

Even if they don't reduce body fat, obesity prevention programs can lower kids' blood pressure

March 28 2014, by Pat Donovan



Even modest elevations in the BP of adolescents, according to recent research, can pose cardiovascular problems later in life.

(Medical Xpress)—One of the serious health consequences of obesity is elevated blood pressure (BP), a particular problem in children because research has found that high BP in children usually follows them into adulthood, carrying with it a wide range of possible negative consequences.

Even modest elevations in the BP of adolescents, according to recent

research, can pose cardiovascular problems later in life.

A systematic review and meta-analysis of published studies of the effect of child obesity intervention programs on [blood pressure](#) has found that whether such programs prevented obesity or not, many of them reduced BP in [children](#). It also found that the most effective programs in this regard promoted both healthy eating and physical activity.

The study, one of the first of its kind, "Effect of Childhood Obesity Prevention Programs on BP: A Systematic Review and Meta-Analysis," was led by epidemiologist Youfa Wang, MD, PhD, of the University at Buffalo and conducted by researchers from Johns Hopkins University, UB and other institutions.

It was published online in the journal *Circulation* on Feb. 19, 2014 in advance of print publication.

Wang said, "Of the 28 obesity interventions with complete data that we analyzed, 13 (46 percent) had a favorable effect on both adiposity and BP and 11 interventions (39 percent) had a significant effect on the reduction of BP, even if they did not affect adiposity.

"It is important to identify obesity intervention programs that can help children develop healthy lifestyles and keep BP at an optimal level," he says, "because these programs help them avoid many long-term [health consequences](#)."

Wang's research team, now based at UB, is working on projects in the U.S. and abroad funded by the National Institutes of Health (NIH) that aim to assess the additional benefits of obesity prevention programs for children and to develop the most effective programs possible.

The team also is using transnational comparison studies to analyze

factors suspected of contributing to the global obesity epidemic.

Wang, an internationally recognized obesity expert, is professor and chair of the Department of Epidemiology and Environmental Health in the UB School of Public Health and Health Professions. The study's first author, Li Cai, PhD, was a postdoctoral fellow who worked with Wang at Johns Hopkins.

Although many scientists contributed data to the current study, the additional principle contributors are Renee F. Wilson and Jodi B. Segal of the Bloomberg School of Public Health, Johns Hopkins University, and Miyong T. Kim, of the University of Texas, Arlington.

This study was built upon previous comprehensive research led by Wang at Hopkins and funded by the U.S. Department of Health and Human Services' Agency for Healthcare Research and Quality (AHRQ), which resulted in an 835-page full report published by AHRQ in June 2013.

The aim of the AHRQ-funded study was to learn what intervention programs worked to prevent [obesity](#) in children. Wang calls it "a comprehensive and demanding two-year effort by more than 20 investigators from multiple institutions." It examined more than 130 studies published between 1985 and 2013 that were conducted in high-income countries worldwide.

Wang also points out that the strong evidence of childhood BP tracking into adulthood and cited above was reported by members of his research team based on more than 50 cohort studies of diverse populations worldwide. That research, which also noted the importance of early intervention, was published in *Circulation* in 2008.

Provided by University at Buffalo

Citation: Even if they don't reduce body fat, obesity prevention programs can lower kids' blood pressure (2014, March 28) retrieved 26 April 2024 from <https://medicalxpress.com/news/2014-03-dont-body-fat-obesity-kids.html>

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