Prof. Livio Luzi, M.D.

Livio Luzi, M.D., is Professor of Endocrinology at the University of Milan and is the Director of the Center for Research on Metabolism at the IRCCS Policlinico San Donato in Milan. Prof. Luzi was also Adjunct Professor of Surgery at the University of Miami and a Visiting Scientist at the Diabetes Research Institute.

After receiving his medical degrees from the University of Milan, Prof. Luzi completed research fellowships in Endocrinology at Yale University and in Diabetes/Metabolism at the University of Texas Health Science Center. From 1993-1996 he was on the faculty of Brigham and Women's Hospital, Harvard Medical School as an Assistant Professor, before returning to Italy.

Prof. Luzi's work focuses on the study of the physiology and pathophysiology of metabolism in different clinical conditions such as acute and chronic diseases related to the cardiovascular such as, diabetes, obesity, high blood pressure, gout, abnormal homocysteine cycle, insulin resistance, metabolic syndrome, dyslipidemia, rare diseases/genetic metabolism with phenotypic manifestations at cardiovascular level.

High-carbohydrate vs. low-carbohydrate diets in diabetes: effect on metabolic control

Diabetes mellitus is a disease characterized by an alteration of the glucose-insulin system. Life-style interventions (diet and physical activity)are a cornerstone in the management of type 1 and type 2 diabetic patients and are strictly interrelated. High-carb diets carry an higher glucose load, that furnish more ready-to-use energy for physically active patients, but, conversely, induce higher glycemic excursions in sedentary diabetics. Low-carb diets have a lower glycemic index and an higher percent of protein and fats, both relevant for endurance exercise.

Herein we will outline the metabolic effect of high-carb and low-carb diets in diabetic patients both with a sedentary life-style as well as with a physically active life (via aerobic and anaerobic sports), also in relation with specific pharmacological treatment.

General guide-lines on dietary and physical exercise recommendations in diabetes mellitus will be summarized and clinical implications of high- vs low-carb diets will be finally discussed.

Learning objectives*:*

1. Concepts of glycemic index, glycemic load, insulinemic index, insulin sensitivity, insulin secretion;
2. Metabolic effects of aerobic vs anaerobic exercise in type 1 and type 2 diabetes
3. Life-style interventions in diabetes: guidelines and novel strategies