



The Effectiveness of a Comprehensive and Personalized Plan of Action in the Prevention and Management of Overweight and Obesity in Childhood and Adolescence

George Papadopoulos¹, Ioanna Farakla¹, Sophia Bakopoulou¹, Christos Giannios¹, Eleni Kouli¹, Alexandra Georgiou^{1,2}, Stamatis Romas¹, Eleni Terzioglou¹, Eleni Koniari¹, Chryssanthi Papathanasiou¹, Penio Kassari¹, Nicolas Nicolaides¹, Elena Critselis¹, Yannis Manios², Evangelia Charmandari^{1,3}

¹Division of Endocrinology, Metabolism and Diabetes, First Department of Pediatrics, University of Athens Medical School, 'Aghia Sophia' Children's Hospital, Athens, 11527, Greece;

²Department of Nutrition, Harokopio University of Athens, Athens, 17671, Greece;

³Division of Endocrinology and Metabolism, Biomedical Research Foundation of the Academy of Athens, Athens, 11527, Greece

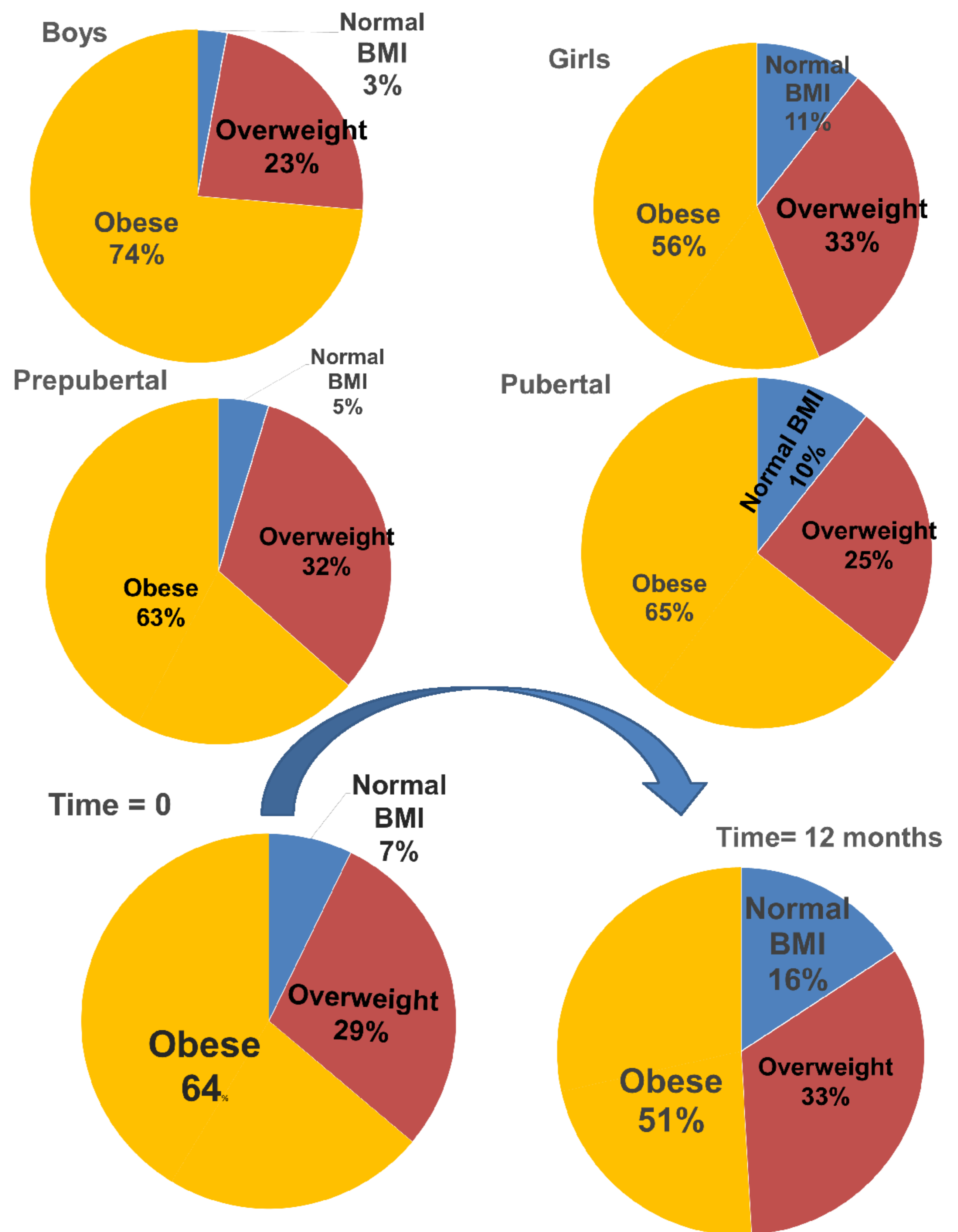
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Background: Obesity in childhood and adolescence represents a major health problem of our century, and accounts for a significant increase in morbidity and mortality in adulthood.

Objective and Hypotheses: To investigate the effectiveness of a comprehensive and personalized plan of action in the prevention and management of overweight and obesity in childhood and adolescence.

Methods: Four hundred seventy children and adolescents (mean age \pm SEM: 9.9 \pm 0.2 yrs; 205 males, 265 females; 274 prepubertal, 196 pubertal), who attended an out-patient clinic for the prevention and management of overweight and obesity, were studied prospectively for one year. According to their body mass index (BMI), subjects were classified as obese, overweight or of normal BMI. All subjects were evaluated by a multi-disciplinary team at frequent intervals, and received comprehensive personalized advice on diet, exercise and psychologic management. Detailed endocrinologic evaluation was performed at the beginning and the end of the study. The study was approved by the Ethics Committee and written informed consent was obtained by the parents in all cases.

Results: At initial evaluation, 64% of subjects were obese, 29% overweight and 7% of normal BMI. A significantly higher number of boys were obese compared with girls (74% vs. 56%, $P < 0.001$), while a higher number of girls were overweight compared with boys (33% vs. 23%, $P < 0.001$). Preadolescent children were more likely to be overweight than adolescents (32% vs. 25%, $P = 0.044$).



Following one year of the multi-disciplinary management interventions, obesity decreased from 64% to 51%, normal BMI increased from 7% to 16%, and cardiometabolic indices improved substantially.

Conclusions: A comprehensive and personalized multi-disciplinary management is effective in decreasing the prevalence of obesity in childhood and adolescence.

