

Background: "Should People Become Vegetarian?"

In 2012 the United States Department of Agriculture (USDA) estimated that Americans ate an average of 52.3 pounds of beef, 57.4 pounds of chicken, and 43.5 pounds of pork, per person. [126] Vegetarians, about 5% of the US population, do not eat meat (including poultry and seafood). [127] The USDA includes meat as part of a balanced diet, but it also states that a vegetarian diet can meet "the recommended dietary allowances for nutrients."

Many proponents of vegetarianism say that eating meat harms health, wastes resources, causes deforestation, and creates pollution. They often argue that killing animals for food is cruel and unethical since non-animal food sources are plentiful.

Many opponents of a vegetarian diet say that meat consumption is healthful and humane, and that producing vegetables causes many of the same environmental problems as producing meat. They also argue that humans have been eating and enjoying meat for 2.3 million years. [14]

In Western culture vegetarianism dates back to Ancient Greece. The mathematician [Pythagoras](#) (570 BC - 495 BC) advocated vegetarianism; a meatless diet was commonly called the "Pythagorean diet" until the term vegetarian became popular during the 1800s. [120] The philosopher Plato (428 BC - 348 BC) described a vegetarian diet as "divinely ordained." [70]

Other well-known vegetarians include [Leonardo da Vinci](#) (1452-1519), [George Bernard Shaw](#) (1712-1778), [Leo Tolstoy](#) (1828-1910), [Mohandas Gandhi](#) (1869-1948), and [Franz Kafka](#) (1883-1924). [71] [81] More recent vegetarians include [César Chávez](#) (1927-1993), [Jane Goodall](#), [Paul McCartney](#), [Ellen DeGeneres](#), [Carl Lewis](#), [Russell Brand](#), [Pamela Anderson](#), and [Dennis Kucinich](#) (D-OH).



(Click to enlarge image)

Oil painting (c. 1618-30) of Pythagoras advocating vegetarianism by Sir Peter Paul Rubens and Frans Snyders. Source: *The Royal Collection*, "Pythagoras Advocating Vegetarianism," www.royalcollection.org.uk (accessed Apr. 19, 2011)



(Click to enlarge image)

USDA image of grass-fed beef cattle at pasture. Source: Wade Snyder, "AFSFC Picture of the Week, November 21, 2005," www.ars.usda.gov (accessed Mar. 28, 2011)

In 1850 the American Vegetarian Society was formed by Reverend Sylvester Graham (1794-1851), a nutritionist and the inventor of the Graham Cracker. The society advocated vegetarianism and avoiding white flour to promote health and cure alcoholism and lust. [77]

In the late 1800s, a new form of Christianity developed in the United States known as Seventh-Day Adventism. The Seventh-Day Adventist Church, of which Dr. John Harvey Kellogg (1852-1953) - the inventor of corn flakes - was a member, [55] [78] preached and practiced vegetarianism as the most ethical, spiritual, and healthy diet. Adventists believe God intended humans to be stewards of the creatures of the earth, not consumers of them. [75] The health benefits of their vegetarian diet were shown in a 2001 study published in the *Archives of Internal Medicine*. [76] Many Quakers, Buddhists, Hindus, and Rastafarians also advocate vegetarianism as an extension of their belief in practicing non-violence. [83]

In 1906 Upton Sinclair published *The Jungle*, a popular book about Chicago's filthy, unhygienic meat-packing facilities and their exploited immigrant workers. The book's revelations led to a government investigation and the passage of the Meat Inspection Act and the Pure Food and Drug Act of 1906. [99]

In 1916 the USDA issued its first food guide, "Food for Young Children," which included meat and milk in one of five necessary food groups for optimal health. [69] In 1917, during World War I, the US government advocated "Meatless Tuesdays" to conserve meat for the troops. [82]

In the 1950s post war prosperity caused demand for meat to increase. With little new grassland left to support expanding livestock herds, farmers began turning to grain and soy, rather than pasture grasses, to feed their animals. By 1960 US soybean production nearly tripled that of China. [28]

In 1958 US President Dwight Eisenhower signed the Humane Methods of Slaughter Act (HMSA) into law under opposition from the USDA and the meat industry. The law sought to minimize the pain of animals by mandating livestock be stunned unconscious before slaughter. An exemption was made for ritual slaughter under religious law. Poultry and fur animals were (and still are as of Apr. 2013) exempt from the HMSA. [65]

In the 1970s US public interest in vegetarianism grew, fueled by books such as Frances Moore Lappe's *Diet for a Small Planet* and Peter Singer's *Animal Liberation*. In 1974, the North American Vegetarian Society was founded as was the magazine *Vegetarian Times*. [70] In 1980, People for the Ethical Treatment of Animals (PETA) formed to advocate for a vegan diet and an end to using animals for testing, entertainment, or clothing. As of 2013, PETA remains one of the largest animal rights organizations in the world with over 3 million members and supporters. [72]

Between 1982 and 1997, the number of animals on [concentrated animal feeding operations](#) (CAFOs) increased by 88%. [41] This industrialization of meat production lowered US prices and increased consumption. In 1970, Americans spent 4.2% of their income to consume 194 pounds of red meat and poultry per person. By 2005 Americans were consuming 221 pounds of red meat and poultry per person (a 12% increase) while spending 2.1% of their income on it (a 50% decrease). [32]

On Oct. 18, 1987, the American Dietetic Association (ADA) released its first position paper endorsing a vegetarian diet stating that, "appropriately planned vegetarian diets are healthful, nutritionally adequate, and provide health benefits in the prevention and treatment of certain diseases." [1]

In the early 1990s Dr. Temple Grandin devised transportation devices, stockyards, loading ramps, and restraining systems designed to minimize stress and calm animals as they are led to slaughter. [88] In 1991 Dr. Grandin's recommendations for humane animal handling and slaughter were adopted by the American Meat Institute, the oldest and largest meat and poultry trade association in the country. [91]

In Dec. 1995 the USDA stated for the first time [69] that "vegetarian diets are consistent with the dietary guidelines for Americans and can meet the recommended dietary allowances for nutrients." [68]

In 1996 the Center for Consumer Freedom was formed to fight against what it termed "self-anointed 'food police,'" and "animal-rights misanthropes." The group lobbies for the food industry against health regulations and lawsuits, and advocates eating meat as a "personal choice." One of its main targets has been the animal rights organization PETA. [94]

On Apr. 16, 1996, the *Oprah Show* aired a debate between former rancher Howard Lyman and Dr. Gary Weber, spokesman for the National Cattlemen's Beef Association



(Click to enlarge image)

Each circle and square is an individual corn or wheat field in Kansas on what used to be shortgrass prairie. This image shows that agriculture also has a major environmental impact. Source: NASA Earth Observatory, "Crop Circles in Kansas" earthobservatory.nasa.gov, June 24, 2001

(NCBA). After Lyman described how dead cows were ground into feed for other cows risking the spread of mad cow disease, Oprah Winfrey stated: "It has just stopped me cold from eating another burger." The show caused a fall in cattle futures on the Chicago Mercantile Exchange and prompted the NCBA to sue Oprah for "disparagement" of beef - a case they eventually lost. [79] After the Oprah controversy, the USDA implemented a ban prohibiting "the use of most mammalian protein in the manufacture of animal feed intended for cattle and other ruminants." [80]



(Click to enlarge image)

Image of beef cattle in a concentrated animal feeding operation (CAFO).

Source: Jeff Vanuga, USDA Natural Resources Conservation Service, "Confined Feeding Operations of Cattle," photogallery.nrcs.usda.gov (accessed July 8, 2013)

In 1999 the Weston A. Price Foundation was founded to promote the consumption of organic "nutrient-dense" foods including raw cow's milk, butter, and meat. The foundation actively cautions people against vegetarian diets, and promotes eating meat and saturated fat for good health. [95]

On Apr. 10, 2001, the *Washington Post* re-ignited public debate about slaughterhouses with their exposé "They Die Piece by Piece." The investigation found that animals in slaughterhouses were often cut apart "piece by piece" while still conscious. [66] The public outcry that followed led Congress to earmark funds specifically for enforcing the HMSA, which the USDA used to hire a veterinarian in each of its 15 districts to oversee enforcement. In 2002 Congress passed a resolution urging the USDA to fully enforce and track violations of the HMSA. [65]

In 2005 Dr. T. Colin Campbell published the results of a 20-year study conducted by Cornell University, Oxford University, and the Chinese Academy of Preventative Medicine. *The China Study* found that people who ate the most plant-based foods were the healthiest, and that people who ate the most animal-based foods developed the highest rates of diseases such as diabetes and cancer. [73] However, the study was criticized in *Wise Traditions*, the magazine of the Weston A. Price Foundation, as "biased" with evidence "selected, presented, and interpreted," in favor of a vegetarian or vegan diet. [74]

In 2006 the US market for processed vegetarian foods, such as faux meat, non-dairy milks, and frozen vegetarian entrees, was estimated to be \$1.17 billion and growing. [1]

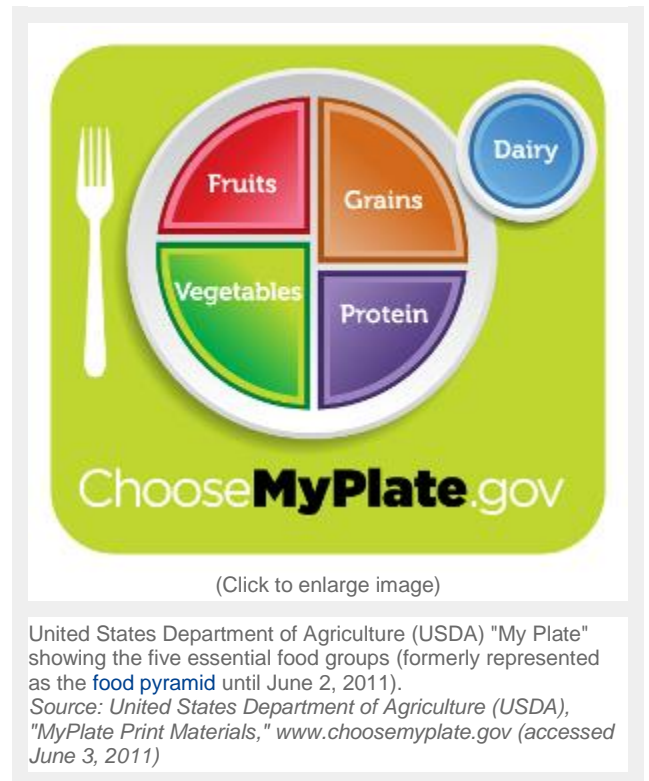
A 2008 *Vegetarian Times* poll conducted by Harris Interactive showed 7.3 million vegetarians in the US—3.2% of the total population (1 million, or 0.5%, of those vegetarians are vegan). [67]

In most countries vegetarians are a small minority, comprising about 3-5% of the population. India is an exception where approximately 35% of the population has followed a traditional vegetarian diet for many generations. [13] The average American gets 67% of his or her dietary protein from animal sources, compared with a worldwide average of 34%. [33]

In 2010 President Bill Clinton adopted a vegan diet (no meat, eggs, or dairy) after his second heart surgery. In Aug. 2011 President Clinton stated, "my blood tests are good, and my vital signs are good, and I feel good, and I also have, believe it or not, more energy." [119]

On June 2, 2011, Michelle Obama unveiled the USDA "My Plate" image representing the five essential food groups and replacing the previous "Food Pyramid." "My Plate" renamed the "Meat & Beans" category to the "Protein" category and changed the "Milk" category to "Dairy." The other three categories (Grains, Vegetables, and Fruits) remained the same.

A 2012 Gallup poll found that approximately 5% of Americans (15,695,702 people) considered themselves to be vegetarian, and 2% (6,278,281 people) considered themselves to be vegan. [127] Total US meat consumption in 2012 was estimated to be 165.9 pounds per person—18.1 pounds fewer than the 2004 high of 184 pounds per person. [126]



PRO Vegetarian

1. **It is cruel and unethical to kill animals for food when vegetarian options are available.** Animals are sentient beings that have emotions and social connections. Scientific studies show that cattle, pigs, chickens, and all warm-blooded animals can experience stress, pain, and fear. [100] In the United States about 35 million cows, 115 million pigs, and 9 billion birds are killed for food each year. [96] These animals should not have to die to satisfy an unnecessary dietary preference.
2. **Human anatomy has evolved to support a primarily vegetarian diet.** Humans do not have the large mouth or long, pointed teeth of carnivores. Human teeth are short and flat for chewing fibrous food. Carnivores have short intestines (3-6 times body length) while human intestines are long (10-11 times body length) to allow slower digestion of plant foods. The liver of a carnivore can detoxify the excess vitamin A absorbed from a meat-based diet. The human liver cannot detoxify excess vitamin A. [62]
3. **A vegetarian diet delivers complete nutrition and can provide health benefits.** According to the American Dietetic Association, a vegetarian diet can meet protein requirements, provide all the essential amino-acids (the building blocks of protein), and improve health. It can also provide all the necessary vitamins, fats, and minerals, and can improve one's health. [1] [2] According to the USDA and the Food and Agriculture Organization of the United Nations, meat is not an essential part of a healthy diet. [68] [123]
4. **A vegetarian diet can help alleviate world hunger.** Over 10 pounds of plant protein are used to produce one pound of beef protein. [24] If these grains were fed to humans instead of animals, more food would be available for the 925 million people in chronic hunger worldwide. [105] Research from Cornell University found that the grain used to feed US livestock alone could feed 800 million people. [107]

CON Vegetarian

1. **Eating meat is not cruel or unethical; it is a natural part of the cycle of life.** Vegetarians mistakenly elevate the value of animal life over plant life. Research shows that plants respond electrochemically to threats and may feel fear, [98] so vegetarians are also causing harm every time they kill and eat a plant. Every organism on earth dies or is killed, at some point, so others organisms can live. There is nothing wrong with this cycle; it is how nature works.
2. **Eating meat has been an essential part of human evolution for 2.3 million years.** [14] The inclusion of meat in the ancestral diet provided a dense form of nutrients and protein that, when combined with high-calorie low-nutrient carbohydrates such as roots, allowed us to develop our large brains and intelligence. [63] Evidence shows our taste buds evolved to crave meat's savory flavor. [57]
3. **Meat is the most convenient protein source available.** In one serving, meat provides all the essential amino acids (the building blocks of protein), as well as essential nutrients such as iron, zinc, and B vitamins. [61] Most plant foods do not provide adequate levels of all the essential amino acids in a single serving.
4. **Eating meat provides healthy saturated fats, which enhance the function of the immune and nervous systems.** Saturated fats contain the fat-soluble vitamins A, D, E and K, [49] and the cholesterol from saturated animal fat is needed for the proper function of serotonin receptors in the brain. Low cholesterol levels have been linked to depression. Saturated fats are also essential for building and maintaining cell health, and help the body absorb calcium. [101]
5. **Meat is the best source of vitamin B12, a vitamin necessary to nervous and digestive system health.** Although it is also found in eggs and dairy, [46] a peer-reviewed July 2003 study showed two in three vegetarians were vitamin B12 deficient compared to one in 20 meat eaters. [47]

5. **A vegetarian diet reduces the chances of developing kidney stones and gallstones.** Diets high in animal protein cause the body to excrete calcium, oxalate, and uric acid—the main components of kidney stones and gallstones. A diet high in animal protein is responsible for the high rates (15% of men and 7% of women) of kidney stones in the United States, according to a peer-reviewed Nov. 15, 1999 study. [6]
6. **A vegetarian diet provides a more healthful form of iron than a meat-based diet.** Studies have linked heme iron found in red meat with an increased risk of colon and rectal cancer. [4] Vegetarian sources of iron like leafy greens and beans contain non-heme iron. [3]
7. **A vegetarian diet helps build healthy bones because vegetarians absorb more calcium than meat eaters.** Meat has high renal acid levels which the body must neutralize by leaching calcium from the bones, which is then passed into urine and lost. [5] There are many sources of healthy vegetarian calcium including tofu, dark leafy greens like kale, spinach, and collard greens, as well as fortified cereals. [128]
8. **A vegetarian diet lowers the risk of heart disease.** [64] According to a peer-reviewed 1999 study of 76,000 people, vegetarians had 24% lower mortality from heart disease than meat eaters. [7] A vegetarian diet also helps lower blood pressure, prevent hypertension, and thus reduce the risk of stroke. [8]
9. **Eating meat increases the risk of getting type 2 diabetes.** A peer-reviewed 2004 study from Harvard researchers found that eating meat increases the risk of getting type 2 diabetes in women, [9] and a 2002 study found that eating processed meat increases the risk in men. [122] A vegetarian diet rich in whole grains, legumes, nuts, and soy proteins helps to improve glycemic control in people who already have diabetes. [10]
6. **Eating meat provides a better source of iron than a vegetarian diet.** The body absorbs 15% to 35% of the heme iron in meat, but only absorbs 2% to 20% of the non-heme iron found in vegetarian sources like leafy greens and beans. [3]
7. **A meat-centered diet can help with weight loss.** It takes fewer calories to get protein from lean meat than it does from vegetarian options. One serving of lean beef (3 oz.) contains as much protein as one serving of beans (1½ cups) or a veggie burger. However, the lean beef has half the calories of beans (180 vs. 374), and 50%-75% fewer calories than the veggie burger. [61] [15]
8. **Raising beef is often the most efficient way to produce food for humans.** About 85% of US grazing land is not suitable for raising crops humans can eat. [27] Today 98% of the original American prairie lands, along with their native plants and animals, are gone. [60] Most of that land is now covered in corn and wheat fields. Natural prairie grasslands can coexist with sustainable herds of cattle or bison, but they cannot coexist with monocrop agriculture.
9. **Vegetarian diets are not necessarily better for the environment.** About 90% of US cropland suffers from top soil loss at 13 times the sustainable rate. [42] 92% of US soybeans (a vegetarian staple protein) are planted with genetically modified soy, immune to herbicides. [43] This immunity allows soy farmers to douse their fields with large quantities of weed-killing herbicides which are toxic to other plants and fish. Some scientists worry that increased herbicide use could create "super weeds." [44]
10. **Vegetarians do not live longer.** This myth stems from the fact that vegetarians tend to be more health conscious overall, eating a more balanced diet, exercising more, and smoking less than the general population. When a peer-reviewed Apr. 11, 2005 study from the German Cancer Research Center compared health conscious meat eaters with vegetarians, there was no difference in overall mortality rates. [56]

10. **Vegetarians live longer.** A Mar. 12, 2012 peer-reviewed study of 121,342 people found that eating red meat was associated with an increased risk of death from cancer and cardiovascular disease. [121] A peer-reviewed 2003 study found that adherence to vegetarian diets or diets very low in meat for 20 years or more can increase life expectancy by 3.6 years. [86] A peer-reviewed July 9, 2001 study of Seventh-Day Adventists who were vegetarian (or ate very little meat) showed longevity increases of 7.28 years for men and 4.42 years for women. [76] On June 3, 2013 a peer-reviewed study of 73,308 people found that a vegetarian diet is associated with a 12% reduction in all-cause mortality. [130]
11. **A vegetarian diet promotes a healthy weight.** According to a peer-reviewed 2003 Oxford University study of 37,875 healthy men and women aged 20-97, 5.4% of meat eaters were obese compared to 3% of vegetarians. Meat eaters had an average Body Mass Index (BMI) 8.3% higher than vegetarians. [11] Another 2006 meta-study that compiled data from 87 studies also found that vegetarian diets are associated with reduced body weight. [124]
12. **Studies show that vegetarians are up to 40% less likely to develop cancer than meat eaters.** [12] According to a peer-reviewed 1994 study by Harvard researchers, consuming beef, pork, or lamb five or more times a week significantly increases the risk of colon cancer. The World Cancer Research Fund found that eating processed meats such as bacon or sausage increases this risk even further. [48]
13. **Overgrazing livestock hurts the environment through soil compaction, erosion, and harm to native plants and animals.** About 70% of the 11 western states are grazed by livestock. [29] Grazing has been a factor in the listing of 171 species under the Endangered Species Act. [92] It has damaged 80% of streams and riparian areas in the western United States. [93] 85% of US land used for grazing livestock is not suitable for farming. [27] Abstaining from meat would help in the restoration of vast US lands more naturally suited to provide habitat for native plants and animals.
11. **US meat consumption does not significantly contribute to global deforestation, or loss of US forest land.** In 2001 about 95% [18] of animal products consumed in the United States were produced in the United States. Despite the US consumption of about 27 billion pounds of beef per year, [26] the percentage of forested US land has remained steady at around 33% since 1907. [19]
12. **Processed vegetarian protein options such as tofu can cause more greenhouse gas pollution than farming meat.** A 2010 report from the World Wildlife Fund (WWF) found that the production of soy-based proteins such as tofu could contribute more to greenhouse gas emissions than eating locally produced meat. [16] According to a peer-reviewed 2009 study, giving up all animal products would only give a 7% reduction in green house gas emissions, [106] not enough to be worth the dietary sacrifice.
13. **Becoming vegetarian will not help alleviate world hunger.** The 925 million [105] people in chronic hunger worldwide are not hungry because people in wealthy countries eat too much meat. The problem is one of economics and distribution. According to the Food and Agriculture Organization of the United Nations, the world "currently produces enough food for everybody, but many people do not have access to it." [108]
14. **A diet that includes fish provides the body with essential omega-3 fatty acids.** Fish are a powerful source of the omega-3 fatty acids EPA and DHA which are important for brain function, lowering triglycerides, and reducing the risk of death from heart attacks and strokes. [52] Although the omega-3 fatty acid ALA can be found in plant oils, the ALA must first be converted by the body into the essential EPA and DHA. The process is inefficient and may not provide the same cardiovascular benefits as eating fish. [53]

14. **A vegetarian diet conserves water.** It takes about 2,500 gallons of water to produce one pound of beef, and about 660 gallons to make a pound of chicken. It only takes about 220 gallons to make a pound of tofu and 180 to make a pound of wheat flour. [25]
15. **Raising animals for food creates 18% of global greenhouse gases - more than the transportation sector.** [17] Greenhouse gases are created by animal farts and burps (aka [enteric fermentation](#)), manure decomposition, and deforestation to make room for grazing animals and growing feed. Producing a pound of hamburger meat contributes as much greenhouse gas as driving a small car nearly 20 miles. A pound of pork equals about 5 miles, and a pound of potatoes only 0.34 miles. [24] A June 2010 report from the United Nations Environment Programme stated that a "worldwide diet change, away from animal products" is necessary to stop the worst effects of global climate change. [104]
16. **Producing one hamburger destroys 55 square feet of rainforest.** [22] Between 1996-2006, 25 million acres of Amazon rainforest were cleared—80% of which became pasture for beef cattle. [20] In 2009, the United States imported 44,284 tons [23] of processed Brazilian beef mostly for use in hamburgers, hot dogs, and lunch meats. Importing fresh Brazilian beef became legal in Nov. 2010, and US beef imports from Brazil will likely increase. [21]
17. **Raising animals for food contributes to air and water pollution.** Manure produces toxic hydrogen sulfide and ammonia which pollute the air and leach poisonous nitrates into nearby waters. The USDA estimates that livestock produces 500 million tons of manure annually—three times what humans produce. [32] Runoff laden with manure is a major cause of "dead zones" in 173,000 miles of US waterways, [32] including the 7,700-square-mile dead zone in the Gulf of Mexico. [115] People living near CAFOs often have respiratory problems from hydrogen sulfide and ammonia air pollution. A peer-reviewed 2006 study of Iowa students near a CAFO found 19.7% had asthma - nearly three times the state average of 6.7%. [116]
15. **Saturated fats from meat are not to blame for modern diseases like heart disease, cancer, and obesity.** Chemically processed and hydrogenated vegetable oils like corn and canola cause these conditions because they contain harmful free radicals and trans fats formed during chemical processing. [46] [49]
16. **Lean red meat, eaten in moderation, can be a healthful part of a balanced diet.** According to researchers at the British Nutrition Foundation, "there is no evidence" that moderate consumption of unprocessed lean red meat has any negative health effects. [50] However, charring meat during cooking can create over 20 chemicals linked to cancer, [51] and the World Cancer Research Fund finds that processed meats like bacon, sausage, and salami, which contain preservatives such as nitrates, are strongly associated with bowel cancer and should be avoided. They emphasize that lean, unprocessed red meat can be a valuable source of nutrients and do not recommend that people remove red meat from their diets entirely, but rather, that they limit consumption to 11 ounces per week or less. [48]
17. **Modern slaughter techniques minimize the suffering of animals.** US slaughterhouses must conform to the Humane Methods of Slaughter Act (HMSA) which mandates that livestock be stunned unconscious before slaughter. [65] Many of the largest US meat producers also adhere to the handling standards developed by Dr. Temple Grandin [87][89] which factor in animal psychology to design transportation devices, stockyards, loading ramps, and restraining systems that minimize stress and calm animals as they are led to slaughter. [88]
18. **There is nothing inherently cruel about raising animals for food.** There is a growing movement to raise "cruelty free" organic meat. In the United States, animals raised for certified organic meat must be given access to the outdoors, clean air, and water. They cannot be given growth hormones or antibiotics and must be fed organically-grown feed free of animal byproducts. [85] According to a 2007 report from the Range Improvement Task Force, organic meat accounted for 3% of total US meat production. [84] By the end of 2012 "natural and organic" beef accounted for 4% of total beef sales in the United States. [129]

18. **Many animals raised for food in the United States are not slaughtered humanely.** The Humane Methods of Slaughter Act (HMSA) mandates that livestock be stunned unconscious before slaughter to minimize suffering. [65] However, birds such as chickens and turkey are exempted from the HMSA, and many US slaughterhouses routinely ignore the HMSA. [66] A 2010 report by the US Government Accountability Organization (GAO) found that the USDA was not "taking consistent actions to enforce the HMSA." [90]
19. **Raising animals in confinement is cruel.** About 50% of meat produced in the United States comes from [confined animal feeding operations](#) (CAFOs) [41] where animals live in filthy, overcrowded spaces. In CAFOs pigs have their tails cut off, chickens have their toenails and beaks clipped off, and cows have their horns removed and tails cut off with no painkillers. [32] Pregnant pigs are kept in metal gestation crates barely bigger than they are. [35] Baby cows raised for veal are tied up and confined in tiny stalls their entire short lives (3-18 weeks). [[36]
20. **A vegetarian diet reduces overuse of antibiotics.** 70% of antibiotics sold in the United States go to livestock like cows, pigs, and chickens to prevent the spread of disease in CAFOs where animals live cramped together. [31] A peer-reviewed 2007 study from the National Institute of Environmental Health Sciences found that overuse of antibiotics in CAFOs causes antibiotic resistant bacteria to develop, which may endanger human health. [40]
21. **Eating fish is not a more ethical or environmentally sound alternative to other animal protein sources.** Scientific studies show fish feel pain when they are injured. [37] In addition, wild fish are severely impacted by overfishing. According to a peer-reviewed 2006 study published in *Science*, 29% of all commercially fished species have suffered population collapse, and at current fishing levels all harvested species will have collapsed by 2048. [38]
19. **The right to eat what we want, including meat, is a fundamental liberty that we must defend.** Animal-rights and health groups are attempting to control personal behavior, and many would like to see meat consumption severely restricted—if not outlawed—through the use of lawsuits, heavy taxation, and government regulations. [97] What people eat should be a protected personal choice.
20. **It is not necessary to become vegetarian to lower our environmental footprint.** Some vegetarians eat an unhealthy diet, drive SUVs, and consume eggs and dairy products produced at factory farms (CAFOs). Some meat eaters use solar panels, ride a bike, grow their own vegetables, and eat free-range organic meat. All of a person's actions make a difference—not just a single act such as eating meat. For example, biking instead of driving for 5 miles can neutralize the greenhouse gas emissions from eating one quarter-pound hamburger patty. [24]
21. **Vegetarian diets can cause the death of animals too.** According to a 2003 study by Steven Davis at Oregon State University, about six animals per acre, or 52-77% of the animals (such as birds, mice, and rabbits) that live in agricultural crop fields, are killed during harvest. [118]
22. **Becoming a vegetarian is not the best way to improve safety for workers in the meatpacking industry.** The meatpacking industry can be dangerous, but the solution for improving the safety of slaughterhouse workers is the strengthening of workplace safety rules, and increasing the monitoring of factories for safety violations—not to stop eating meat. Many jobs can be dangerous, but that does not mean that these jobs should not be performed. According to the US Department of Labor, 278 workers died producing crops in 2009. [113] The most fatal occupation in the United States in 2009 was construction work (818 fatalities), followed by motor vehicle operators such as truckers (660 fatalities). [112]

22. **Eating fish is not necessary to maintain optimal health, and can even have negative health effects.**

Omega-3 acids (which can be found in fish) are crucial for health, [125] but the mercury that contaminates most seafood is not. The omega-3 acid ALA is found in vegetarian sources like walnut, flax, and olive oils, and is converted by the body into EPA and DHA—the essential omega-3 acids found in fish. According to peer-reviewed research in the *American Journal of Clinical Nutrition*, the omega-3 ALA is sufficient to meet the dietary needs of humans. [54] In terms of mercury contamination in seafood, the US EPA states that "nearly all fish and shellfish" are contaminated by methylmercury (a potent neurotoxin) from industrial pollution. [39]

23. **A vegetarian diet would improve worker safety.**

Meatpacking workers are injured at a rate of 27.6 per 100 workers - double the average of all manufacturing industries. [114] Human Rights Watch has called meatpacking "the most dangerous factory job in America." [111]