



A Consumer's Guide to Food Shopping



Top 7 Tips for Food Shopping Smart



- ✓ Don't trust terms like "natural" or misleading "healthy" images; always read the ingredients list carefully
- ✓ Purchase USDA certified organic or Non-GMO Project Verified products when possible to avoid exposure to pesticides
- ✓ Shop the "clean fifteen"; avoid the "dirty dozen" (<http://www.ewg.org/foodnews/index.php>)
- ✓ Shop farmer's markets or join a Community Supported Agriculture program (CSA) where you can meet the farmer and ask about pest control and agricultural practices
- ✓ Choose meat and dairy products raised without antibiotics and synthetic hormones
- ✓ Choose fresh, whole foods; avoid packaged foods with artificial flavor, color, and preservatives
- ✓ Choose fresh or frozen; avoid canned foods that may be lined with chemicals that interfere with hormones



Reading Labels: Natural vs. Organic

What is "Natural" or "All Natural?"

These terms are not defined by the FDA for food labeling. Any food that does not contain artificial ingredients may be labeled "natural" or "all natural", however such foods may have been treated with pesticides, antibiotics or other drugs, and may contain GMOs.



What is the USDA Organic Seal?

This is the gold standard. It ensures that the product is at least 95% organic; the other 5% consisting of non-organic agricultural materials or artificial ingredients that have been approved for a 5-year period. To carry the USDA Organic seal, products must adhere to the USDA National Organic Program guidelines, meaning they contain NO:

- Synthetic pesticides
- Antibiotics or other drugs
- Genetically modified organisms (GMOs)
- Artificial ingredients (e.g. flavoring, coloring, or preservatives)



"100% organic" means that the product is comprised entirely of organic ingredients.

"Made with Organic Ingredients" means the product contains at least 70% organic ingredients.

The remaining 30% ingredients can be treated with pesticides, drugs, hormones, or other chemicals, but may not be GMOs, irradiated, or produced with sewage sludge or artificial ingredients prohibited in 95% or 100% organic foods.

Note: the terms "organic", "100% organic" and "made with organic ingredients" in the absence of USDA certification are meaningless. However, producers with less than \$5000 in annual sales are permitted to label their product organic without USDA certification. Many small farmers forego the USDA certification process because it is expensive. Frequent farmers markets to ask local growers about their farming practices. Support those who follow the USDA National Organic Program guidelines outlined above.

Is organic food better for me and my family?



We recommend consumption of organic and natural foods in order to reduce exposures to chemicals of concern. Studies have shown that switching from a conventional (non-organic) diet to an organic diet is associated with a reduction in exposure to pesticides. While direct health effects from the consumption of pesticide residues on foods have not been demonstrated, many of these compounds are known carcinogens or toxic to the nervous system. In addition, some studies suggest that synthetic preservatives and food dyes may be associated with hormone disruption, cancer, and behavioral problems. There is conflicting data about whether the nutritional content of organic food is greater than conventionally farmed food, and further research is needed in this area.





Shopper's Guide to Genetic Modification and Food

What are GMOS?



A genetically modified plant or animal has been altered in a laboratory to contain genetic material (DNA) that is not found in that organism naturally. Often this involves inserting DNA from one species into another unrelated one (examples include introduction of bacterial DNA into a plant, or mammalian DNA into a fish).

Why are GMOs in my food?

Many crops are genetically engineered to resist pests as well as synthetic herbicides and pesticides. Because of this resistance, toxic chemicals can be used in abundance to kill weeds and insects on these crops. As weeds and insects develop resistance to the chemicals, greater quantities and increasing toxicities are required. This pattern increases human exposure to chemicals such as glyphosate and 2,4-D, classified as "probable human carcinogens" by the World Health Organization.

Are GMOs bad for me?

By avoiding GMO foods, it may be possible to reduce exposure to potentially harmful pesticides and herbicides. However, due to a lack of scientific studies, we don't know whether GMOs are safe to consume. The FDA classifies GMOs as "generally recognized as safe" (GRAS) and does not require GMO labeling. A 2004 National Academy of Science review of GMOs concluded that GMOs pose no risk to human health, however because GMOs can withstand heavy chemical treatments, consumers may be exposed to higher levels of cancer-causing chemicals. In contrast to our system that allows GMOs to be used without regulation, the European Union prohibits all GMOs in food products, unless they pass a rigorous screening process. So far, only 2 GMO crops have been approved and most EU countries prohibit them altogether.



Top Tips to Avoid GMOs

- ✓ **Look for third party certification on the food product from the Non-GMO Project or the USDA***



*The USDA verifies numerous agricultural processes. Look for foods with both the USDA Process Verified seal AND a "non-GMO" statement.

- ✓ **Avoid the most common GMO ingredients**

Although most types of foods are currently not genetically modified, several common high-production crops are – and most of the packaged food products we consume contain one of these in the ingredients list. Greater than 90% of the following U.S. food crops are genetically modified:

Soy*

Corn*

Canola

Sugar Beets

Other common GMO crops include alfalfa, papaya, zucchini, and summer squash

*Avoid products that contain soy or corn derivatives as ingredients including soybean oil, soy protein, and high fructose corn syrup

- ✓ **Choose USDA Organic Certified products or grow your own**



By definition, USDA Organic products must be GMO-free

- ✓ **Support GMO labeling**



Consumer advocacy groups and industry partners are asking the FDA to label food packages according to whether they contain GMO ingredients. Congress passed a bill in August 2015 that PROHIBITS labeling of GMOs (and preempts labeling laws enacted in various states). If the Senate passes a similar bill, consumers will lose their "right to know" whether foods contain GMOs.

Visit <http://www.justlabelit.org/> to learn more



Shopper's Guide to Safer Food Choices

AVOID	Why?	CHOOSE THIS INSTEAD
The Dirty Dozen*	These fruits and vegetables have been found to contain the highest pesticide residues.	USDA Organic The Clean Fifteen* Produce from a local farmer that you trust uses minimal or no synthetic chemicals
Artificial Coloring including "U.S. certified color added", FD&C red no. 3, yellow # 2 or other colors followed by a number on the ingredients panel	May cause hyperactivity in sensitive individuals. Very limited evidence suggests a link between some food dyes and hormone disruption and cancer, but more research is needed. Artificial coloring is often found in foods low in nutritional content.	Natural coloring from vegetables, fruits, or spices (e.g. beets, turmeric, annatto)
Artificial Flavoring	<p>"Flavor" can comprise over 100 chemicals such as solvents and preservatives which do not need to be listed on food packaging labels.</p> <p>Although direct evidence of adverse health effects is limited, the presence of artificial flavoring often indicates that a food is low in nutritional content.</p>	<p>Foods prepared at home from fresh, wholesome ingredients</p> <p>Prepared and packaged foods flavored with natural* ingredients and spices</p> <p><i>*the term "natural flavoring" is misleading as natural flavoring may contain synthetic chemicals</i></p>
Artificial sweeteners including Sucralose (Splenda), Acesulfame potassium, Aspartame (NutraSweet), Neotame, Erythritol, sorbitol, saccharin	Recent epidemiological studies link consumption of artificial sweeteners with increased risk of obesity, metabolic disorders, and Type 2 Diabetes.	Honey Real Maple Syrup Agave



Products containing conventionally grown soybeans, soy protein, soy oil	93% of soy grown in the United States is genetically modified. GMO crops are often treated with greater amounts of potentially harmful herbicides than non-GMO crops.	USDA Organic Non-GMO Project Verified
High fructose corn syrup	88% of corn grown in the United States is genetically modified. GMO crops are often treated with greater amounts of potentially harmful herbicides than non-GMO crops. HFCS is often present in processed foods with high sugar content and low nutritional content. There is some controversy over whether the body processes HFCS in the same way as other sugars, but there is insufficient evidence to suggest that HFCS is worse for your health than other sugars	Honey Real maple syrup Agave Limit sugar consumption from all sources
Synthetic preservatives including butylated hydroxyanisole (BHA) and butylated hydroxytoluene (BHT), nitrates and nitrites. as Avoid labels lik: "preservative", "mold inhibitor", "to retard spoilage", "to protect flavor", "to promote color retention"	Many processed and pre-packaged foods contain preservatives. Often these foods are low in nutritional content. BHA and BHT are carcinogenic in laboratory animals. Consumption of nitrates and nitrites used in cured and deli meats are associated with increased risk of neural tube defects during pregnancy and stomach cancer later in life.	USDA Organic Fresh whole foods Meats labeled "uncured" or "no nitrates added" Foods that use natural preservatives such as Vitamin C, citric acid, or Vitamin E (tocopherols)
Canned foods	Cans are often lined with bisphenol A or bisphenol S, both of which have been shown to disrupt hormones	Fresh or frozen produce Homemade soups Tomatoes and other acidic foods packaged in glass If buying canned, check for dents which can increase exposure to chemicals in the lining



Antibiotics

Antibiotics are used to promote growth and prevent disease in farm animals. Overuse of antibiotics in agricultural has contributed to an increase in dangerous bacterial infections that don't respond to antibiotics (antibiotic resistance).

USDA Certified Organic meat and dairy, which by definition cannot be treated with antibiotics

Meat and dairy products from animals raised without antibiotics

Synthetic hormones

The hormones estrogen and testosterone are administered to cattle and sheep to increase growth. Note that the USDA prohibits hormone treatment of pigs and all fowl (chickens, turkeys, etc).

Recombinant bovine somatotropin (rBST), also known as recombinant bovine growth hormone (rBGH) is a genetically engineered protein that is fed to cattle to increase growth and milk production. rBST induces mastitis and reproductive problems in cattle and is banned in Canada, Europe, and Japan for animal welfare reasons. However, BST is not elevated in the milk of treated animals, nor is it biologically active in humans. Numerous scientific studies find no effect of consumption of products from rBST treated animals on human health, prompting the FDA, World Health Organization, and National Institutes of Health to declare it safe. There is some evidence that rBST is associated with increased IGF-1 levels, a known tumor promoter, but this remains controversial.

Meat and dairy products labeled "hormone-free"

Dairy products labeled rBST or rBGH free



Food Shopper's Guide to Safer Food Packaging

Increasing evidence suggests that food packaging and containers are a major source of exposure to potentially harmful chemicals. Manufacturers are not required to disclose the components of packaging materials, making it difficult for consumers to make choices that limit harmful exposures. Use this guide when shopping to choose packaging and food contact materials that are safer for you and your family.

AVOID	Why?	CHOOSE THIS INSTEAD
Canned foods	<p>Often lined with Bisphenol A (BPA) a hormone disruptor</p> <p>Some manufacturers are replacing BPA with BPS, which also appears to have hormone disrupting affects, making it difficult to validate the safety of "BPA-free" products</p>	<p>Fresh or frozen foods</p> <p>Foods that are packaged in glass (i.e. tomatoes, soups)</p> <p>If you must purchase canned foods, check for dents and dings that can increase exposure to chemicals in the lining</p>
Lead and PVC (polyvinyl chloride) plastic in lunch boxes	<p>Lead is known to impair brain development and has been detected in some name brand lunch boxes</p> <p>PVC contains hormone disrupting phthalates that can migrate into food and beverages</p>	<p>Lead-free lunch containers</p> <p>Canvas or cotton lunch bags</p>
Containers with the #3, #6, and #7 recycling symbols	<p>#3: made with polyvinyl chloride and may contain hormone disrupting phthalates</p> <p>#6: made with polystyrene; styrene, a carcinogen and neurotoxin that migrates into food</p> <p>#7: may indicate that the plastic contains BPA</p>	<p>Glass or stainless steel food and beverage containers</p> <p>If you must use plastic containers choose #1, 2, 4, and 5 and do not heat or freeze foods in them</p>
Plastic wrap	<p>Some plastic wraps are made with PVC which contaminates foods with hormone disrupting phthalates</p>	<p>Aluminum foil, paper bags, or parchment paper</p>



Microwaving or dishwashing plastic	Heating plastic causes chemicals to migrate from packaging into foods	Heat food on the stove or in glass Wash plastic containers by hand
Nanoparticles	Nanosilver is used added to some food packaging to prevent the growth of bacteria and microbes. The safety of nanoparticles is not known, but they have been shown to migrate from packaging into food. Nanoparticles are not regulated in food packaging; there is no way to know if they are present	Choose fresh foods Avoid food containers that claim to be "anti-microbial"
