

Change in our food consumption: past, present and future.

In western countries over production leads to over eating. Data from the US show that food production vastly outstrips human requirements. It is estimated that food supply provides around 3800Kcal/day for everyone, which is vastly in excess of the 1800 to 2400 Kcal that most people require. This has risen by 500Kcals/day since 1970 (Nestle 99). While some of the excess is either exported, turned into biofuels or simply wasted, the main part of the excess goes in over consumption, fuelling the obesity epidemic.

This is driven by a huge marketing machine that encourages all to eat more, since this is how big profits are generated. The average candy bar in the US has an annual advertising budget of up to \$50 million. Every year, food producers and manufacturers are pushed by the financial sector to increase profits and most of this done by getting everyone to consume more, often in the form of highly processed and highly profitable but also in animal-based foods as shown in the table below. Walk into any supermarket in the west and see that the whole central section is devoted to processed foods whose advertising promotion runs into billions each year. See the section on [advertising](#). Contrast this to the promotion of fruit and vegetables.

What were the major drivers behind this change? Many people in our communities today would be surprised to learn that the composition of our food intake has changed considerably over the past 100 years. Back then and up until the Second World War, the problem was one of nutritional deficiency and policies particularly in the US were directed to eating more. Until 1980s, the US Department of Agriculture pushed the concept of the "Basic Four", for people to consume equal portions of meat, dairy, fruit/vegetables and cereals. In the 1950s it first became apparent that such a policy had shifted diet related problems from one of deficiency to one of chronic diseases induced by food.

The policy then shifted to one advising the consumption of less energy, fat, saturated fat, cholesterol, sugar, salt and alcohol to a diet higher in complex carbohydrates and fibre. The sources of the nutrients that should be consumed less are meat, dairy and processed foods, the very foods that are so heavily promoted. In the late 1970s in the US, it was recommended that 58% of dietary energy should come from complex and simple carbohydrates, i.e. fruit, vegetables and grains, so that 30% or less energy came from fats and 8-10% from saturated fats. To achieve this would require a major shift in consumption away from animal-based foods to plant-based foods. (Nestle 99) Unfortunately this message has not resulted in significant change with annual meat production predicted to rise from 218 million tonnes in 97-99 to 376 million tonnes by 2030.

Moves towards a North America style diet have also occurred in many countries that traditionally had more plant-based diets. In urban Brazil for example, there has been a marked decrease in consumption of most plant-based foods towards more animal protein. Fruit consumption fell by around 70% but dairy rose by 40% in the period 1962 to 1988 (Dalmeny 04). Such urbanization in the developing world has been a major driving force pushing up the demand for animal protein as shown in the following table (figures from WHO Report #916, 2003).

Region	Meat (kg/year)	Milk (kg/year)
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Time period	64-66	97-99	2030	64-66	97-99	2030
World	24.2	36.4	45.3	73.9	78.4	89.5
Developing countries	10.2	25.5	36.7	28.0	44.6	65.8
Transitional countries	42.5	46.2	60.7	156.6	159.1	178.7
Industrialized countries	61.5	88.2	100.1	185.5	212.2	221.0

The march of the food giants into the rest of the world. As markets for processed foods have become saturated in the west, increasingly these food giants are moving to less well developed parts of the world. As expected what is promoted is energy dense low nutrient processed food. In Eastern Europe, for every dollar that is invested in fruit and vegetables, ten dollars are invested in soft drinks and confectionary. Ten percent of investments go to dairy production. More and more, farming is directed at single high-yielding cash crops with a loss in more general farm production that would provide for a more balanced diet. In the areas of the traditional Mediterranean diet, there has been a steady rise in animal-based foods from 15% of dietary energy to more than 25% from 1960 to 2000(Dalmeny 04).

In the US political interference driven by animal protein producer lobbies has attempted to debase the original message. The recommendations to eat more plant-based foods drew fire from several quarters in the US but the most vocal was that of the producers of animal protein. Politicians under intense lobbying from the producers attempted to alter the recommendations, overriding the scientific evidence, towards allowing more animal-based foods (Nestle 99). There followed a most intense scientific enquiry about such changes since the science behind the original recommendations to eat more plant-based foods was questioned. By 1993, more than 100 reports of committees in more 30 countries gave support to the original science (Nestle 99). Virtually every major health body in the world strongly supports a move to a more plant-based diet in the prevention of heart disease, diabetes and cancer. See [Healthy Eating](#). The current US dietary guidelines recommend consumption more plant-based foods, to make up more 70% of caloric intake (Dietary Guidelines 05).

References:

(Dalmeny 04) K Dalmeny, E Hanna, T Lobstein. Broadcasting bad health - Why food marketing to children needs to be controlled. Journal of the HEIA 2004;11:10-24

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(Nestle 99) M. Nestle. Animal v. plant foods in human diets and health: is the historical record unequivocal? Proceedings of the Nutrition Society 1999; 58, 211–218

(WHO Report 916, 2003) WHO Technical Report Series 916. Diet, Nutrition and the Prevention of Chronic Diseases. Joint WHO/FAO Expert Committee. 2003)