

The food pyramid

A model for obesity

Dee Pigneguy critiques the 'food pyramid' used as a nutrition guide, and explores its implications for our health

Being overweight is not a disease; it is a symptom that things are wrong with your diet. Is it any wonder that in today's fast food culture when flour in biscuits, tomatoes in tomato sauce, and potatoes in chips contribute to grain, fruit and vegetable servings that many people are becoming aware that the USDA 'food pyramid' is an unsuitable model for promoting health?

'Kiwis Still Hooked On the Unhealthiest Food' was the title of a *Sunday Star Times* article on 22 February 2009. It reported that the top ten items sold in supermarkets are different types of colas, canned spaghetti, white bread, tinned baked beans and bobby bananas, proof enough I would argue that the food pyramid we are using to educate people about food and nutrition is actually working in tandem with the food industry to produce a nation of unhealthy consumers!

History of the food pyramid

So what is the history of this American document on which we base our nutrition choices?

In 1894, before vitamins and minerals were discovered, the US Department of Agriculture (USDA) published its first dietary recommendations. Then in 1916 the government published a guide called

Food for Young Children, listing five food groups: milk and meat; cereals; fruits and vegetables; fat and fatty foods; sugar and sugary foods. In the 1930s dried beans, peas and nuts were added to help poor families who couldn't afford meat.

In 1943 the USDA announced the 'basic seven' food groups, but this was scaled down to the 'basic four' and included milk, meats, fruits and vegetables and grain products.

By the 1970s chronic diseases like stroke and heart diseases were on the rise and in 1977 the US government again added a fifth food group of fats, sweets and also alcohol, without issuing nutritional advice about the damage they do to health.

In 1991 the USDA attempted to release an 'Eating Right Pyramid', which emphasised grains and vegetables rather than animal products, but the Cattlemen's Association and National Milk Producers Federation opposed its publication and it was withdrawn. A pyramid that suited the food industry was finally released in 1992.

Since then soaring obesity rates in the United States have forced a review of the USDA food pyramid guide, resulting in the new online MyPyramid.



Tauono showing a taro root on the island of Aitutaki (Cook Islands): healthy, traditional Polynesian food

Photo: Dee Pigneguy

Different foods for different peoples

Eating patterns have evolved over centuries and are shaped by climate, geographical conditions, agriculture, trade patterns, economics and politics. The present USDA food pyramid is only one model and does not take into consideration the foods of peoples of other cultures. For example, Polynesians, Asians, Indians and Mexicans are culturally, socially, physiologically and genetically different and each group has foods particular to their culture.

For example, the Polynesian diet was traditionally largely plant-based. Breadfruit, yams, cassava, bananas, taro and sweet potato provided abundant starches and fibre. Fish from the sea provided omega-3 oils as well as the protein (supplemented by the raising of chicken and pigs). Minerals and vitamins came from the vegetables and tropical fruits as well as sea grapes and seaweeds, while coconuts supplied abundant fats and liquid for drinking.

The USDA pyramid was never adopted as the official New Zealand food model to illustrate healthy eating, but it is the main model we have in New Zealand today, even though our food culture has changed dramatically with the influx of immigrants.

10 flaws in the food pyramid

For the following reasons I believe the food pyramid is critically flawed and not up-to-date with current nutrition research. It is misleading people and contributing to a growing obesity epidemic.

- 1 The pyramid recommends 6–11 servings of carbohydrates a day but it does not differentiate between simple carbohydrates (sugars) and complex carbohydrates (starches). The majority of the carbohydrate intake should come from whole grains or fresh unprocessed vegetables (complex carbohydrates).
- 2 It leads you to believe that refined carbohydrates are essential for health. In reality optimal health is obtained by keeping the intake of refined carbohydrates to a minimum. The pyramid has displaced the essential proteins and fats with an abundance of refined carbohydrates.
- 3 The pyramid does not tell you the difference between nature's balanced whole foods and the refined or processed foods made from these plants. This is important because refined foods no longer contain the nutrients needed to build and repair the human body.
- 4 There is no distinction between the foods and the nutrients they provide. Proteins, carbohydrates and fats are not whole foods, they are the nutrients found in nature's fresh, unrefined foods, and in many cases these foods contain a mixture of proteins, fats and carbohydrates as well as vitamins, minerals and enzymes.

What's wrong with high fructose corn syrup (HFCS)?

The US Corn Growers' Association would like everyone to believe that HFCS is a natural sweetener just like honey or sugar. But it's highly processed and does not exist anywhere in nature.

The process of making HFCS out of corn was developed in the 1970s. Before then sucrose from sugar beets and sugar cane was the sugar used in processed foods. The refining process turns the natural fructose into glucose. Then synthetic chemicals are added, turning back the glucose into an artificial type of fructose called 'high fructose'.

By 1984 this cheap new artificial sweetener had become the sweetener of choice for US manufacturers of pre-packaged processed foods and soft drinks. With globalisation, processed foods that virtually keep forever are traded worldwide, so make sure you read all labels to avoid this unhealthy substance.

Today HFCS is almost always made from genetically modified corn, which will increase your risk of developing corn food allergies.

A 340 ml can of soft drink may contain as many as ten teaspoons of sugar in the form of HFCS, and even low fat yoghurt can have up to ten teaspoons of the fructose-based sweetener in one serving! (Nutritionists recommend a maximum of 10 teaspoons of natural sugars daily from natural sources.)

HFCS contains no enzymes, vitamins or minerals, and it can interfere with the heart's use of magnesium. It leaches nutrients from the body, eventually leading to enzyme and chemical imbalances and malnutrition.

HFCS mimics insulin, tricking the liver into using the fructose to build triglycerides (fatty acids), which are stored in fat cells and are more damaging to heart health than cholesterol. High levels of insulin in the body lead to major damage, the most visual being obesity.

FOOD PYRAMID

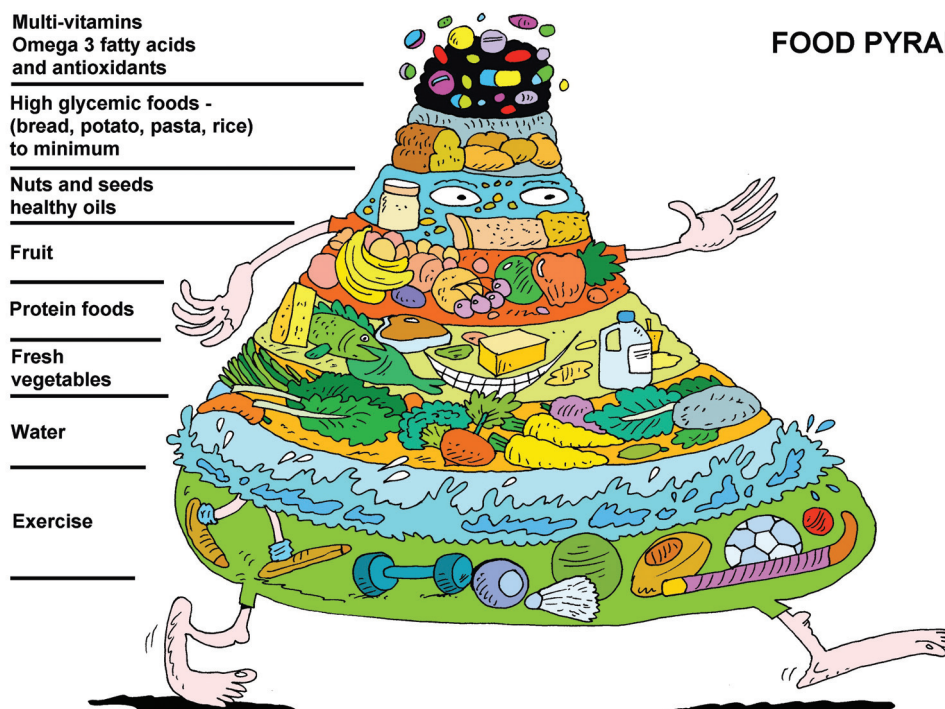


Illustration: Richard Gunther

Dee and Tamarin Pigneguy's suggested healthy food pyramid from their book *Feed Me Right*

- 5 Fats are listed as bad, but in fact only certain fats are bad, like synthetic trans fats and saturated fats, while unsaturated fats and the essential fatty acids (omega-3 and -6) are essential for health.
- 6 The pyramid misleads people into believing milk and dairy products are essential for calcium. Yet sesame seeds, almonds, coconuts, spinach, broccoli, parsley, eggs, sunflower seeds, chick peas, brown rice, molasses and a host of other fresh foods contain calcium, and to top it off, fresh green vegetables contain the magnesium necessary to balance calcium.
- 7 The concerns of vegetarians are not addressed. Some sources of proteins are better for you than others. Red meat contains protein but is also high in saturated fat. Beans and nuts are good sources of protein, but beans are vegetables and should be separate from the meats.
- 8 The pyramid does not distinguish between good foods that are nutrient dense and bad foods that are calorie dense (e.g. sugars and refined products made from sugar). If you eat too many refined grains and sugars and your body is constantly releasing an abundance of insulin, your body will over time become insulin resistant.
- 9 The pyramid does not tell you that high fructose corn syrup is the sweetener of choice for many manufacturers of processed foods. Many people are unaware of just how dangerous HFCS is (see sidebar).

- 10 Despite scientific evidence that eating a meat- and dairy-heavy diet contributes to serious health problems, the pyramid continues to recommend 4–6 servings daily of animal products, when nuts, seeds, lentils and a variety of fresh vegetables would supply the necessary protein.

A health-promoting pyramid

A health-promoting pyramid would feature only those foods that are essential, fresh and minimally refined. Nutrition education should focus on the essential nutrients the human body needs for growth, development and health. Then people (women in particular) would not need to take supplements to get the required essential fatty acids, iron, or folic acid that is no longer contained in the refined, processed foods recommended by the pyramid. 🟢

Dee Pigneguy is the author, with Tamarin Pigneguy, of *Feed Me Right*. She also teaches beginner gardening courses in Auckland.

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