an odds ratio [OR] of 2.1 (95% confidence interval, 1.1 to 3.9). Girls were also at a greater risk of hospitalization than were boys.

"Obesity is associated with an increase in risk of severe disease due to many other infections such as influenza and COVID-19," the authors wrote. "While public education programs have focused on the importance of reducing obesity to prevent occurrence of diabetes, cardiovascular diseases and cancer, there has been limited focus on the impact of obesity on many [infectious diseases](#)."

The authors said the findings confirm other studies on the links among obesity, diabetes, and severe dengue. As dengue cases rise across much of the globe and BMIs also increase, the authors said it would be crucial to further investigate the risk of hospitalization due to [obesity](#).

**More information:** Chandima Jeewandara et al, Is the rise in childhood obesity rates leading to an increase in hospitalizations due to dengue?, *PLOS Neglected Tropical Diseases* (2024). [DOI: 10.1371/journal.pntd.0012248](https://doi.org/10.1371/journal.pntd.0012248)

Provided by University of Minnesota

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