

**Food safety** issues such as meat irradiation, GMOs, mad cow disease, and PCBs and mercury in fish are ongoing concerns for co-ops and consumers. Some of the best ways to create change regarding these issues is by keeping informed, connecting with food safety advocacy groups and buying your food from trusted sources.

## What consumers need to know

**Organics.** Buy organic foods and food from trusted sources. Look for the “Certified Organic” label on foods that meet the USDA certification requirements. (See the Organics brochure for more information.)

**Labeling and testing.** Contact the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) to demand consistent labeling and long-term testing of GMOs, irradiation and other food safety issues that impact human health and the environment.

**Fish and seafood.** Buy the freshest food available, especially seafood. Make sure the fish or seafood smells clean and feels firm. Watch for missing scales, which can indicate the fish was handled improperly before arriving at the store.

**Irradiation.** Irradiation of perishable food is not a substitute for adequate cooking, handling and storing of food. Use proper food handling and cleanliness standards in your home kitchen to keep food as safe as possible.

**Hormone disruptors.** Reduce your exposure to hormone disruptors by reducing chemical exposure in homes, schools and workplaces. For example, purchase natural home cleaning products or make your own cleaners. Avoid storing food in plastics that contain Bisphenol A (BPA.)

## Fish and seafood

This is one of the smartest diet choices you can make, but selecting healthy, economical, and environmentally responsible fish and seafood can be challenging. Dioxin, methylmercury, PCBs and other contaminants are all considerations when buying fish.

**Polychlorinated biphenyls (PCBs)** are a class of manufactured chlorinated compounds that have been associated with acne-like skin conditions in adults and neurobehavioral and immunological changes in children. Reduce your risk of exposure to PCBs by removing the skin and fat from fish before cooking.

**Methylmercury** is a neurotoxin that can seriously impair brain development in children. Mercury is distributed throughout the muscle, so skinning and trimming fish will not reduce mercury exposure. Predator fish like salmon pose a unique problem, since mercury passes from smaller fish into larger, predator fish.

Fish farming can receive bad press. However, many fish farmers are learning to raise fish sustainably by using water filtration systems and natural fish-feeds that won't pollute the surrounding ecosystems. Some farmed salmon actually have lower mercury and PCB counts than wild fish have. Farmed American catfish and tilapia are other healthy examples of positive aquaculture.

Fishers are learning to fish “sustainably” in the wild, as well. Nets are treated with antifouling chemicals to prevent water birds from being snared, and “drag nets” are avoided, since they cause longterm damage to the ocean floor.

The Food and Drug Administration recommends that young children and pregnant/nursing moms eliminate predator fish (such as shark, swordfish, and king mackerel) from their diets, and limit consumption of other fish to twelve ounces per week to minimize exposure to methylmercury.



**StrongerTogether.coop** is a consumer website developed by National Cooperative Grocers Association (NCGA) for our “virtual chain” of over 120 retail food co-ops, operating more than 160 store fronts, nationwide.

**StrongerTogether.coop** is a place for people to gather on their food journeys. It's a place to find out more about what's in your food, where it comes from, where to find great food, how to prepare it, and a whole lot more. It's also a place to talk with others about food topics you're exploring, are passionate about, and even want to get involved in.

Learn more about co-ops, and find food co-ops all across the U.S. at [www.strongertogether.coop](http://www.strongertogether.coop). Follow [@strongertogether](https://twitter.com/strongertogether) on Twitter and like us on Facebook; we're at [www.facebook.com/coop.strongertogether](https://www.facebook.com/coop.strongertogether).

ALL ABOUT

# Food Safety



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## Food Irradiation

Since food irradiation was approved by the Food and Drug Administration (FDA) in 1963, consumers have had many concerns and questions about this controversial food technology. Irradiation is the process of exposing food to ionizing radiation that kills harmful bacteria the food may contain, such as salmonella, listeria and E. coli. The radiation breaks chemical bonds in molecules, killing all pathogens. However, the food is not exposed long enough to become “radioactive.”

The FDA has approved its use on spices, fruits, vegetables, pork, poultry and red meat. Irradiation has also been used for disinfecting medical supplies, cosmetics, contact lens solution and baby pacifiers. Although the process is approved, it is not widely used, due to lack of consumer acceptance and cost. No human studies have been conducted to assess the long-term safety of irradiated food.

## Labeling

Currently, irradiation labeling requirements by the FDA are loosely defined. Labeling is required only for irradiated foods sold in grocery stores, and not for foods sold in restaurants, school lunch programs or as ingredients in processed foods.

## Genetically Modified Organisms (GMOs)

Genetically engineering food means artificially transferring genes from one species to another. For example, animal genes could be inserted into fruits and vegetables. This process creates organisms that have new combinations of genes, and therefore new combinations of traits not found in nature. Such a technology is radically different from

traditional plant and animal breeding. The end product of this process is called a genetically modified organism or GMO.

## GMO Foods on the Market

Foods may be genetically engineered for a number of reasons, most commonly for resistance to pesticides, viruses and insects, as well as increasing the product’s shelf life. The following genetically engineered crops have already been approved for sale in the U.S.: soybeans, yellow corn, canola, papaya, potatoes, tomatoes, squash, radicchio, cotton and dairy products.

## Potentially harmful effects from GMOs

GMO foods could have a number of harmful health implications for people who consume them and for the eco-system as well:

- GMO foods are not labeled or tested for longterm effects, putting consumers at risk of unlabeled allergens in the food supply.
- An “antibiotic resistance gene” is used in many genetically engineered foods, which could promote antibiotic resistance.
- Many organic farmers use the bacteria *Bacillus thuringiensis* (Bt) as a natural pesticide to combat insects without using synthetic chemicals. In time, pests may become immune to Bt because of genetic engineering in conventional crops. Bt-immune crops have been shown to be harmful to beneficial insects, an irreplaceable agricultural tool for organic farmers.

## Hormone Disruptors

Hormone disruptors interfere with our bodies’ natural hormone systems, causing a wide array of health problems such as cancer,

infertility, thyroid dysfunction, birth defects, behavioral problems, and immune system suppression. Hormone disruptors can:

- **Mimic natural hormones**, tricking the body to behave in disruptive ways,
- **Block natural hormones** by locking up cell receptors, or
- **Trigger reactions** not normally produced by a given hormone.

So far, scientists have identified more than 65 chemicals believed to affect the endocrine system, which include: dioxin, atrazine, lindane, styrene, lead, cadmium, mercury, and PCBs. Two of particular concern are:

**Estrogen.** The chemicals nonylphenol (used in common household cleaning products and in plastics to prevent cracking) and Bisphenol A “mimic” estrogen and cause breast tissue to grow in laboratory tests. Higher rates of breast cancer, endometriosis and other female reproductive problems have been linked to nonylphenol. Both chemicals are also linked to decreased sperm counts and prostate and testicular cancer in men.

**Perchlorate.** This chemical, the explosive element in rocket fuel, has been found to contaminate water supplies in 34 states. It has also been detected in milk and lettuce samples collected throughout the country. Perchlorate is a “blocker” that depresses thyroid function, causing thyroid tumors and disrupting fetal development. Efforts are currently under way to clean up perchlorate contamination across the country.

## Mad cow disease and other meat safety issues

See the *Meat and Poultry brochure* for information on antibiotics in meat, mad cow disease, and food-borne illness.

## RESOURCES

### Fish and Seafood Resources

Monterey Bay Aquarium’s Seafood Watch  
[www.mbayaq.org/cr/seafoodwatch.asp](http://www.mbayaq.org/cr/seafoodwatch.asp)

The Fish List  
[www.thefishlist.org](http://www.thefishlist.org)

The Environmental Protection Agency  
[www.epa.gov/waterscience/fish](http://www.epa.gov/waterscience/fish)

### Food Irradiation and GMO Resources

Organic Consumers Association  
[www.organicconsumers.org](http://www.organicconsumers.org)

The Campaign to Label Genetically Engineered Foods  
[www.thecampaign.org](http://www.thecampaign.org)

Institute for Agriculture and Trade Policy  
[www.iatp.org](http://www.iatp.org)

Union of Concerned Scientists,  
[www.ucsusa.org](http://www.ucsusa.org)

### Hormone Disruptors Resources

*Hormone Deception*  
by D. Lindsey Berkson, 2000

The Natural Resource Defense Council  
[www.nrdc.org](http://www.nrdc.org)