

## **Factsheets: Veganism and the Issue of Protein**

Can the vegan (strict vegetarian) diet provide protein adequate for sound human health? This question continues to be asked despite the fact that a "yes" answer was given some three decades ago in a study reported by Hardinge and Stare.(1) The question stays with us largely because animal products (meat, milk, cheese, and eggs) have been promoted (usually by the industries that produce and sell them) as the best source of protein. This dietary assumption is wrong and can even be harmful, as a quick study of the facts about vegetable protein and nutrition shows.

### **The Importance of Protein**

Protein is essential to human health. In fact, our bodies--hair, muscles, fingernails, and so on--are made up mostly of protein. As suggested by the differences between our muscles and our fingernails, not all proteins are alike. This is because differing combinations of any number of 22 known amino acids may constitute a protein. (In much the same way that the 26 letters of our alphabet serve to form different words, the 22 amino acids serve to form different proteins.)(2)

Amino acids are a fundamental part of our diet. While most of the 22 can be manufactured in one way or another by the human body, eight (or, for some people, 10) cannot. These "essential amino acids" can easily be provided by a balanced vegan diet.

### **How Much Protein?**

Non-animal foods can easily provide us with the necessary protein. Despite the claims of the meat and dairy industries, only 2.5-10 percent of the total calories consumed by the average human being needs to be in the form of protein. The rule of thumb used by the National Academy of Sciences Food and Nutrition Board is .57 grams of protein for every kilogram (2.2 pounds) of body weight. People under special circumstances (such as pregnant women) are advised to get a little more. Vegans should not worry about getting enough protein; if you eat a reasonably varied diet and ingest sufficient calories, you will undoubtedly get enough protein.(3)

Eating too much protein can result in osteoporosis and kidney stones. Meat and dairy products raise the acid level in human blood, causing calcium to be excreted from the bones to restore the body's natural pH balance. This calcium depletion results in osteoporosis, or weakening of the bones. The excreted calcium ends up in the kidneys, where it often forms painful stones. Kidney disease is far more common in meat-eaters than in vegans, and excessive protein consumption has also been linked to cancer of the colon, breast, prostate, and pancreas.(4) By replacing animal protein with vegetable protein, you can improve your health while enjoying a wide variety of delicious foods.

### **Protein Sources**

While just about every vegetarian food contains some protein, the soybean deserves special mention, for it contains all eight essential amino acids and surpasses all other food plants in the amount of protein it can deliver to the human system. In this regard it is nearly equal to meat.

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The human body uses about 70 percent of the protein found in meat and 60 to 65 percent of that found in soybeans. The many different and delicious soy products (tempeh, soy "hot dogs," "burgers," Tofutti brand "ice cream," and tofu) available in health and grocery stores suggest that the soybean, in its many forms, can accommodate a wide range of tastes.

Other rich sources of non-animal protein include legumes, nuts, seeds, food yeasts and freshwater algae. Although food yeasts ("nutritional yeast" and "brewer's yeast") do not lend themselves to forming the center of one's diet, they are extremely nutritious additions to most menus (in soups, gravies, breads, casseroles, and dips). Most yeasts are 50 percent protein (while most meats are only 25 percent).

Freshwater algae contains a phenomenal percentage of protein. One type is the deep green spirulina, a food that is 70 percent protein. It is available in tablets, powders, and even candy bars.

### **Percentage of Calories from Protein**

#### LEGUMES

Soybean sprouts 54%

Soybean curd (tofu) 43%

Soybeans 35%

Lentils 29%

Split peas 28%

Kidney beans 26%

Navy beans 26%

Lima beans 26%

Garbanzo beans 23%

#### GRAINS

Wheat germ 31%

Rye 20%

Wheat, hard red 17%

Wild rice 16%

Buckwheat 15%

Oatmeal 15%

Millet 12%

Barley 11%

Brown rice 8%

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### VEGETABLES

Spinach 49%  
Watercress 46%  
Kale 45%  
Broccoli 45%  
Brussels sprouts 44%  
Turnip greens 43%  
Cauliflower 40%  
Mustard greens 39%  
Mushrooms 38%  
Lettuce 34%  
Green peas 30%  
Zucchini 28%  
Cucumbers 24%  
Green pepper 22%  
Artichokes 22%  
Cabbage 22%  
Eggplant 21%  
Tomatoes 18%  
Onions 16%  
Beets 15%  
Potatoes 11%  
Yams 8%

### FRUITS

Lemons 16%  
Honeydew melon 10%  
Cantaloupe 9%  
Strawberry 8%  
Orange 8%  
Grape 8%  
Watermelon 8%

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Tangerine 7%

Papaya 6%

Peach 6%

Pear 5%

Banana 5%

Grapefruit 5%

Pineapple 3%

Apple 1%

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Pumpkin seeds 21%

Peanuts 18%

Sunflower seeds 17%

Walnuts, black 13%

Sesame seeds 13%

Almonds 12%

Cashews 12%

Filberts 8%

As the above charts demonstrate, protein deficiency need not be a concern for vegans. If we ate nothing but wheat, oatmeal, or potatoes, we would easily have more than enough protein. Eating nothing but cabbage would provide more than twice as much protein as anyone would need!

Of course, an actual vegan would never want to be limited to just one food. The vegan diet can (and should) be full of a wide variety of delicious foods. Write to PETA for some recipes and cooking tips to get you and your family started.

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## **Factsheets: Factory Farming: Mechanized Madness**

Life on "Old MacDonald's Farm" isn't what it used to be. The green pastures and idyllic barnyard scenes portrayed in children's books are quickly being replaced by windowless metal sheds, wire cages, "iron maidens," and other confinement systems integral to what is now known as "factory farming."

### **Deprivation and Disease**

Simply put, the factory farming system of modern agriculture strives to produce the most meat, milk, and eggs as quickly and cheaply as possible, and in the smallest amount of space possible. Cows, calves, pigs, chickens, turkeys, ducks, geese, rabbits, and other animals are kept in small cages or stalls, often unable to turn around. They are deprived of exercise so that all of their bodies' energy goes toward producing flesh, eggs, or milk for human consumption. They are fed growth hormones to fatten them faster and are genetically altered to grow larger or to produce more milk or eggs than nature originally intended.

Because crowding creates a prime atmosphere for disease, animals on factory farms are fed and sprayed with huge amounts of pesticides and antibiotics, which remain in their bodies and are passed on to the people who eat them, creating serious human health hazards.

Chickens are divided into two groups: layers and broilers. Five to six laying hens are kept in a 14-inch-square mesh cage, and cages are often stacked in many tiers. Conveyor belts bring in food and water and carry away eggs and excrement. Because the hens are severely crowded, they are kept in semi-darkness and their beaks are cut off with hot irons (without anesthetics) to keep them from pecking each other to death. The wire mesh of the cages rubs their feathers off, chafes their skin, and cripples their feet.

Approximately 20 percent of the hens raised under these conditions die of stress or disease.(1) At the age of one to two years, their overworked bodies decline in egg production and they are slaughtered (chickens would normally live 15-20 years).(2) Ninety percent of all commercially sold eggs come from chickens raised on factory farms.(3)

More than six billion "broiler" chickens are raised in sheds each year.(4) Lighting is manipulated to keep the birds eating as often as possible, and they are killed after only nine weeks. Despite the heavy use of pesticides and antibiotics, up to 60 percent of chickens sold at the supermarket are infected with live salmonella bacteria.(5)

Genetic selection to keep up with demand and also reduce production costs, causes extremely painful joint and bone conditions, making any movement difficult. PETA's 1994 undercover investigation into the "broiler" chicken industry also revealed birds suffering from dehydration, respiratory diseases, bacterial infections, heart attacks, crippled legs, and other serious ailments.

Cattle raised for beef are usually born in one state, fattened in another, and slaughtered in yet another. They are fed an unnatural diet of high-bulk grains and other "fillers" (including sawdust) until they weigh 1,000 pounds. They are castrated, de-horned, and branded without

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anesthetics. During transportation, cattle are crowded into metal trucks where they suffer from fear, injury, temperature extremes, and lack of food, water, and veterinary care.

Calves raised for veal--the male offspring of dairy cows--are the most cruelly confined and deprived animals on factory farms. Taken from their mothers only a few days after birth, they are chained in stalls only 22 inches wide with slatted floors that cause severe leg and joint pain. Since their mothers' milk is usurped for human consumption, they are fed a milk substitute laced with hormones but deprived of iron: anemia keeps their flesh pale and tender but makes the calves very weak. When they are slaughtered at the age of about 16 weeks, they are often too sick or crippled to walk. One out of every 10 calves dies in confinement.(6)

Ninety percent of all pigs are closely confined at some point in their lives, and 70 percent are kept constantly confined.(7) Sows are kept pregnant or nursing constantly and are squeezed into narrow metal "iron maiden" stalls, unable to turn around. Although pigs are naturally peaceful and social animals, they resort to cannibalism and tailbiting when packed into crowded pens and develop neurotic behaviors when kept isolated and confined. Pork producers lose \$187 million a year due to dysentery, cholera, trichinosis, and other diseases fostered by factory farming.(8) Approximately 30 percent of all pork products are contaminated with toxoplasmosis.(9)

### Laws and Lifestyles

Factory farming is an extremely cruel method of raising animals, but its profitability makes it popular. One way to stop the abuses of factory farming is to support legislation that abolishes battery cages, veal crates, and intensive-confinement systems. But the best way to save animals from the misery of factory farming is to stop buying and eating meat, milk, and eggs. Vegetarianism and veganism mean eating for life: yours and theirs.

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## **Factsheets: Veal: A Cruel Meal**

The veal calf industry is one of the most reprehensible of all the kinds of intensive animal agriculture. Veal calves are a by-product of the dairy industry; they are "manufactured" by "milk machines"--dairy cows. Female calves are raised to be dairy cows: They are confined and fed synthetic hormones to increase growth and production and antibiotics to keep them alive in their unhealthy, unnatural environments. They are artificially inseminated and, after giving birth, are milked for several years until their production levels drop, then they are slaughtered.

Male calves are taken from their mothers shortly after birth. Some are slaughtered soon after birth for "bob veal." Others are raised in "open pens," a kind of minimum security prison, and even then they are sometimes chained. Most are destined for the veal crate.

### **Solitary Confinement**

The veal crate is a wooden restraining device that is the veal calf's permanent home. It is so small (22" x 54") that the calves cannot turn around or even lie down and stretch and is the ultimate in high-profit, confinement animal agriculture.(1) Designed to prevent movement (exercise), the crate does its job of atrophying the calves' muscles, thus producing tender "gourmet" veal.

### **"Feeding" Time**

The calves are generally fed a milk substitute intentionally lacking in iron and other essential nutrients. This diet keeps the animals anemic and creates the pale pink or white color desired in the finished product. Craving iron, the calves lick urine-saturated slats and any metallic parts of their stalls. Farmers also withhold water from the animals, who, always thirsty, are driven to drink a large quantity of the high-fat liquid feed.

Because of such extremely unhealthy living conditions and restricted diets, calves are susceptible to a long list of diseases, including chronic pneumonia and "scours," or constant diarrhea. Consequently, they must be given massive doses of antibiotics and other drugs just to keep them alive. (The antibiotics are passed on to consumers in the meat.) The calves often suffer from wounds caused by the constant rubbing against the crates.

### **A Fate Worse Than Death**

About 14 weeks after their birth, the calves are slaughtered. The quality of this "food," laden with chemicals, lacking in fiber and other nutrients, diseased and processed, is another matter. The real issue is the calves' experience. During their brief lives, they never see the sun or touch the Earth. They never see or taste the grass. Their anemic bodies crave proper sustenance. Their muscles ache for freedom and exercise. They long for maternal care. They are kept in darkness except to be fed two to three times a day for 20 minutes. The calves have committed no crime, yet have been sentenced to a fate comparable to any Nazi concentration camp.

## What You Can Do

To help stop veal calf abuses, don't buy or eat veal, and tell friends, relatives, and neighbors why. Tell restaurant managers about veal cruelties and ask them to remove veal from their menus. Also, don't buy or eat dairy products, because of the dairy industry's role in veal production. Ask your state legislators to sponsor bills that would prohibit the use of veal crates.

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## Factsheets: Vegetarianism: Eating for Life

Vegetarianism has been a way of life for many people for centuries, and today nearly 20 million Americans are vegetarians; many more have greatly reduced their meat consumption. Recently, as the link between meat consumption and life-threatening illnesses has become more apparent, and as more people have become aware of the cruelties of meat production, vegetarianism has rapidly gained in popularity.

### Health Benefits

There is no nutritional need for humans to eat any animal products; all of our dietary needs, even as infants and children, are best supplied by an animal-free diet. Our evolutionary ancestors were, and our closest primate relatives are, vegetarians. Human teeth and intestines are designed for eating and digesting plant foods, so it is no wonder that our major health problems can be traced to meat consumption.

The consumption of animal products has been conclusively linked with heart disease, cancer, diabetes, arthritis, and osteoporosis. Cholesterol (found only in animal products) and animal fat clog arteries, leading to heart attacks and strokes. A vegetarian diet can prevent 97 percent of coronary occlusions. The rate of colon cancer is highest in regions where meat consumption is high and lowest where meat-eating is uncommon. A similar pattern is evident for breast, cervical, uterine, ovarian, prostate, and lung cancers.

Low-fat diets, particularly those without saturated fat, have been instrumental in allowing many diabetics to dispense with their pills, shots, and pumps. A study of more than 25,000 people over age 21 found that vegetarians have a much lower risk of getting diabetes than meat-eaters.

A South African study found not a single case of rheumatoid arthritis in a community of 800 people who ate no meat or dairy products. Another study found that a similar group that ate meat and other high-fat foods had almost four times the incidence of arthritis as those on a low-fat diet.

Osteoporosis, or bone loss due to mineral (particularly calcium) depletion, is not so much a result of insufficient calcium as it is a result of eating too much protein. A 1983 Michigan State University study found that by age 65, male vegetarians had an average measurable bone loss of 3 percent; male meat-eaters, 18 percent; female vegetarians, 7 percent; female meat-eaters, 35 percent.

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In addition to the problems associated with too much fat, cholesterol, and protein, consumers of animal products take in far greater amounts of residual agricultural chemicals, industrial pollutants, antibiotics, and hormones than do vegetarians. The absorption of antibiotics through meat-eating results in antibiotic-resistant strains of pneumonia, childhood meningitis, gonorrhea, salmonella, and other serious illnesses.

Approximately 9,000 Americans die annually from food-borne illness and an estimated 80 million others fall ill.(1) The U.S. Department of Agriculture estimates that up to 40 percent of the poultry sold in this country is infected with salmonella bacteria.(2)

Meat contains 14 times as much pesticide residue as plant foods; dairy products, more than five times as many. Fish is another source of dangerous residues. The EPA estimates that fishes can accumulate up to nine million times the level of cancer-causing polychlorinated biphenals (PCBs) found in the water in which they live. Ninety-five percent of human exposure to dioxin, a "probable" cause of cancer and other health risks, comes through meat, fish, and dairy consumption.(3)

### **Vegetarian Ethics**

Human beings must consider what impact our actions have on the lives of others. To limit moral consideration to humans only is no more logical or justifiable than limiting concern to white people only or to men only; speciesism, like racism and sexism, is wrong because all animals contribute to the ecosystem and are capable of suffering. We do not need to eat meat, drink cow's or goat's milk, or eat eggs to live. Because today's system of mass production of these "products" causes pain, distress, and ultimately death to the billions of animals from whom they are taken each year, we are ethically bound to renounce them.

### **Ecological Arguments**

More than four million acres of cropland are lost to erosion in the United States every year. Of this staggering topsoil loss, 85 percent is directly associated with livestock raising, i.e., overgrazing.

Throughout the world, forests are being destroyed to support the meat-eating habits of the "developed" nations. Between 1960 and 1985, nearly 40 percent of all Central American rain forests were destroyed to create pasture for beef cattle. The rain forests are the primary source of oxygen for the entire planet; the very survival of the Earth is linked to their survival. The forests also provide ingredients for many medicines used to treat and cure human illnesses, and these resources have yet to be explored for their full potential.

Much of the excrement from "food" animals (which amounts to 20 times as much fecal matter as human waste) flows unfiltered into our lakes and streams.

The production of one pound of beef requires 2,500 gallons of water. It takes less water to produce a year's worth of food for a pure vegetarian (a vegan; one who consumes no meat, eggs, or dairy products) than to produce one month's food for a meat-eater.

## **Humanitarian Concerns**

Raising animals for food is an extremely inefficient way to feed a growing human population. The U.S. livestock population consumes enough grain and soybeans to feed more than five times the entire U.S. population. One acre of pasture produces an average of 165 pounds of beef; the same acre can produce 20,000 pounds of potatoes.

If Americans reduced their meat consumption by only 10 percent, it would free 12 million tons of grain annually for human consumption. That alone would be enough to adequately feed each of the 60 million people who starve to death each year.

## **Be Healthy and Humane**

When you consider the serious health risks of a meat- and dairy-based diet, the environmental devastation caused by animal agriculture, the huge waste of resources in a world faced with chronic human starvation, and the violence to and suffering of billions of animals kept cruelly confined on "factory farms," the switch to vegetarianism makes perfect sense.

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## **Factsheets: "Free-Range" Eggs and Meat: Conning Consumers**

According to a poll conducted by Opinion Research Corporation of Princeton, N.J., 93 percent of Americans oppose the suffering of animals raised for food; nine out of 10 specifically disapprove of the extreme confinement endured by chickens, pigs, and other animals on today's "factory farms."<sup>(1)</sup> Increasingly, conscientious consumers are turning to "free-range" eggs and "natural" meats as humane alternatives to animal foods produced by the factory-farming system. But how much more humane are "free-range" farms?

### **Free-Range: Fact or Fiction?**

Most consumers believe that the hens who produce "free-range" eggs spend much of their lives outdoors, warming themselves in the afternoon sun, enjoying dust baths, and laying their eggs in individual straw nests. But to U.S. egg producers, free-range means something entirely different--generally, that hens are uncaged, yet confined indoors in crowded sheds similar to "broiler" houses. In fact, no government laws or standards regulate the use of terms like ? free-range? and ? free-roaming? on egg cartons; some "free-range" eggs may be produced by hens who spend their lives in conventional battery cages.<sup>(2)</sup>

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Karen Davis, president of the animal protection group United Poultry Concerns, visited one free-range egg farm--Happy Hen Organic Fertile Brown Eggs--in Pennsylvania. According to fliers for Happy Hen eggs, these hens run free "in a natural setting" and are "humanely housed in healthy, open-sided housing, for daily sunning--something Happy Hens really enjoy."(3)

Davis tells a different story: "Through the netting at the front of the long barn we saw a sea of chickens' faces looking out, as though they were smashed up against the netting. Inside, the birds were wall to wall. They were severely debeaked and their feathers were in bad condition--straggly, drab, and worn off."(4)

More than 7,000 birds are housed in each Happy Hen barn, and individual hens have no more than 11/2 square feet of space each, not enough room to even spread their wings. One hen lays 250 eggs a year. Like their caged sisters, Happy Hens are occasionally force-molted. (This means that the hens are denied food for several days, which forces them to lose their feathers, or molt, and stop laying eggs for a couple of months. Forced-molting is an economic maneuver used by farmers to adjust egg prices.)(5)

Chickens can live for 15 years, but hens on commercial free-range farms are "spent," or unable to produce enough eggs to remain profitable, after one or two years. Even on small family farms, birds are kept for only two or three years. Worn-out free-range hens are usually sold to slaughterhouses or to live-poultry markets (where Santeria practitioners buy birds to be used in religious rituals). On both free-range and factory egg farms, male chicks are considered worthless: At birth, they are dumped into trash cans to suffocate one on top of another, thrown alive into a grinder, or sold for school science projects and to laboratories.

Birds who are raised for meat may be called free-range or free-roaming if they have some form of access to the outdoors. Free-range cows and sheep must be "grass fed and live on a range."(6) No other criteria--such as the size of the "range" or the amount of space individual animals must have--are required. Unfortunately, the truthfulness of even these vague claims is rarely verified. The United States Department of Agriculture, which defines free-range and free-roaming for labeling purposes, relies "upon producer testimonials to support the accuracy of these claims."(7) According to The Washington Post Magazine, in the case of birds, especially, the term free-range "doesn't really tell you anything about the [animal's] ... quality of life, nor does it even assure that the animal actually goes outdoors."(8)

### **Unnatural "Natural" Meat**

"Natural" foods "contain no artificial ingredients and are only minimally processed."(9) Animals raised for natural meats, sold at many health-food stores and upscale markets, are given no hormones or antibiotics, although they may be fed corn and other grain grown with pesticides. But again, this term tells consumers very little about the quality of an animal's life. For example, Coleman Natural Meats, the largest producer of natural beef in the United States, contracts with "ranchers of mainstream cattle to raise animals by the Coleman method. ... [E]ach Coleman animal receives a metal ear tag identifying it, and the ranchers must sign affidavits swearing that no drugs or hormones have been administered to the Coleman animals. From there, the cattle go to 23 mainstream feedlots in Colorado, where their feed is monitored every

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two weeks."(10) These so-called "natural" steers are confined to the same crowded feedlots as conventionally raised animals.

### **"Exotic" Animals on the Plate**

While some people consider it daring or adventurous to eat "exotic" meats--like ostrich steaks and buffalo burgers--many consume non-traditional animal foods because they believe these animals are raised more humanely than cows, chickens, turkeys, or pigs. A look at the way two species of these animals are treated suggests otherwise.

Recently, ostrich meat has begun to be marketed in the United States. The ostrich feathers are sold to designers or are used to make feather dusters, and their skin is used for expensive leather boots and clothing. To protect the commercial value of the hide, which can sell for hundreds of dollars, ostriches are stripped of their feathers before being slaughtered. To do this, farmers roughly pull ostrich feathers from their sockets with pliers or shave them off with electric shears. A New York Times article stated, "Slaughterhouses often do not know what to do with the big birds, the largest in the world."(11) A slaughterer in California said it took him "two hours of violent struggle to kill a single ostrich."(12) Often, ostriches are killed like chickens: They are electrically shocked (not stunned) and hung upside down and have their throats slit while fully conscious.(13)

Buffaloes (or American bison) who are raised for food fare little better than other commercially raised animals. A typical rancher confines his animals to a corral that is 7 feet high and solid, because if buffaloes "see daylight through the corral, they'll beat a hole into the wood in their attempt to get out, possibly injuring or killing themselves in the process."(14) Experimenters have tried to increase the number of buffaloes available for food by artificially inseminating female bison, flushing out the embryos and implanting them into cows, then re-impregnating the bison.(15) Bulls are slaughtered at about 2 years of age, when their hides are "prime."

### **Doing the Humane Thing**

From the "free-range" hen who smells fresh air for the first time on the way to the slaughterhouse to the "humanely raised" dairy cow whose days-old male baby is taken from her and sold to veal farmers, all animals raised for food suffer and are exploited. The only truly humane alternative to contributing to this suffering is to choose alternatives to eggs, milk, and meat. It's not as hard to do as you may think!

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## **Factsheets: The Grief Behind Foie Gras**

France produces most of the world's annual 10,000 tons of foie gras--the livers of ducks and geese grotesquely enlarged by cruel force-feeding. But inhumane force-feeding goes on in U.S. factory farms, too--in New York and California.(1)

### **Cruelty Most Fowl**

In 1991, PETA investigated foie gras production at Commonwealth Enterprises located in the Catskills of New York. Despite Commonwealth's many prior claims that it made foie gras without force-feeding the ducks, PETA's investigators observed and documented the following:

Three times a day, workers entered small duck pens in a factory-farm building. The ducks, knowing what was coming, struggled to get as far away from the men as possible.

The workers grabbed the ducks one at a time, held them down, forced open their bills, and shoved a long metal pipe down their throats all the way to their stomachs.

They then squeezed a lever attached to the pipe, and an air-driven pump forced a third of the day's six-to-seven pounds of corn mixture into each duck's stomach.

Each worker was expected to force-feed 500 birds three times a day. So many ducks died when their stomachs burst from overfeeding those workers who killed fewer than 50 of "their" 500 received bonuses.

After four weeks of force-feeding, the ducks were slaughtered, their livers six to twelve times normal size (2,3)--pale, blotchy melon-sized messes instead of small, firm, healthy organs.

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A worker told one of PETA's investigators that he could feel tumor-like lumps, caused by force-feeding, in some ducks' throats. One duck had a maggot-covered neck wound so severe that water spilled out of it when he drank. Workers routinely carried ducks by their necks, causing them to choke and defecate in distress.

Foie gras is sold as a "delicacy" which, until Commonwealth was established, was not obtainable "fresh" in the U.S.--only as processed pâté de foie gras--because of import restrictions.

Only male ducks are used for foie gras--they produce larger livers and are considered better able to withstand the four weeks of torture. Female hatchlings are treated as trash--literally. Commonwealth workers were observed stuffing a nylon feed sack with female ducklings, tying the bag at the top, and dropping it into a trash can filled with scalding water. Workers killed the surviving ones by smashing their heads against the trash can.

### **Cruelty Charges Against Commonwealth**

Based on PETA investigators' evidence, eyewitness accounts, and veterinarians' statements, New York state police raided Commonwealth in April 1992. The company was charged with cruelty to animals. Sadly, the district attorney later gave in to pressure by agriculture groups, withdrew the criminal charges, and persuaded a judge to seal the case file so the proceedings which led to the dismissal would remain secret.

### **What the Experts Say**

Veterinarians who viewed PETA investigators' video footage and read their log notes said such force-feeding would damage the pharynx and esophagus so severely that ducks would not be able to eat on their own after a short period; there is a high chance of infection from using the same pipe on so many ducks without cleanings; and food is likely to enter the lungs, causing pneumonia.

One veterinarian who accompanied police on their raid of Commonwealth Enterprises said, "All of the ducks [in the force-feeding area] exhibited signs of illness. Many of those ducks were unable to walk or stand. [Some] exhibited ... bill deformities."(4)

Another stated, "[Force-feeding] can injure the mouth and esophagus. ... The birds appear to be ill; their eyes are dull and their feathers unkempt."(5) A third veterinarian who accompanied police noted that "none [of the ducks] was attempting to preen. Only severely stressed or ill ducks allow their plumage to deteriorate to the degree seen in this videotape."(6)

A New York state wildlife pathologist who examined ducks from Commonwealth said, "***If this kind of thing was happening to dogs, it would be stopped immediately.***"(7) He expressed horror at their "greatly enlarged livers, the product of overfeeding by force (livers are easily torn by even minor trauma)," and at one duck's "laceration of the liver with hemorrhage into the body cavity. This type of treatment and farming of waterfowl is outside the acceptable norms of agriculture and sane treatment of animals."(8)

Many New York veterinarians signed a statement that foie gras production should be outlawed because foie gras is nothing but the serious liver disease hepatic lipidosis: "Animals in this

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condition would feel extremely ill .... Foie gras production, by definition, constitutes clear-cut animal cruelty."

Nobel Prize-winning goose expert Konrad Lorenz was asked to read to the European Parliament a report promoting the foie gras industry. Lorenz refused, saying he felt "hot with anger" as he read the report. "My viewpoint towards the 'expert opinion' which further permits forcible fattening of geese ... can be expressed briefly: The 'expert opinion' is a shame for the whole of Europe."(9)

### **Pâté de Folly**

Foie gras and pâté de foie gras can make people fat and sick like the unfortunate birds tortured to produce it. Foie gras gets 85 percent of its calories from fat--more than twice as much as a hamburger! Cardiologist David T. Nash has pointed out, "This fat is mostly palmitic acid, a saturated fat known to increase cholesterol."(10)

### **De-Livering**

Following PETA's exposé, activists organized protests at restaurants that serve foie gras, and PETA sent information to hundreds of restaurants in the U.S. and Canada. Many, including the San Francisco Hilton, Chicago's Pump Room, and New York's Loews hotel chain, have removed foie gras from their menus. Air Canada and Scandinavian airline SAS have both agreed to stop serving foie gras, and American Airlines agreed to stop selling it in its duty-free catalog. Echoing the sentiments of many of the restaurateurs who received PETA's information on foie gras, George Dareos, owner of La Louisiane restaurant in San Antonio, Texas wrote: "I cannot thank you enough for providing this information to me. . . . It is simply appalling! I am discontinuing any further purchasing of [foie gras] immediately."

Possibly because of the scandal of force-feeding, Commonwealth became part of the foie gras company AGY Corporation, which also does business as Hudson Valley Foie Gras, New York State Foie Gras, and Ferme de Gourmande, D'Artagnan.

### **Legislation Introduced**

Since 1993, New York state legislators have introduced bills that would prohibit force-feeding for foie gras production. The powerful farm lobby opposes the legislation, and as this factsheet goes to print, the Senate and Assembly Committees on Agriculture have been unwilling to hold open hearings on cruel force-feeding.

### **Animal Lovers Unite**

On April 4, 1995, PETA sent a letter co-signed by 223 animal protection groups to the American Society for the Prevention of Cruelty to Animals (ASPCA), which has authority to enforce New York's anti-cruelty laws. The letter urged the ASPCA to investigate and prosecute the New York foie gras producers, pointing out that New York law prohibits torturing or unjustifiably injuring animals and furthering any act of cruelty to animals. As of this writing, PETA has no word on how the ASPCA plans to act on this information, but we are hopeful they will opt to enforce the law to its fullest extent.

## What You Can Do

Never buy foie gras or any foie gras product. Order a foie gras action pack from PETA. Urge restaurants and stores that sell foie gras to halt sales and to sell vegetarian pâté instead. (The vegetarian Bonavita brand and others are often sold alongside U.S. and imported liver pâté in food stores.) Organize demonstrations where foie gras is sold. Ask PETA how you can support legislation to prohibit cruel force-feeding.

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## Factsheets: Milk: Not a Natural

Dairy products are considered a dietary staple by many, yet they are neither a necessary nor a desirable part of a healthy human diet. For those who wish to avoid meat for ethical and/or health reasons, dairy products are a poor substitute.

Whole cow's milk is suited to the nutritional needs of calves who, unlike human babies, double their weight in 47 days (as opposed to 180 for humans), grow four healthy stomachs, and weigh 300 pounds within a year. Cow's milk contains about three times as much protein as human milk and almost 50 percent more fat. Despite the clever advertising of the dairy industry, it is not "natural" for humans to drink cow's milk. No other species drinks milk beyond infancy, and no other species drinks the milk of another species (except domestic cats and dogs, who are taught the habit). After four years of age, most people develop lactose intolerance, the inability to digest the carbohydrate lactose (found in milk), because they no longer synthesize the digestive enzyme lactase. Consuming dairy products after early childhood can cause diarrhea, gas, and cramps.(1)

## Liquid Meat

In addition to being an unnatural food for humans, cow's milk, like other dairy products, is unhealthy. John A. McDougall, M.D., calls dairy foods "liquid meat" because their nutritional contents are so similar. Rich in fat and cholesterol, dairy products, including cheese, milk, butter, cream, yogurt, and whey (found in many margarines and commercial baked goods), contribute to the development of heart disease, certain cancers, and stroke—our nation's three deadliest killers—and even osteoporosis, as studies have repeatedly shown.

Osteoporosis is bone loss due to calcium resorption, which, contrary to the protestations of the dairy industry, is not halted or prevented by an increase in the intake of calcium so much as by a drop in protein consumption. High-protein foods, such as meat, eggs, and dairy products, leach calcium from the body as excess protein is processed by the liver and passed through the kidneys, making the kidneys work harder and causing the loss of minerals such as calcium.(2) Societies with little or no consumption of dairy foods and animal proteins show low incidences of osteoporosis. Furthermore, Dr. McDougall notes, "Calcium deficiency caused by an insufficient amount of calcium in the diet is not known to occur in humans."(3)

Other illnesses are more prevalent among those who consume significant amounts of dairy products than among vegans. Ninety percent of asthma patients who were put on a completely vegetarian diet (without meat, eggs, or dairy products) experienced great improvements in the frequency and severity of their attacks.(4) Dairy products are also the leading cause of food allergies and have been implicated in congestive heart failure, neonatal tetany, tonsil enlargement, ulcerative colitis, Hodgkin's disease, and respiratory, skin, gastrointestinal, and behavioral problems.(5)

## It's a Cow's Life

At least half of the 10 million cows kept for milk in the United States live on factory farms, in conditions that cause tremendous suffering to the animals. They do not spend hours grazing in fields but live crowded into concrete-floored milking pens or barns, where they are milked two or three times a day by machines.

Milking machines often cause cuts and injuries that would not occur were a person doing the milking. These injuries abet the development of mastitis, a bacterial infection common to the dairy industry. In a handbook for dairy farmers, a photo caption warns that "Increasing severity of mastitis results in progressive deterioration of milk quality," causing losses of at least half a billion dollars per year.(6) More than 20 different types of bacteria cause the infection, which is easily spread from one cow to another and which, if left unchecked, can cause death.

In some cases, milking machines give cows repeated electrical shocks, causing them considerable discomfort, fear, and impairment of their immune systems, sometimes leading to death. A single farm can lose several hundred cows to uncontrolled electric shocking.(7) However, milking machines are used anyway, because they save labor, enabling a single farm worker to milk 86 cows in two hours.(8)

The number of cows raised for milk dropped from almost 22 million in 1950 to 10.8 million in 1980, yet the amount of milk produced rose from 116 billion pounds to 128 billion.(9) As a

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result, the average cow of the 1980s produced about twice as much milk as her counterpart of the 1950s. To produce 24 quarts of milk per day, cows are fed more than 81 pounds of food (including grain, hay, and silage--corn, sorghum, grass, and legumes) plus 45 gallons of water every day.(10) In 1983 the U.S. government stored 17 billion pounds of surplus "milk equivalent" (milk, cheese, and butter), at a cost to taxpayers of \$2.5 billion for 1983.(11) Efforts to prevent farms from going under have cost the U.S. government more than a billion dollars a year in price support programs.(12)

Cows of the 1990s live only about four to five years, as opposed to the life expectancy of 20-25 years enjoyed by cows of an earlier era. To keep the animals at high levels of productivity, dairy farmers keep them pregnant constantly through the use of artificial insemination. Farmers also use an array of drugs, including bovine growth hormone (BGH); prostaglandin, which is used to bring a cow into heat whenever the farmer wants to have her inseminated; antibiotics; and even tranquilizers, to influence the productivity and behavior of the cows.

About 15% of dairy cows are routinely injected with BGH(13), which increases milk production by up to 20 percent, causing cows' udders to become so heavy and swollen that they can drag along the ground. A full udder can weigh 60 pounds and hold 50 pounds of milk. (14) The cows' accidental stepping on their udders causes the teats to become injured and infected, resulting in mastitis. Fortunately, responding to pressure by groups representing animal rights, consumer protection, small farms, and environmental interests, five of the largest supermarket companies in the United States have asked their suppliers not to ship them milk from cows given the drug.(15) BGH aggravates lameness, because it causes cows to become so heavy. Cement flooring and the high-energy diet also contribute to the problems.

### **What Happens to the Calf?**

Perhaps the greatest pain suffered by cows of the dairy industry is the repeated loss of their young. Female offspring may join the ranks of the milk producers, but the males are generally taken from their mothers within 24 hours of birth, before they have drunk any of their mothers' milk, and sold at auction either for the notorious veal industry or to beef producers. If the calf is killed when young, his fourth stomach is also used in cheese-making; it contains rennin, an enzyme used to curdle (or coagulate) milk to turn it into cheese. Rennet, the membrane of which rennin is an extract, can also be used in this process. It is possible to make rennetless cheese (available at health food stores), but the close connection between the dairy, veal, and leather industries makes it cheaper for cheese producers to use calf parts than a vegetable-derived enzyme.

Within 60 days the cow will be impregnated again. "If a cow hasn't dried up just before calving, farmers often give her a few days' rest. Some feel that a month or so rest period is valuable but others see that as a waste of time."(16) For about seven months of her next nine-month pregnancy, she will continue to be milked for the fluid meant for her older calf. A typical factory-farmed dairy cow will give birth three or four times in her short life. When her milk production wanes, she is sent to slaughter, most likely to be ground up into fast food burgers.(17)

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## **Factsheets: Poultry and Eggs: Gone Rotten**

Although some people who claim to be vegetarians eat poultry, chickens are not vegetables; they are animals whose lives are considered to be so inconsequential that in the United States alone we kill six billion of them each year for food. Close to 280 million chickens supply the 68 billion eggs the United States consumes each year (1); the rest are slaughtered for meat. Ninety-eight percent of "layer" hens are raised in tiny, crowded cages.(2)

Male or female chickens can be raised for meat, but only females can produce eggs, so about 280 million male chicks per year are disposed of by being shoved into plastic bags and left to suffocate. They cannot be raised as "broilers" or "fryers" because they have not been bred to produce a lot of muscle. Since the primary objective in modern chicken farming is to breed a profitable chicken, "broilers" and "fryers" suffer numerous health problems--affecting their bones and legs--because they are so "meat heavy." Hens bred to be super layers are so stressed that their accelerated laying span lasts only a year and a half, two years at most, compared with

the 15-20 years that hens produce eggs under natural conditions. They now lay about twice as many as the 120 eggs per year that hens laid several decades ago, before factory farming, and their tired bodies pay the price.

### **"Broiler" Chickens**

Chickens raised for meat are kept in large warehouses, which typically hold 25,000 birds.(3) Chickens can function well in groups of up to about 90, a number low enough for each bird to find a niche in the pecking order. In crowded groups of thousands, however, no such social order is possible, and, in their frustration, the birds peck at one another so vehemently that they draw blood and even kill one another. Genetic selection, to keep up with demand and also keep production costs down, causes extremely painful conditions. According to veterinary professor John Webster, "Broilers are ... in chronic pain for the last 20% of their lives. They don't move around ... because it hurts their joints so much." PETA's 1994 undercover investigation into the "broiler" chicken industry revealed birds suffering from dehydration, respiratory diseases, bacterial infections, crippled legs, heart attacks, and other serious ailments. Rather than being euthanized, sick birds may be beaten to death with a piece of pipe or may have their heads "whacked" with a nail driven into a piece of pipe. Others are simply left to suffer and die on their own.

It is not only their numbers that make the birds' lives unnaturally stressful. They have no access to fresh air because the warehouses, which are permeated by the overpowering odor of ammonia, are ventilated by machines. If the machinery breaks down, or if it proves inadequate for extreme temperatures, thousands of chickens suffocate in a matter of hours. In a typical case in Union County, N.C., more than half a million chickens died during one heat wave.(4)

Vaccinating the birds soon after birth and keeping them segregated by age help keep down the mortality rate. Nevertheless, as many as 5.5 percent die before their 7-8 weeks of hell are over.(5) To keep the birds wakeful and eating, lights are kept on for 23 hours a day. Agriculture researchers are now testing the use of red contact lenses to render the chickens confused and to blur their vision and thus reduce movement and cannibalism.

### **Laying Hens**

The egg industry is now almost completely automated. Feeding, lighting, temperature, and even moulting are controlled by machines; nothing is left to nature. Eggs roll onto a conveyor belt, which carries them out of the hen house. Conveyor belts also deliver food and water to the cages, which are stacked in several tiers. Cage floors are of wire mesh, so waste falls from the upper tiers onto the chickens below. A single cage, roughly 16 by 18 inches, holds five to six hens, each with a wingspan of 32 inches. The cage floor slopes toward the food and water troughs, so that weaker hens are often crushed to the bottom, their feathers worn away by constant contact with wire, and finally killed.

Chicken feed is specially formulated to encourage weight gain. Hybrid corn is fortified with Vitamins A and D (to eliminate the nutritional need for sunlight) and laced with antibiotics to fight infections that come from the filth of close confinement and pesticides to control fly

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populations. The industry has even developed ways to recycle the chickens' own wastes back into the diet.

In a typical 80,000-hen warehouse, about 20 birds die per day.(6) When the level of egg production drops too low to make a profit, all the hens go to slaughter, and their battered bodies are turned into "pet" food, chicken soup, feed for animals on fur farms, and other miscellaneous products. The hen house is hosed down in preparation for the next unfortunate batch of birds.

Meanwhile, at the chicken processing plant, water is used as if there's no tomorrow--as many as 100 million gallons a day(7)--and slaughterhouse workers experience pain and even permanent limb damage (carpal tunnel syndrome) caused by repetitive motion. Fear of unemployment and poverty keeps them at their gruesome task.

### **The Unhealthy Result**

Many people, fearful of the high levels of fat and cholesterol in beef and other "red" meats, are eating more chicken, believing that poultry is a healthy alternative. They could not be more wrong. Not only does chicken contain the same amount of cholesterol as beef (25 mg per ounce)(8), it is also likely to be contaminated with leukosis (chicken cancer), which infects 90 percent of factory-farmed chickens (9), or salmonellosis, which has also been found in as much as 90 percent of federally inspected poultry.(10) According to the Food and Drug Administration, poultry is the number one source of food-borne illnesses, causing an estimated 1,680 deaths per year (11) and millions of cases of "stomach upset" or "food poisoning." An inspector has only two seconds per bird to check for signs of contamination.(12)

Eggs are also hazardous to health. Although experts now consider the average egg to contain 213 mg of cholesterol, rather than the 275 that they thought previously (13), eggs cause food poisoning, particularly from salmonella, and contribute to obesity, heart disease, and other serious health problems. In England in late 1988, Junior Health Minister Edwina Currie remarked that "most of the egg production in this country" is contaminated with salmonella. As a result of her candor, egg sales in England suddenly dropped 60 percent, and Ms. Currie was pressured to resign.(14) Two months later, a confidential government report was leaked that stated that up to two million infections a year may be caused by the consumption of eggs and poultry in the United Kingdom.(15) Because the symptoms of salmonellosis are similar to flu symptoms, many people have salmonella poisoning without realizing it.

Eating chicken is no more healthy or humane than eating other kinds of meat, and eggs are no safer to eat now than they were before we revised their cholesterol level. These foods are hazardous to your health, and there are several good substitutes for them. Try tofu scrambler instead of tired old scrambled eggs, egg replacer in your baked goods, and marinated tofu at your next barbecue, and put the chicken torture chambers out of business. Perhaps the only way to be sure a chicken dinner won't poison you or your family is to throw it away.

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## Factsheets: Keeping a Healthy Heart

Every day, 4,000 Americans suffer from heart attacks. Those who don't die often suffer another heart attack later. Because we now know what causes heart attacks, we can prevent them. Studies show that people who have heart attacks often have high cholesterol levels; many also smoke or have high blood pressure. When these causes are controlled, heart attacks become rare.

### Cholesterol and Your Heart

In many studies, researchers have found that higher levels of cholesterol are linked to greater risk of heart attacks. For every one percent increase in the amount of cholesterol in your blood, there is a two percent increase in your risk of having a heart attack; every one percent reduction in your cholesterol level reduces your risk by two percent.(1)

Elevated cholesterol--anything above 150--promotes atherosclerosis, the buildup of cholesterol, fat, and cells in the arteries that feed the heart muscle. When these arteries become clogged, a section of this muscle loses its blood supply. The result is a heart attack.

Fortunately, this process can be reversed without drugs and their side effects. Dr. Dean Ornish demonstrated this fact in his 1990 study of patients with advanced heart disease. Dr. Ornish put a group of patients on a completely vegetarian diet, which was less than 10 percent fat. They

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were also asked to begin a moderate exercise program, walking a half hour every day, and were taught relaxation techniques. Patients in this group found that their chest pain disappeared and their cholesterol levels dropped at a rate comparable to that of cholesterol-lowering drugs, without the side effects. Because the patients felt so much better, they were motivated to stick with this program. The plaques that had been growing in their hearts for decades actually started to dissolve within one year.(2)

A **vegan** (pure vegetarian) diet is the best for reducing cholesterol levels. Plant foods contain no cholesterol, whereas meats, eggs, and dairy products contain large amounts of cholesterol, saturated fats, and concentrated protein, all harmful substances. Also, the high fiber content of a vegetarian diet helps "wash away" excess cholesterol in your digestive tract.

### Reducing Your Cholesterol

Thanks to the dedicated efforts of the meat, dairy, and egg industries, many Americans still believe that animal products are necessary for good health.(3) In fact, America's meat habit is causing a tremendous, and unnecessary, health crisis. According to *The Journal of the American Medical Association*, a vegetarian diet can prevent 97 percent of coronary occlusions.(4) One of the largest studies of lifestyle and health found the heart disease mortality rates for lacto-ovo vegetarians to be only one-third that of meat-eaters; for vegans, the figure was one-tenth.(5)

Don't settle for halfway measures; you'll only be half as healthy as you could be. It's never too late to change your habits and improve your health. For breakfast, forget bacon and eggs and enjoy flavored oatmeal, cereals, bagels, or fresh fruit. For lunch, try salads, vegetable-stock soups, or tofu "burgers" and "hot dogs."

For dinner, make spaghetti with marinara sauce instead of meat sauce, fix bean burritos instead of beef tacos, or try vegetable lasagna, using soft tofu instead of ricotta cheese. Virtually any meat-based dish can be made with vegetables or with soy substitutes that mimic meat flavor. Try cool Tofutti for dessert.

Eating out? Chinese and Indian restaurants offer many vegetable dishes. At American restaurants, ask for a vegetable plate with a baked potato or rice, or try the salad bar (watch the high-fat dressings). Order pizza with lots of vegetables but no cheese; you'll be surprised at how many more flavors you'll taste. Be creative! Meatless meals can be as tasty as they are healthful.

### Preventing Heart Attacks

Become a botanical gourmet. Choose beans, grains, vegetables, and fruits. Avoid meats, fish, and cheese.

Include high-fiber foods in your diet. Whole-wheat bread, brown rice, oats, and vegetables supply fiber, which helps lower cholesterol.

Avoid dairy products; they contain cholesterol and saturated fats. Calcium can be obtained from vegetables, nuts, and beans.

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Avoid tobacco, too. Smoking promotes atherosclerosis and robs your body of oxygen.

Have your blood pressure and cholesterol level checked regularly. Avoid excessive salt; read labels for sodium content.

Exercise regularly. Walking, running, tennis, and any other activity that increases the heart rate is helpful.

Write to PETA for delicious, eggless, non-dairy, vegetarian recipes.

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## **Fish Out of Water**

### **By Ingrid Newkirk**

This is a true story about a fish who lived in an aquarium in a country house and longed for weekday afternoons.

During the mornings, when the house was quiet, the fish spent his time at the end of the tank near the window, catching the morning sunlight on his fins and browsing among the reeds. But, at about 4:30 p.m., he swam to the other side of the tank and stared at the hallway door.

At that time of day, the man came home from work. Before the key turned in the lock, the fish began "pacing," swimming back and forth without letup, showing the sort of impatience you might see in a person drumming his fingers on a table top. Every few laps the fish paused and hung in the water, staring hopefully at the door.

Perhaps he sensed that the man loved him, as wholly inadequate as a man's love for a fish must be. In fact, the man had usually forgotten all about the fish until he reached the door, but then he remembered and rushed straight into the living room so as not to disappoint him. The fish jumped and wagged his tail like a dog, lifting about a fifth of his body clean out of the water. The man would gently scratch the fish's back, the fish offering first one side of his body to be petted, then the other, making little waves with the swishing of his fins.

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The fish didn't know that, sometimes, for a lark, the man had thrown cherry bombs into the creek when the carp were spawning and then killed them with blows from a two-by-four as they thrashed about on the bank. The fish didn't know that on summer days the man still caught and gutted fish from that creek and grilled them just outside the window.

Not that the man would ever harm the fish in the tank, but, like most of us, he had a compartmentalized mind. Killing fish whom you don't know is just part of our culture.

The captive fish tried to make the best of what was otherwise a plain life. He cleaned rocks by rolling them about in his mouth, swam through the hair curlers fastened together to form a jungle gym, and tickled his back in the bubbles from the aerator. Once, he swam purposefully to the west end of the tank, seized a plastic plant in his tiny jaws, and dragged it back to his corner. The next day, when the man tidied the tank and put the plant back in its "place," the fish moved it again to the new spot he had chosen for it.

The fish had a sport. When the fish saw a cat tiptoe over the bookshelves to drink from his "aquarium," he would lie in wait for her in the reeds. Experience had taught the cats to peer into the depths for any sign of an ambush, but the fish knew that and stayed quiet as a mouse. Only when the cat's tongue descended, did he burst into action, propelling himself up through the reeds like a torpedo, hell-bent on taking a chunk out of that raspy organ. If she sensed the underwater eruption, the cat might get her first lap in before tongue and fish met. No blood was ever drawn on either side, but the contest provided a welcome diversion.

The fish kept to himself, taking the presence of newcomers to his tank with all the dignity and despair of a librarian who finds a group of young bikers living between the shelves. He would puff himself up and shake his fins at them and give chase if they did anything truly appalling, but he never attacked.

In the end he outlived them all. Some of them died of "seasickness,"--the trauma of sloshing around in the bag from ocean to distributor, in the truck to the pet shop, and then in the car on the way home; others succumbed to epidemics of "ick" that destroyed their fins, sending them spinning helplessly to the bottom of the tank, tiny vestiges of their graceful selves; still more suffocated when power failures robbed oxygen from the water.

On the Saturday the tank cracked, there were only two other fishes left. They were African "elephant-noses," exotic fish with trunk-like protuberances. The old fish expected their presence; he and they kept as respectful a distance from each other as fish can in a modest aquarium.

The man had been at the movies and returned to find water all over the floor and still dripping from a crack in the glass. In the inch of liquid left in the bottom of the tank, three individuals lay on their sides, dying.

Rescue had to be effected without delay. The fish was whisked into a large pot. One elephant-nose went into a saucepan, the other into a coffee pot; but this last little fish struggled, caught his long nose in the spout, and suffered a terrible injury. When the substitute tank was set up, the injured fish could not breathe properly or keep his balance. His companion helped keep him afloat, pushing him up against the side of the tank so he could reach food and air. But this

didn't save his life. Within a week of the injured elephant-nose's death, his companion died, too. After that, the old fish was alone again.

When I had first seen him, he had only been about half an inch long, and I was still eating cod roe on toast and salmon steak. By the time the elephant-noses died, I had stopped eating others of his kind. As he had grown, so had my understanding that there might be something wrong with pretending that fish could be kept as living room decorations. Human amusement was not worth their barren lives and "accidental" deaths.

When the fish died, I found myself trying to imagine what his ancestral waters were like, where and how he had been captured or bred, and what on earth we were thinking of when we acquired him and robbed him of his little fish destiny. Sorry, old fellow. Truly.

## **The One That Got Away: New Seafood Regulations Come up Short**

*By Neal D. Barnard, M.D., and Cindy S. Spitzer*

With its feeble attempts to deal with tainted fish, the U.S. Food and Drug Administration let a really big one get away.

On the surface, the FDA seafood inspection program, which finally took effect in December after a leisurely two-year implementation process, looks like a good idea. With more than 100,000 Americans sickened by contaminated seafood each year, the government's insistence on purportedly safer, cleaner handling methods seems better than nothing. The FDA's new Hazard Analysis and Critical Control Points (HACCP) plan aims to limit bacterial contamination by looking at selected points in fish processing plants, where contamination is most likely to occur. But, neither this plan nor any other will actually test whether the fish anyone buys at a store is loaded with disease-causing bacteria, mercury, or anything else. Such traces are invisible, and government inspectors will not routinely use the sophisticated tests that could reveal the contaminants.

Meanwhile, below the surface of the seafood safety issue lies the vast, mostly ignored reality that eating sea animals—even freshly killed, "cleanly handled" sea animals—can hazard one's health. The widely held public perception of seafood as health food is simply one whopper of a fish story.

The flesh of fish and other sea animals comes loaded with highly toxic chemical residues, which "bioconcentrate" in their muscles (the parts generally served). Fish and shellfish also contain too much protein, fat, and cholesterol to be healthy. Let us reel in the facts:

Fish swim the global ocean, picking up toxic pollution from places you would never dream of having lunch. Big fish eat little fish, and the bigger the fish (such as tuna and salmon), the greater the bioaccumulation of toxic chemicals throughout their flesh.

Fish and shellfish contain toxic chemicals at concentrations as high as 9 million times those found in the polluted water in which they swim. Mercury, something especially high in tuna and swordfish, can cause brain damage, of particular concern to growing children. Pesticides, such

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as DDT, PCBs, and dioxin, have been linked to cancers, nervous system disorders, fetal damage, and many other health problems. Avoiding fish eliminated half of all mercury exposure and reduces one's intake of other toxins as well.

Women who often eat fish are more likely to give birth to sluggish infants with small head circumferences and learning disabilities than women who rarely or never eat fish.

Nursing infants consume half of their mothers' load of dioxin, PCBs, DDT, and other deadly organochlorides.

Many people who eat fish and shellfish falsely believe that doing so is healthy. According to an August 1997 survey of 10,000 households, commissioned by an industry group called the National Fisheries Institute, more than half of those questioned cited health benefits among their top reasons for eating seafood. More than three-quarters believed consuming fish to be healthier than eating cows, pigs, or chickens. And, most believed the quality of the seafood they had eaten was good.

But, even eating fresh, relatively pollution-free fish—if you can find them—does not promote good health. Fish flesh provides excessive amounts of protein, fat, and cholesterol, with no fiber, complex carbohydrates, or vitamin C. That hefty dose of animal protein increases bone calcium loss, encouraging osteoporosis. Many people say they eat fish rather than beef in hopes of limiting fat and cholesterol. But, many fish, such as catfish, swordfish, and sea trout, contain almost one-third fat. Salmon is 52 percent fat. Ounce for ounce, shrimp have double the cholesterol of beef.

Fish and fish-oil capsules do contain the so-called “good” fat—essential fatty acids, such as omega-3. However, they have as much artery-clogging saturated fats as they do omega-3s, and studies show that diets based on fish do nothing to reverse arterial blockages. In fact, blockages continue to worsen for patients who regularly eat fish. Fortunately, eating vegetables such as broccoli, spinach, lettuce, and beans provides essential fatty acids in a more stable form, with zero cholesterol and little saturated fat.

One hopes FDA's recent seafood regulations may prevent some food poisonings caused by improper handling of fish and shellfish. But mounting evidence shows that eating fish and other sea animals is downright unhealthy. No increased vigilance to reduce the slimy bacteria on their decomposing and pollution-laden bodies will improve their inherently inadequate nutrition, or reduce the toxic chemicals laced throughout their flesh.

If toxic chemicals and saturated fat are not enough to curb your appetite for fish flesh, consider this: fish and the bacteria living in them flourish in cold water—often at the same temperature range as your refrigerator. Even properly handled, constantly refrigerated dead fish rapidly rot. At least 40 percent have begun to spoil before being taken from the grocery seafood counter. Any fish that smells “fishy” is indeed spoiling.

But do not rely on your nose to protect you. As much as 10 percent of raw shellfish, while appearing perfectly fresh, are infected with organisms that can cause hepatitis, salmonella poisoning, cholera, and even death.

Just how fresh do you want your saturated fat and mercury anyway?

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Neal D. Barnard, M.D., author of *Eat Right, Live Longer*, founded the Washington, D.C.-based Physicians Committee for Responsible Medicine in 1985. Cindy S. Spitzer is a science writer based in the Baltimore area.