

Paraoxonase's (PON1) Activity, an HDL-Associated Enzyme, in Obese Children
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Obesity is a multifactorial disease, whose incidence has increased not only among adults but in children as well. The correct orientation and treatment of obese children may avoid the development of adult obesity and of other associated diseases. This study had the purpose to evaluate the seric activity of paraoxonase, an antiatherogenic HDL-associated enzyme, in children and teenagers with severe obesity, comparing them to the others parameters. A transversal study was performed to analyze 24 obese children (between 7 and 15 years) from the Obesity and Dyslipidemia Ambulatory of the Pediatrics Department of Faculdade de Medicina do ABC. The participants were submitted to anthropometric, nutritional, economic and social evaluations. Fasting glucose levels, total seric cholesterol and fractions, seric triglycerides and serum paraoxonase activity were measured. Serum activity of PON1 enzyme using paraoxon as substrate were between 31 U/mL and 323 U/mL without addition of sodium chloride and between 52 U/ml and 538 U/ml in the presence of the salt. Arilesterase activity of PON1 using phenylacetate as substrate varied between 43 U/ml and 141 U/ml. Both, arilesterase and paraoxonase activities of PON1 were not significantly correlated to any of the other parameters evaluated, except for the fldBMZ parameter. Measurements of paraoxonase activity have shown inverse association with several diseases, including obesity. Few studies were, however, performed in children. Measurements of paraoxonase activity in obese children could be important to identify children with higher risk to develop cardiovascular and other diseases.

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