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Insulin-resistance and the alcat food intolerance test: Evidence of a new approach

Insulin-resistance (IR) is defined as the inability of a known quantity of exogenous or endogenous insulin to increase glucose uptake and utilization. Several mechanisms have been proposed as possible causes underlying the development of IR and the insulin resistance syndrome. It occurs as part of a cluster of cardiovascular-metabolic abnormalities commonly referred to as “the metabolic syndrome”. This may lead to the development of type 2 diabetes, accelerated atherosclerosis, hypertension, dysmenorrhea, hirsutism, and polycystic ovarian syndrome depending on the genetic background of the individual developing the insulin resistance. The aim of this study was to assess, in 123 female and 35 male (mean age 42 ± 10.3 , range 19-75) volunteers, whether IR could be partly related to a dietary sugar intolerance and whether there could be a correlation between the alcat intolerance test and a mutation of the *tcf7l2* gene (it promotes the transcription of the pro-glucagon and plays a key role in the development of the Langerhans islands). Results evidenced that subjects with an intolerance to sugar, have also shown a statistically significant complete or incomplete alteration of the *tcf7l2* genetic test. Based upon these findings, our study demonstrated that there is a clinical correlation between the alcat food intolerance test and the IR. The positivity to the alcat test of one of the sugars tested (fructose, sugar cane and sugar beet) indicates, in the majority of the subjects, the presence of a mutation of the gene *tcf7l2* and could contribute to the prevention and treatment of the IR.

Biography

Pierluigi Pompei is working as an Associate Professor of Pharmacology, Pharmacotherapy and Sport Nutrition, Dept. of Experimental Medicine and Public Health, University of Camerino. He is author of over 50 international publications on peer-reviewed journals, several chapters of scientific books, has 1 international patent, and attended hundreds of conferences and meetings.

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