

The Soy Debate

Soy, for centuries part of Asia's staple diet, became touted as a "super food" when health conscious Western cultures rediscovered it in the sixties and seventies. Vegetarians found the protein they needed in soy products. Mothers with lactose-intolerant infants saw soy-based infant formulas as a godsend. Studies glowingly reported all of the health benefits of soy. Then the bad press started coming. There were reports about soy products and their links to cancer, birth defects and many other debilitating and deadly diseases. What is the truth about soy? Is it good for you or something to be avoided?

The Soy Debate

On the one hand, we have the proponents of soy. They point out many health benefits of soy. On the other hand, there are those opposed to soy, who argue that soy beans are accountable for innumerable health problems. These are some of the issues that are argued, together with the rebuttals offered by advocates:

Soybeans contain ipriflavone, a natural steroid that is reportedly far safer than anabolic steroids. Studies have shown that ipriflavone moves nutrients out of fat cells and into muscle and bone. It is also said to decrease bad cholesterol (LDL) and increase good cholesterol (HDL) levels.

Phytoestrogens: Soy contains two of them, Diadzein and Genistein. Both of these are said to prevent cancer and have the remarkable ability to normalise oestrogen levels, reducing them if they are too high and raising them if they are too low. Those who advocate soy argue that it is the pesticides that are used in growing soybeans that are responsible for hormone disruptions attributed to soy products.

Phytic Acid (or phytate) occurs in soybeans. In the past, there was speculation that phytic acid prevented mineral absorption by binding them. However, this criticism has been disputed. Advocates of soy claim that while it does bind minerals, it does so in order to transport them and then it releases them into the body when they are needed. Phytic acid is said to have dramatic anti-cancer properties, being absorbed by cancer cells and causing them to revert back to normal, healthy cells. It is also a powerful antioxidant and anti-inflammatory.

Soy foods are said to increase the body's need for vitamin D and vitamin B12. Although vitamin B12 is present in soy, the body cannot utilise it. This seems to be generally accepted,

but proponents argue that these deficiencies are counterbalanced by soy's many benefits and can be overcome by supplements and more exposure to the sun.

GM (Genetically Modified) Soy Products

GM Soy contains a gene ("RR") that allows it to survive when crops are sprayed with the glyphosate herbicide. The increased use of GM RR soy has led to far greater use of this herbicide. Defenders of this herbicide claim that it is safe, but a recent study in Argentina, where GM RR soy is used in over 90% of soy plantings (as it is in North America), strongly suggests otherwise. According to Argentine government scientist, Professor Andrés Carrasco and the other authors of the report, "GM Soy: Sustainable? Responsible?" it has "toxic effects on health and the environment." Some of these toxic effects allegedly include birth defects, miscarriage, cancer and damage to the DNA.

The Argentinian government authorised the study after reports started coming in about the effects the newly introduced herbicide was having on inhabitants of areas where it was being used. In 2010, a commission organised by the Chaco provincial government in Argentina analysed health statistics in areas where soy and rice crops were sprayed. In one town, the rate of childhood cancer tripled between 2000 and 2009 and birth defects throughout the state of Chaco quadrupled over the same period.

The report goes on to question the safety of GM RR soy in general, citing several animal studies that showed it had significant potential health risks and pointing out that it has never been proven safe for human consumption. Its approval by the US Food and Drug Administration (FDA) was based "on the assumption that GM foods are substantially equivalent to their non-GM equivalents." The report strongly disputes this claim, stating that "the process is imprecise and can cause widespread mutations that can disrupt the functioning of hundreds of genes, leading to unpredictable and potentially harmful effects."

The Verdict

The verdict is not in on the safety of GM soy, but it is interesting to note that natural, organic soy has been a staple food for thousands of years, but its safety for human consumption has only been recently called into question. In Australia, independent Senator Nick Xenophon and Greens Senator Rachel Siewert are calling on the federal government to institute labelling reform so that Australians know whether or not the foods they are buying, including soy, are genetically modified. This seems like a fair and balanced solution, given the controversy surrounding their use.