



# Buying Criteria Breakdown

MNFC strives to select foods that are local, organic, and free of:

- Artificial Preservatives, Colors, & Flavors
  - Added Hormones & Antibiotics
    - Transfats
  - High Fructose Corn Syrup
    - Parabens
  - Animal Testing
  - Irradiated Ingredients

## Artificial Preservatives, Colors, & Flavors:

**Preservatives**- Are used to prevent bacteria, yeast, and mold growth, preserve color, flavor, and extend shelf life. Below are a few common artificial preservatives and, according to The Organic Institute, the potential health dangers. Keep in mind that these refer to the artificially synthesized form of these preservatives, not their naturally occurring counterparts:

- Sodium Benzoate/Potassium Benzoate- a known carcinogen also linked with thyroid cancer and hyperactivity in children. Particularly dangerous in combination with ascorbic acid (Vit.C) and when exposed to light and heat.
- Sulphur Dioxide/Sulfites- can cause allergic reactions including hives, wheezing, and anaphylactic reactions.
- Sodium Nitrate/Sodium Nitrite- believed to cause colon cancer, metabolic syndrome which can lead to diabetes, and a condition in infants known as “blue baby syndrome” due to the fact that nitrates can convert to nitrites in the digestive tract, which combines with hemoglobin inhibiting the ability for oxygen to be carried by the blood.
- Butylated Hydroxyanisole (BHA)- carcinogen, endocrine disruptor.

**Colors**- Processed food manufacturers add dyes that are derived from petroleum to turn unattractive mixtures of ingredients and food additives into alluring novelties. They turn to artificial colors because they are cheaper and brighter than most natural colorings. Red 40, Yellow 5, and Yellow 6 account for 90% of all dyes used. Below are the artificial colorings used in processed foods and the associated health risks found by the Center for Science in the Public Interest.

- Blue 1- has been shown to cause kidney tumors in mice and damage to nerve cells.
- Blue 2- showed a statistically significant incidence of tumors, particularly brain gliomas, in rats.
- Citrus Red 2- permitted only for coloring the skins of oranges, this color is toxic to rodents at even modest levels and caused tumors, mostly of the bladder.
- Green 3- caused significant increases in bladder and testes tumors.
- Red 3- recognized in 1990 by the FDA to be a thyroid carcinogen, prompting it to be banned for use in cosmetics, but can still be in drugs and foods at the rate of 200,000 pounds of dye annually.

- Red 40- Most widely used dye. Accelerates the appearance of immune system tumors in mice. Causes hypersensitivity (allergic) reactions in some consumers and has been shown to trigger hyperactivity in children.
- Yellow 5- causes hypersensitivity reactions in some consumers and hyperactivity in children.
- Yellow 6- caused adrenal tumors in animals. Occasionally causes hypersensitivity reactions.

Nearly all studies on dyes are commissioned, conducted, and analyzed by the chemical industry and their academic consultants. Ideally, these should be tested by independent researchers. Furthermore, nearly all studies were conducted on individual dyes, rather than combinations of dyes. Many foods and human diets contain these dyes in combination, not in isolation.

The few studies of dye combinations show organ damage, cancer, birth defects, allergic reactions, hyperactivity, and other behavioral problems in children. The British government has advised companies to stop using most food dyes, and the EU is requiring a warning notice on dye-containing foods.

(from the Center for Science in the Public Interest)

**Flavors-** A great deal of engineering goes into crafting flavors for processed foods. Because smell makes up 80-90% of the sense of taste, chemicals that give food a specific smell are big business. The annual sales of the fragrance and flavor industry are estimated at \$24 billion, and controlled by just a handful of companies. In a 2011 *60 Minutes* interview, two flavor scientists said that one of their goals is to make food addictive. These flavors are complex mixtures of more than 100 chemicals. Solvents, emulsifiers, flavor modifiers, and preservatives make up 80-90% of the mixture. Natural flavors are required by the FDA to be derived from animals or plants. Artificial flavors are comprised of a combination of nearly 700 FDA-allowed chemicals or food additives categorized as “generally recognized as safe”, or from any of 2,000 other chemicals not directly regulated by the FDA, but sanctioned for use by the Flavor and Extract Manufacturers Association of the United States. In short, when you see the word “flavor” on a food label, you have no clue what chemicals, carrier solvents, or preservatives have been added to the food. (from The Environmental Working Group)

## **Added Hormones & Antibiotics:**

**Hormones-** According to a Cornell University review, hormones are produced naturally in the bodies of all animals, including humans. They control important functions such as growth, development, and reproduction. Hormones are artificially administered to animals to achieve more rapid weight gain or to increase milk production. While the hormones produced by our bodies are essential for normal development, synthetic steroid hormones have been found to affect cancer risk. For this reason, there is significant concern about exposure to hormones added to our food supply.

Regulatory monitoring of many hormones is nearly impossible, due to the fact that it is not possible to tell the difference between the hormones added unnaturally from those produced naturally by the animal’s own body.

**Hormones, continued-** In addition to concerns about increased cancer risk, many suspect that hormones added to our food supply affect the age of puberty onset for girls, which increases their risk of breast cancer.

rBST/rBGH is a genetically modified (GMO) growth hormone given to dairy cows to boost milk output. According to the Canadian Journal for Veterinary Research, side effects for the animal include reduced pregnancy rates, visibly abnormal milk, hoof disorders and a need for more drug treatments for health problems. Cows treated with rBST face a nearly 25% increase in the risk of clinical mastitis, a 40% reduction in fertility, and 55% increased risk of lameness. It's banned for use in Canada, Japan, Australia, New Zealand, and in the 27 countries of the European Union. Due to the fact that we currently lack large-scale studies to compare the health of those who eat meat or dairy from hormone treated animals, to those who eat a similar diet from untreated animals, the scientific data on the affects of consuming hormone treated food is unavailable. (from a Cornell University Consumer Concern Fact Sheet)

**Antibiotics-** According to the CDC, antibiotics in our food supply pose a serious health threat. When animals are fed routine doses of antibiotics, they then serve as a reservoir of resistant pathogens and resistance mechanisms that can directly or indirectly result in antibiotic resistant infections in humans. Resistant bacteria may be transmitted to humans through the foods we eat. Some bacteria have become resistant to more than one type of antibiotic, which makes it more difficult to treat the infections they cause. Preserving the effectiveness of antibiotic drugs is vital to protecting human and animal health. See CDC handout.

## **Transfats:**

These industrially-produced fats are the worst for our bodies, as they raise our LDL 'bad' cholesterol and lower our HDL 'good' cholesterol. See CDC handout.

## **High Fructose Corn Syrup (HFCS):**

The corn syrup industry argues that corn sugar and cane sugar are the same, though many scientists disagree. Nutritional Scientist, Dr. Bruce Ames, and Nutritional Biochemist, Dr. Jeffrey Bland, point out that they are NOT biochemically identical or processed the same way by the body. HFCS is also a GMO. Large doses of any kind of sugar are harmful, but the biochemistry of different kinds of sugar and their respective effects on absorption, appetite, and metabolism are different. We are consuming HFCS in quantities never before experienced in human history. Because it is in so many processed food products, the average American consumes over 60 lbs of it per year. This represents 15-20% of the average American's total caloric intake. We currently require a land area the size of Massachusetts to grow the GMO corn to make the HFCS we annually consume!

## **Parabens:**

Parabens are preservatives found in shampoos, conditioners, lotions, and other body care products. Health concerns include endocrine disruption, cancer (particularly of the breast), developmental and reproductive issues. Pregnant women and children are especially vulnerable. These chemicals are absorbed through skin and the GI tract, and the body is unable to metabolize them. In a 2004 study in the UK, intact parabens were found in biopsy samples of breast tumors from 19 out of 20 participants. (From the Campaign For Safe Cosmetics & [breastcancerfund.org](http://breastcancerfund.org))

## Animal Testing:

Animals including rabbits, mice, rats, and guinea pigs are made to suffer and often die during a number of routine tests for cosmetic and body care products. The information that has historically been gained from animal tests is increasingly being replaced with quicker, cheaper and more reliable non-animal methods. These modern methods are more relevant to humans and have been found to predict human reactions better than the traditional outdated animal tests, according to the Coalition for Consumer Information on Cosmetics (CCIC).



Many of the products we offer in our wellness department carry an independent, third-party certification from Cruelty Free International's Leaping Bunny Program. This program is the product of eight different national animal protection groups that banded together to form the CCIC. This coalition promotes a single, comprehensive standard to certify that the products bearing its label are free from any animal testing on the product or its isolated ingredients. Look for the Leaping Bunny logo.

## Irradiated Ingredients:

Irradiation is the application of ionizing radiation as a method of preserving and extending the shelf life of a food. According to the Organic Consumer Association, this process is problematic for the following reasons:

- Irradiation damages food by breaking up molecules and creating free radicals, damaging vitamins and enzymes, and combining with existing chemicals in the food (like pesticides) to form new chemicals called unique radiolytic products (URPs) which may be toxic.
- There has not been sufficient testing to prove that a long-term diet of irradiated foods is safe for human health.
- There is no consumer label required for irradiated foods. The label is only required for the first purchaser so ingredients used in prepared foods on consumer shelves will not allow the consumer to know that their food has been irradiated.
- The source of irradiation is not listed on the label. The original sponsor of food irradiation was the US Department of Energy, which wanted to create a favorable image of nuclear power, as well as dispose of radioactive waste. Cobalt-60, which is used for irradiation, must be manufactured in a nuclear reactor.
- Irradiation using radioactive materials is an environmental hazard. Radioactive leaks from irradiation facilities and radiation exposure to workers in the facilities make the risks too great.
- Bacteria can become radiation-resistant. Some bacteria, like the one responsible for botulism, as well as viruses and prions (Mad Cow Disease) are not killed by current doses of radiation.