

## **4P's strategies in obesity**

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Obesity decreases health and life expectancy and quality of life, mainly because of its metabolic, psychological, and oncological complications. The traditional care based on standard lifestyle goals, has proved limited long term efficacy to combat the disease. Thus, for long time, prevention has been considered the best tool to overcome the obesity epidemics. As early obesity tends to track into adulthood, prevention should be offered very early in life. Unfortunately, population-based programs targeting pregnant women or infants/toddlers have failed to show interesting results. These programs have generally focused on lifestyle and responsive feeding. Prevention could be more effective if it targets subgroups that are at increased risk to develop obesity because of socio-cultural and/or biological drivers, and if it uses precise and participative strategies taking into account the individual mechanisms leading to obesity. For example, the responsive feeding strategy, which is based on trusting the child's appetite regulation, cannot be effective if the child has a strong genetic predisposition to have a chronic positive energy balance until the achievement of a high body mass index. In this case, environmental protection and portion control may be more effective. Some targeted trials taking into account specific biological or socio-cultural etiologies of obesity, have been performed or are ongoing, bringing hope for upcoming evidence about effective preventive strategies. Of course, to guarantee a good impact in decreasing the overall prevalence of obesity, it is important that the targeted subgroups effectively capture the potential future patients. In other words, it is important to make good prediction. Only target trials based on predictive models whose accuracy is verified, will inform us on their population-level impact. Finally, 4-P strategies, including prediction, prevention, precision and participation, should be addressed also to treating obesity. In fact, the care should include all possible tools to predict the treatment response, to prevent the patient drop-out, and to make the treatment person-centered and precise. In this view, a large spectrum of tools, going from social support to precise drugs, should be adopted.