

Major study highlights weight differences among 3-19 year-olds with type 1 and 2 diabetes

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A major study of three to 19 year-olds has provided vital data on the weight problems faced by the growing number of children and young people with type 1 diabetes, which is more prevalent in younger age groups than type 2 diabetes.

The findings of the SEARCH for Diabetes in Youth Study Group, published online by *Pediatric Diabetes*, show that children and youths with [type 1 diabetes](#) are more likely to be overweight than those without diabetes.

Researchers from six clinical centres across the USA took part in the study, which compared data from 3,953 diabetics, aged between three and 19, taking part in the SEARCH study, with data for 7,666 non-diabetic children and youths from a national US study.

"The links between [type 2 diabetes](#) and excess weight are well documented, but are less clear in type 1 diabetes which affects less than 10 per cent of people with diabetes but is more common in children and young people" explains lead researcher Dr Lenna Liu from the Center for Child Health, Behavior and Development at Seattle Children's Hospital USA.

"When people have diabetes their blood glucose can become too high" she continues. "In type 1 diabetes, this happens because an autoimmune

process has destroyed the insulin-producing [beta cells](#) in the pancreas, allowing [glucose levels](#) to rise. Type 2 diabetes occurs when not enough insulin is being produced or the insulin is not working properly.

Traditionally a disease in overweight adults, type 2 diabetes is increasingly being seen in younger patients as childhood [obesity](#) levels increase."

The population-based study looked at a racially and ethnically diverse group of children and young people with diabetes and compared them with the non-diabetic control group.

Most of the children and youths who took part in the study had type 1 diabetes (89 %) and tended to be younger - 49% of the type 1 group were aged three to 11, compared to 7% of the type 2 group.

The type 1 diabetes subjects were equally split between male and female and three-quarters (75%) were non-Hispanic White, 12% were Hispanic, 9% were African American, 4% were Asian/Pacific Islanders and 1% were American Indian.

Key findings included:

- Non-Hispanic White males aged from three to 11 with type 1 diabetes were more likely to be overweight/obese than females (34% versus 27%) while females were more likely to be overweight/obese when they were 12-19 years of age (37% versus 29%).
- African American females were significantly more likely to be overweight/obese in both age groups than males (54/55% versus 36/36%) but there were no significant differences between Hispanic males and females.

- More than a fifth of the children and youths with type 1 diabetes (22%) were overweight, compared with 10% of those with type 2 diabetes and 16% of those without diabetes.
- When this was broken down by race/ethnicity, 28% of Hispanic children and youths with type 1 diabetes were overweight, as were 24% of Asian/Pacific Islanders, 23% of African Americans, 21% of non-Hispanic Whites and 15% of American Indians.
- The figures for children and youths with type 2 diabetes showed that 15% of Asian/Pacific Islanders were overweight, as were 14% of non-Hispanic Whites and 11% of Hispanics.
- Approximately one in eight children and youths with type 1 diabetes (13%) were obese, less than the 79% of subjects with type 2 diabetes and the 17% without diabetes.
- When this was broken down by race/ethnicity, 20% of African American children and youths with type 1 diabetes were obese, as were 17% of Hispanics, 17% of Asian/Pacific Islanders and 11% of non-Hispanic Whites.
- The figures for children and youths with type 2 diabetes showed that 91% of African Americans were obese, as were 88% of American Indians and 75% of Hispanics.

"Knowing the prevalence of overweight and obesity in children and young people with type 1 and type 2 diabetes is very important as it helps us to identify those individuals - by age, gender or race/ethnicity - who face the greatest risk of the clinical complications associated with excess weight" say Dr Liu.

"We feel that further studies are critical to help us to better understand how weight causes complications in the growing number of children and young people with [diabetes](#) and influences the diagnosis and treatment they receive."

More information:

www3.interscience.wiley.com/journal/118545642/home

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