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# New Dimensions for Studying Obesity

Obesity had become one of the largest health and social problems nowadays. With huge percentage of population of the developed countries suffer from obesity, there is significant increase in interdisciplinary research of that problem. Despite broad scope of related research its major focus is on the traditional explanations of obesity. The latter includes genetics and such lifestyle features as lack of physical activity and consumption of fat rich and high calorie food. Correspondingly, physical exercise and changing diet in favor of having more fruits and vegetables and less greasy food is recommended. Following these recommendations is considered to be a solution of the problem.

The author argues that traditional explanations hold for variation in obesity level among certain segments of population and could account for some variation other segments. However, in author's view, these explanations fail to account for the whole amount of variation in obesity among certain chunks of population, and for some of population they account for none of it. There are many examples that could illustrate this point. For instance, in some countries where eating greasy food is a tradition and doing regular workouts is not a commonplace for everyone, obesity level is relatively low (e.g. in France).

There are also many examples of how people immigrate to a foreign country and gain weight rapidly despite exercising more and eating less fat and hi calorie food (certainly, maintaining same genes through the lifetime). Attempts to point out for differences in genetics among nations and ethnic groups as a decisive factor accountable for variations in obesity level across countries are largely disproved by the fact that in US, a melting pot for basically all racial and ethnic groups, obesity became a huge problem for each of these groups. Also, pointing out for lack of physical activity as the other major factor contributing to obesity, raises the question of why obesity level among those who cannot exercise at all, like handicapped in a wheelchairs, is lower than the one of population that reside in "car cultures" where is still some room for exercising and walking.

Inability of traditional explanations to account for all factors contributing to obesity have led the author to search for alternative explanations that could serve as complimentary ones in some cases and could be the primary ones in others. In author's view, several following factors should be taken into account and researched in regards to obesity problem:

1. Hybreeding Foods.
2. Depletion of Soil.
3. Consumption of Prematurely Picked Fruits and Vegetables.
4. Food Additives (Preservants, Stabilizers).
5. Mental States (e.g. Depression).

The way these factors could contribute to slowdown of metabolism and obesity, is represented in the following diagrams:

Figure 1

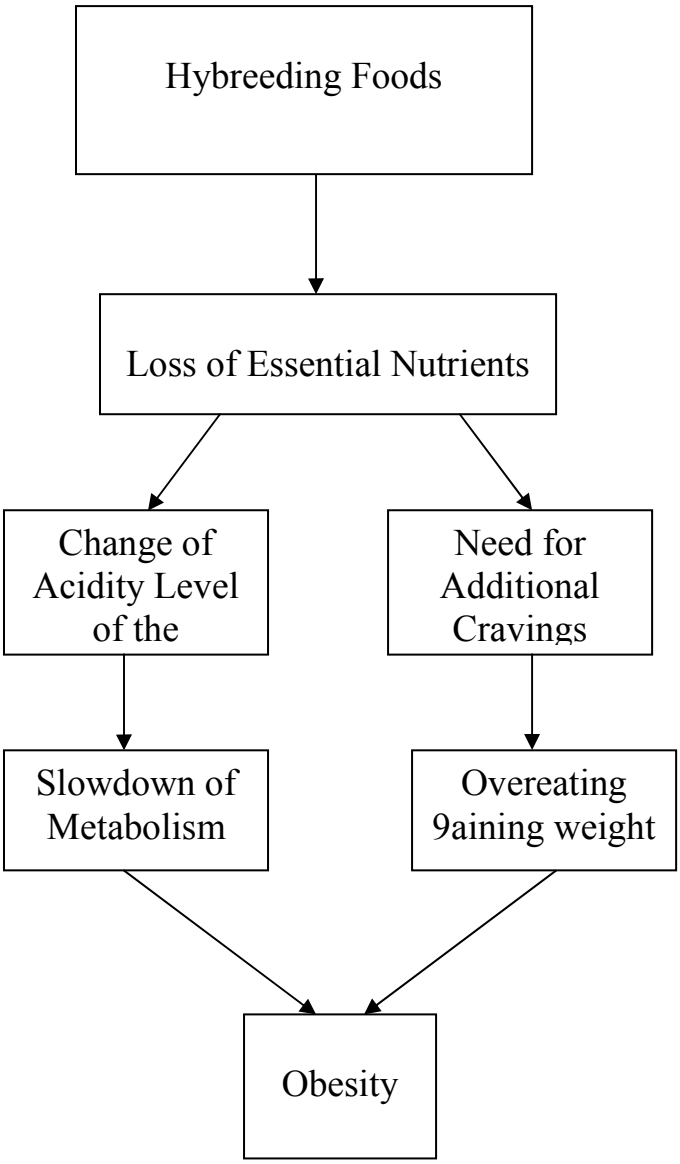

Hybreeding Foods
Loss of Essential Nutrients
Change of Acidity Level of the
Need for Additional Cravings
Slowdown of Metabolism
Overeating 9aining weight
Obesity

Figure 2

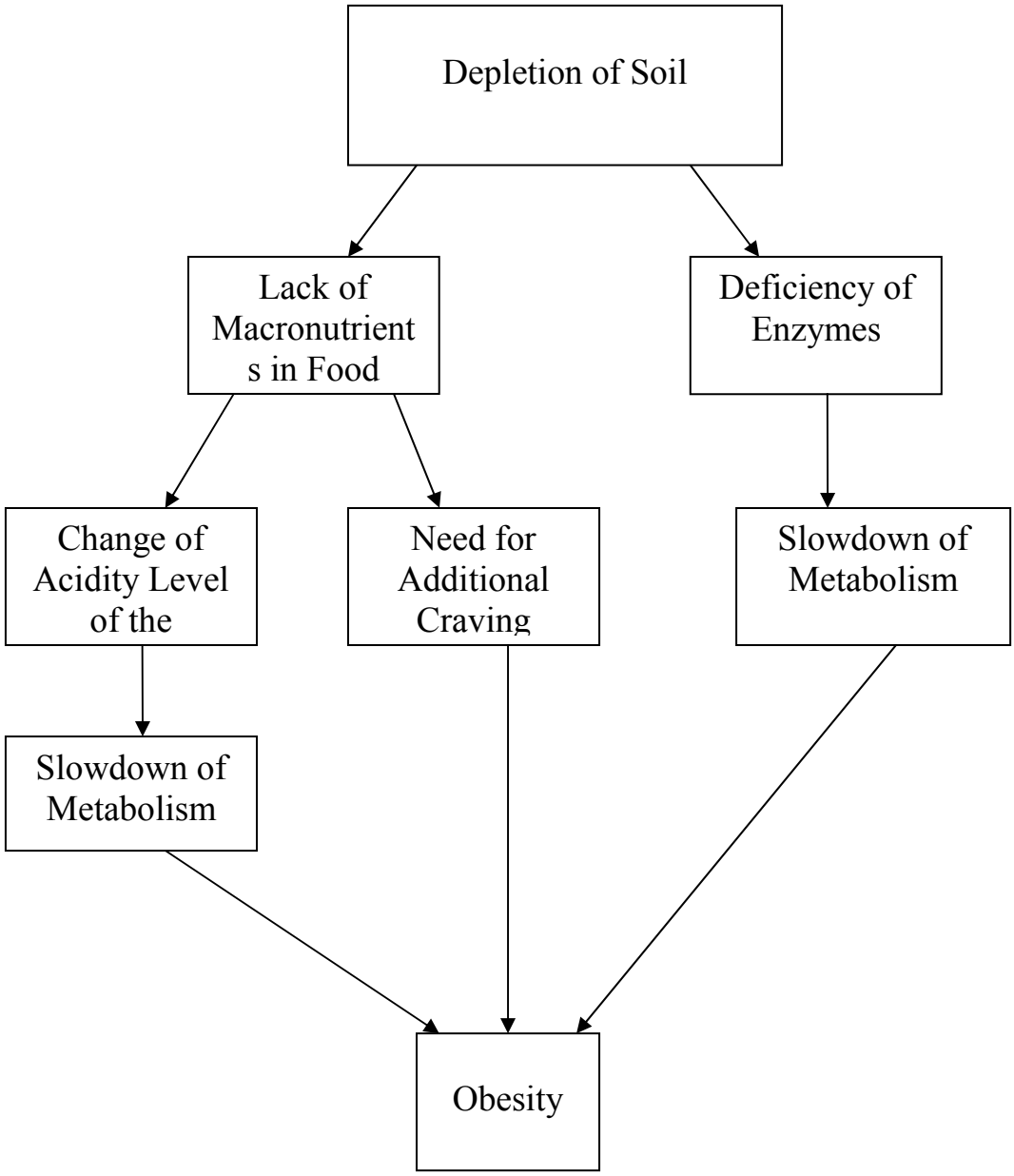

Depletion of Soil
Lack of Macronutrients in Food
Deficiency of Enzymes
Change of Acidity Level of the
Need for Additional Craving
Slowdown of Metabolism
Slowdown of Metabolism
Obesity

Figure 3

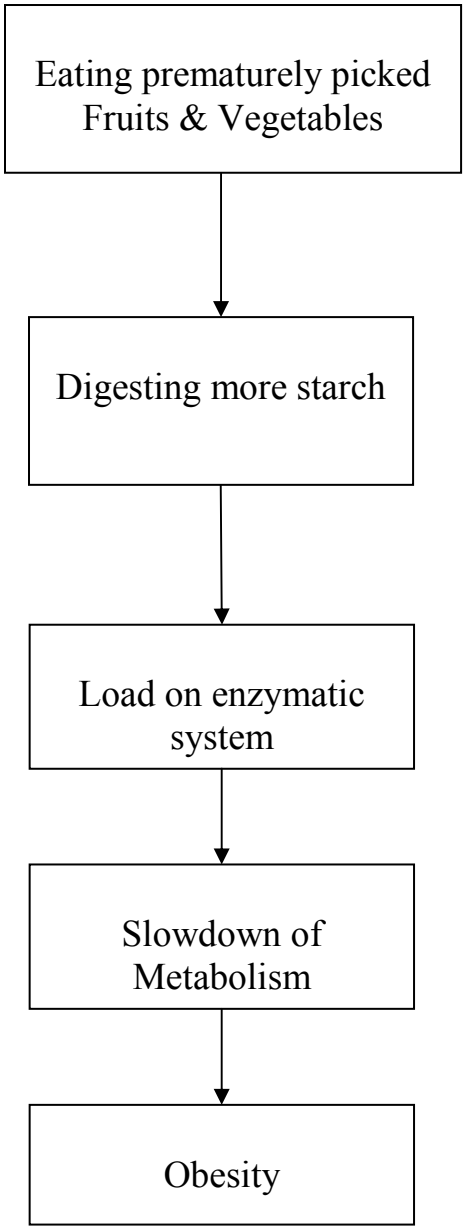

Eating prematurely picked Fruits & Vegetables
Digesting more starch
Load on enzymatic system
Slowdown of Metabolism
Obesity

Figure 4

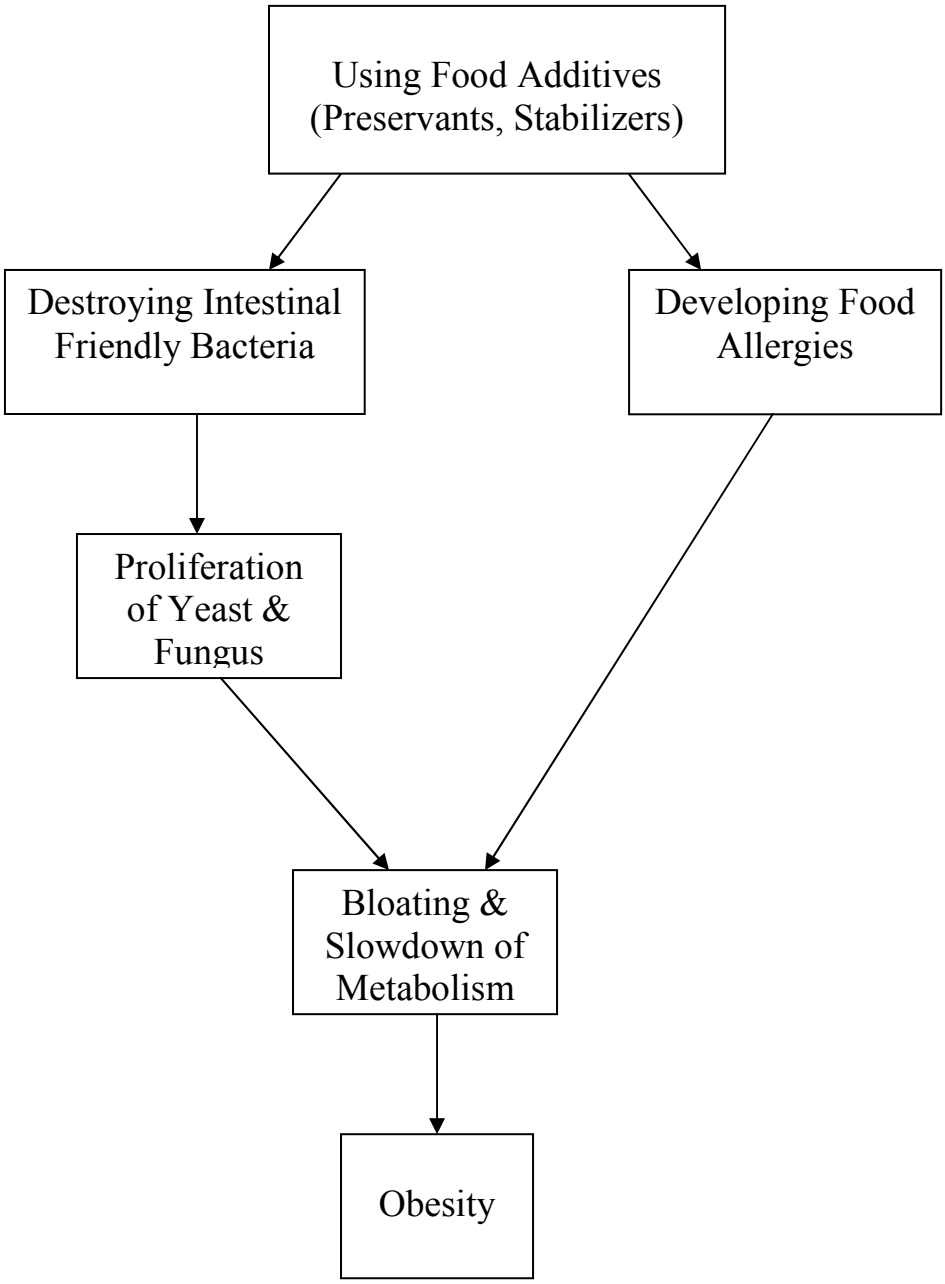
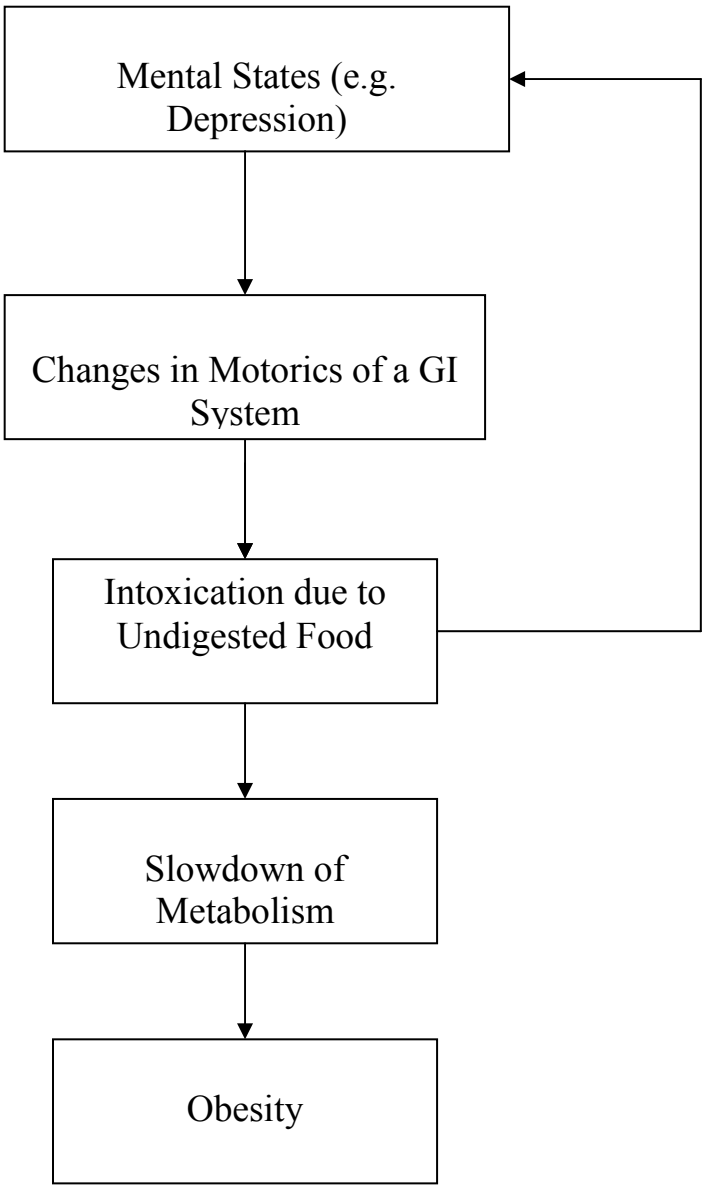

Using Food Additives
(Preservants, Stabilizers)
Destroying Intestinal
Friendly Bacteria
Developing Food
Allergies
Proliferation
of Yeast &
Fungus
Bloating &
Slowdown of
Metabolism
Obesity

Figure 5


Mental States (e.g. Depression)
Changes in Motorics of a GI System
Intoxication due to Undigested Food
Slowdown of Metabolism
Obesity

Here are brief explanations of how these factors lead to obesity:

1. Hybreeding usually leads to enhancing of some properties at the expense of the others. For instance, crossing breeds of dogs for enhancing their size leads to loss of hunting instincts. By the same token, hybreeding of foods for the sake of size, firmness and shelve life leads to diminishing of taste and important micronutrients. Latter could lead to slowdown of metabolism, first, by changing acidity level that requires certain minerals for its sustain and, second, by enhancing desire for additional cravings.. It is worth mentioning that organic food standard so far forbids genetic modification of food but permits simple hybreeding.
2. Depletion of soil due to the extensive use of fertilizers and overcultivation leads to loss of important micronutrients and enzyme deficiency. The first factor affects metabolism in a way similar to the one of hybreeded food. Lack of enzymes in food leads to undigested food, intoxication and slowdown of metabolism. It is worth mentioning that in order to be certified organic in US food has to be grown in a soil that rests for three years. It is barely enough for soil to restore itself.
3. Eating prematurely picked fruits and veggies compromises digestion because it is much harder to digest starch than fruit sugar to which starch is converted in a ripe food. Load on enzymatic system also leads to slowdown of metabolism.
4. Many of food additives including some preservants and stabilizers cause depletion of friendly bacteria in the intestine. Disbacteriosis leads to many GI problems including proliferation of yeast and fungus. Presence of yeast and fungus lead to bloating and water retention that eventually change metabolic rate.
5. Proper metabolism requires synchronicity in work of several digestive organs. Violation of neurological signals from the brain could jeopardize this synchronicity and thus cause a dysfunction of metabolism.

It is important to emphasize social and cultural dimensions of the way these factors affect metabolism and contribute to obesity. Cultural preferences for prematurely picked fruits and vegetables, for instance, allows for offering corresponding supply. Spreading of information and knowledge on possible damage of pesticides and herbicides to one's health has contributed to the implementation of organic food market. Similarly, research and information of the factors listed in this paper could lead, as author hopes, to possible changes in tastes and demand for quality food. Correspondingly, it could affect supply of quality food. What seems to be a promising approach in proposing and predicting changes on this frontier is application of diffusion model. This model allows for

predicting the whole cycle of possible changes in demand-supply equation, starting from spreading out new information about the new factors of obesity to changes in patterns of food manufacturing and supply, via trendsetters articulating new patterns to significant shares of population.