

Dietary restriction to prevent fattening/insulin resistance/overall inflammation

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The division had a start when I read the Handbook of Physiology of the American Society for Physiology, A researcher should have different objective than physicians. In 1967, I was charged with the treatment of malnutrition and diarrhea in the University of Florence. I read the handbook to become aware about mucosal digestion and absorption. At that time, these points had to be diagnosed to treat malnourished children. Before beginning any research, I intended to adapt intake to intestinal physiology. I read that 50-60% or more immune cells of the human body reside in the mucosa of small intestine [1-3]. Bacteria grow in small and large intestine by slow energy production without oxygen use. All fibers and small amounts of sugars, carbohydrates, proteins, fats escape intestinal digestion and provide energy for one bacterial replication per day [4]. Food avoided absorption due either to excessive intake or to incapability to be digested. Fibers like cellulose and pectin escape digestion and promote slow growth of poorly immunogenic bacteria species and prevent harmful microbiome developments. Bacterial growth becomes immunogenic and harmful when energy dense food is largely available. In the mammal intestine, bacterial indiscriminate, harmful growth is proportionate to a positive energy balance in blood and in body. Thus, I studied bacteria number on intestinal mucosa in time after last meal. A longer interval from the meal produced a decrease in bacteria number. An increase in mucosal and overall immune stimulation is associated with bacteria growth on intestinal mucosa, with preprandial blood glucose (BG) and with a slowdown of meal absorption [5,6]. Energy balance directly affects these correlated variables either increasing or lowering the conflict between bacteria activity and mucosal immune response. The initial hunger meal pattern (IHMP) was devised to reduce bacterial growth and reduce the mucosal immune response at nutrient absorption. This conflictual state between bacteria and mucosa has been confirmed [7,8]. The many successful cures of gastrointestinal pathologies suggest that the conflictual theory that was used for recovery was objective, i.e. reproduced the events in small and large intestine. In this view, the question: "what food provokes cancer?" is absurd. Malignancy needs to be surveilled and prevented through an increase in efficiency of immune system [9]. Lower intestinal stimulation may be the way to achieve higher immune efficiency also in the body [2,3,5,10,11]. Thus health (general immune efficiency) follows the relation between energy intake and expenditure. Hundreds or thousands of bacterial species live and multiply in the intestine, 5-15% of the species elicit IgG production, the intestinal mucosa responds with an immune reaction and, lastly, the immune stimulation by bacterial antigens spreads to all body tissues (Overall Subclinical Inflammation). Thus, many observations sustain the conflictual view for the absorption of every energy dense food. Now, hundreds of scientific Journals ask me for submitting articles. I am alone and cannot produce hundred articles that are new and different each other to repeat the statements about the conflictual absorption and the IHMP solution for health maintenance

and recovery. Yet, the upsurge of malignant and vascular risks, not to mention malnutrition that affects one billion of malnourished people, impose to spread the awareness on this issue [12-15].

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