**EFFECT OF VARIOUS CHILDHOOD ANTHROPOMETRIC MEASURES ON ADULTHOOD CAROTID INTIMA-MEDIA THICKNESS: A SYSTEMATIC REVIEW AND META-ANALYSIS**

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*Background*: Various studies have examined the effect of different childhood anthropometric measures on adulthood preclinical atherosclerosis measured as carotid intima-media thickness (cIMT).

*Objectives*: We aimed to establish summary estimates for the relationship between childhood anthropometric measures and adulthood cIMT.

*Methods*: A systematic literature search was conducted to identify studies which assessed the relationship between childhood anthropometric measures and adulthood cIMT. We included studies which enrolled children and adolescents between ages 6 months to 19 years and followed them up for at least 4 years. For the meta-analysis, the effect sizes were first converted into a common effect size, standardized regression coefficients.

*Results*: Of the 121 studies found, twelve studies were included in the meta-analysis for the association between childhood BMI and adulthood cIMT. A 1 SD increase in adolescent BMI increased early adulthood cIMT (20-45 years) by 0.06 mm (95% CI= 0.04, 0.07) and a 1 SD increase in BMI during childhood and adolescent lead to an increase of 0.10 mm (95% CI= 0.07, 0.12) in early adulthood cIMT. A total of seven studies were included to examine the relationship between childhood and adulthood BMI on adulthood cIMT. The pooled findings showed that subjects who were overweight/obese as children and adults had significantly higher cIMT measurements than subjects who were who always had normal BMI. Also, the subjects who were overweight/obese as children but had normal BMI as adults had cIMT measurements similar to those subjects who always had normal BMI. Both childhood weight and skinfold thickness were found to have a positive relationship with adult cIMT.

*Conclusion*: Not only BMI but other childhood anthropometric measures have been shown to have an effect adulthood cIMT.

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