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***IgG antibodies against food antigens are correlated with inflammation and intima media thickness in obese juveniles.***

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**OBJECTIVE:** Systemic low grade inflammation may contribute to the development of obesity, insulin resistance, diabetes mellitus and atherosclerotic vascular disease. Food intolerance reflected by immunoglobulin G (IgG) antibodies may predispose to low grade inflammation and atherogenesis. We examined the relationship between IgG antibodies specific for food components, low grade inflammation and early atherosclerotic lesions in obese and normal weight juveniles. **RESEARCH METHODS AND PROCEDURES:** We determined IgG antibodies directed against food antigens, C-reactive protein (CRP) and the thickness of the intima media layer (IMT) of the carotid arteries in 30 obese children and in 30 normal weight children. **RESULTS:** Obese juveniles showed a highly significant increase in IMT ( $p=0.0001$ ), elevated CRP values ( $p=0.0001$ ) and anti-food IgG antibody concentrations ( $p=0.0001$ ) compared to normal weight juveniles. Anti-food IgG showed tight correlations with CRP ( $p=0.001/r=0.546$ ) and IMT ( $p=0.0001/r=0.513$ ) and sustained highly significant in a multiple regression model. **DISCUSSION:** We show here, that obese children have significantly higher IgG antibody values directed against food antigens than normal weight children. Anti- food IgG antibodies are tightly associated with low grade systemic inflammation and with the IMT of the common carotid arteries. These findings raise the possibility, that anti-food IgG is pathogenetically involved in the development of obesity and atherosclerosis.

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