Everybody Can’t Eat Everything

Joseph S. Feuerstein1,2*

1Director of Integrative Medicine, Center for Integrative Medicine and Wellness at Stamford Hospital, USA
2Assistant Professor in Clinical Medicine, Department of Medicine, Columbia University College of Surgeons and Physicians, New York, USA

There is a sentiment among the general public that human nutrition is egalitarian, and anyone from any part of the world, can eat anything they fancy from the other end of the planet, even if this may be first time that they or any of their predecessors, have ever been exposed to that type of food. Due to global trade in the 21st century, a person can eat all manner of varied foods like gluten, soy and milk, all together in a single sitting.

Though it would be comforting to think that everyone in the species is the same, when it comes to what foods our bodies can tolerate; the truth is that there are wide geographical and racial variations between people, as we are not equal when it comes to food. Celiac disease, an auto-immune enteropathy that occurs in individuals, carrying the alleles HLA- DQ2 and/or HLA DQ8, who are exposed to gluten in their food, is found predominantly in people of Caucasian genetic heritage, as these two alleles are regarded as primarily Caucasian genetic traits. Though, a case series at the Celiac Disease Center of Columbia University found that, 1% of African Americans had celiac disease and celiac has been found in North Africa, the Middle East and Northern India [1]. Celiac is still much more common in countries populated by those of European origin.

The metabolism of soy by the bacteria of the human gut, and the geographical variation in people’s ability to convert the soy isoflavone, daidzein to equol and 0-desmethyloxygesin (ODMA), again illustrates the racial variation, in what foods the digestive systems of people from different areas of the world can metabolize. Research done on Korean Americans and Caucasian American in the Seattle, Washington area found that compared to Western populations, Asian populations has higher equal-producer prevalence (51% vs 36%). They also found that the ODMA-producer phenotype was less common in Caucasian Americans (84%) than in in Caucasian Americans (92%). The authors concluded that the metabolism of the soy isoflavone, daidzein, may differ between different racial groups [2].

Finally, the ability to digest the milk sugar, lactose, differs widely in the population. The enzyme lactase, needed to digest lactose in the gastro-intestinal tract is found in approximately 85% of people of Northern European descent but only 20% of blacks and Latinos and is found rarely in Asians [3].

It could be argued that, as people from different geographical areas become accustomed to eating foods, that are new to their cultural eating habits, their digestive systems will adapt themselves to allow optimal digestion of these new foods. However, an interesting point noted in the Seattle, Washington study on the digestion of soy noted that, although the Korean Americans ate approximately three times more soy foods than the Caucasian Americans did, there was no significant association between consumption of soy foods and the equal-producer phenotype. It appears that the ability to metabolize soy, was based more on genes than the amount of soy people were exposed to in their diets.

Based on the facts detailed above, one has to conclude that though we are so much alike in so many ways, when it comes to eating, we all can’t eat everything, we would like to.

References