

# EXPULSED

## Processed meats cause cancer.

### So why do schools feed them to children?



In late 2007, the verdict came in. The American Institute for Cancer Research and the World Cancer Research Fund released the most comprehensive review ever compiled on nutrition and cancer risk. Many foods are linked to cancer, the report confirmed. But it reserved some of its strongest language for the link between processed meats, like hot dogs and bacon, and colorectal cancer. The evidence was deemed “convincing,” and no amount was considered safe: Processed meats should be avoided completely.

The term “processed meats” means those that are typically prepared or preserved by smoking, curing, or salting or by the addition of preservatives. This includes ham, bacon, pastrami, and salami, as well

as hot dogs and sausages to which nitrites or nitrates have been added. Hamburgers and minced meats may be included as well, depending on processing.

The report’s conclusion was based on 44 case-control studies (in which the diets of individuals with

### How Much Do Americans Eat?

In 2006, Americans consumed more than 1.5 billion pounds of hot dogs. Analysts estimate the processed meat industry will generate \$22.49 billion in annual sales by 2009. Sixty-two percent of all Americans eat smoked ham, bacon, or some form of processed pork—the average person eats 32 pounds of it a year.



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cancer were compared with those of individuals who did not have cancer, but who were similar in other respects) and 14 cohort studies (in which the diets of individuals were assessed before cancer onset, and the individuals were followed over time to track diet patterns and cancer risk).

The risk of colorectal cancer increases, on average, by 21 percent for every 50 grams of processed meat consumed daily. A 50-gram serving is about the size of a typical hot dog. Some studies have also linked processed meats to cancer of the esophagus, lung, stomach, and prostate, but evidence is more limited than for colorectal cancer.

### Like Tobacco and Lung Cancer

Why do processed meats cause cancer? From a scientific standpoint, the situation is very much like tobacco and lung cancer: There are hundreds of chemicals in tobacco smoke, and exactly which ones present the greatest risk has never been entirely clear.

Processed meats contain fat, especially saturated fat, as well as plenty of cholesterol and salt. The nitrites that are often used as a preservative, or as a coloring and flavoring agent, can produce N-nitroso compounds, which are suspected carcinogens. In addition, meats cooked at high temperatures may contain carcinogens, including heterocyclic amines and polycyclic aromatic hydrocarbons. Heme iron is also plentiful in red and processed meats. Heme promotes the production of carcinogens, and its iron content also leads to the production of free radicals.

Despite the scientific consensus that these foods should never be eaten, let alone fed to children, they are still widely consumed. According to the National Hot Dog & Sausage Council, more than 740 million hot dog packages were sold in 2007. On average, Americans consume about 32 pounds of processed pork products each year. Compared with whites, blacks consume about 15 percent more processed pork. Bacon is routine breakfast fare for many Americans, and processed meats grace the top of pizzas everywhere.

The National Cancer Institute predicts that in 2008, 108,070 individuals will develop colon cancer, 40,740

## Processed Meat Increases the Risk of Colon Cancer



Every 1.7 ounces of processed meat consumed per day raises colorectal cancer risk 21 percent.

World Cancer Research Fund/American Institute for Cancer Research. *Food, Nutrition, Physical Activity, and the Prevention of Cancer: A Global Perspective*. Washington, DC: AICR, 2007.

## Who Invented the Hot Dog?

Many hot dog historians credit (or blame) German immigrants pushing food carts in New York City's Bowery during the 1860s. As Linda Stradley writes on *WhatsCookingAmerica.net*, one German

butcher—looking for a simple way to make hot sandwiches in a confined space—came up with the idea of placing a sausage in a roll. He went on to open the first Coney Island hot dog stand.



**“There are two things you don’t want to see being made: sausage and legislation.”**

—GERMAN CHANCELLOR OTTO VON BISMARCK

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### Who's Eating Processed Meats?

Men, especially middle-aged men, eat more processed pork than women. Higher-income Americans eat less of it than middle- and low-income citizens. Rural Americans eat more than urban Americans. Blacks eat more than whites. And Midwesterners eat the most per capita.



### Processed Meat Increases the Risk of Stomach Cancer

Just one ounce of processed meat per day increases your risk of stomach cancer by 15 percent to 38 percent.

Larsson SC, Orsini N, Wolk A. Processed meat consumption and stomach cancer risk: a meta-analysis. *J Natl Cancer Inst.* 2006 Aug 2;98(15):1078-1087.



will develop rectal cancer, and 49,960 will die from these conditions. Colorectal cancer is the fourth most common cancer in both men and women.

#### Children at Risk

America's children have never been at such high risk for diet-related diseases. More than 16 percent of children and adolescents are overweight. One in three will develop diabetes at some point in his or her life.


Lifetime cancer risk is now one in three for women, and one in two for men.

A growing number of health professionals, legislators, parents, and others concerned about this health crisis have begun examining the role of school lunches in shaping children's eating habits. Many American cities have introduced bans or restrictions on soda, candy, fried foods, and other unhealthful products sold in schools.

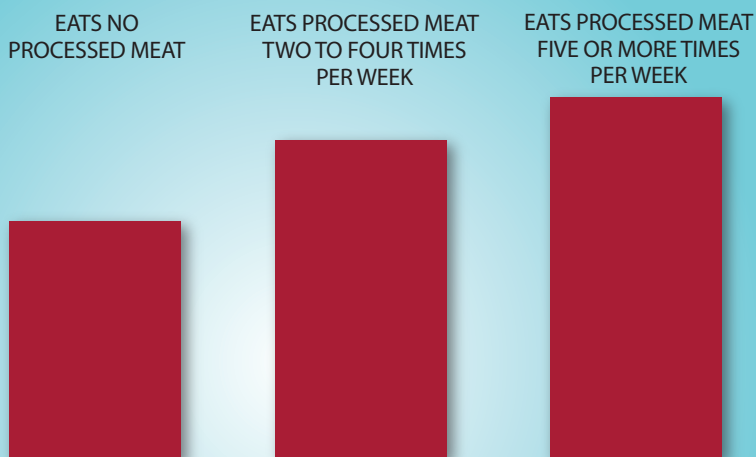
California, Connecticut, Idaho, Indiana, New Jersey, North Carolina, Oregon, and Texas ban or limit the amount of trans fat in school foods or encourage schools to phase out the use of trans fat in school foods. Some cities and counties are passing similar bans.

Research shows efforts like these help. A study published in *Pediatrics* this April compared two groups of elementary school children in Philadelphia. One group attended schools that banned candy and sodas, limited snacks, and taught lessons about nutrition. The other group attended schools that did not make these changes. Over a two-year period, the number of children who became overweight was 50 percent less at the schools limiting the unhealthful foods.

#### Healthier Options

Vegetarian options are abundant. As the Vegetarian Resource Group reported in its *Journal* (Volume XXVII, No. 2) earlier this year, there are now at least 15 different vegetarian hot dogs to choose from, including their top two (most healthful) choices: Tofurky Chipotle Franks and Lightlife Tofu Pups. Most products are soy based and are lower in calories and fat than traditional hot dogs. And none have nitrites. 

### Processed Meat Increases the Risk of Diabetes



A Harvard study of more than 40,000 health professionals showed that those who ate hot dogs, salami, bacon, or sausages two to four times per week increased their risk of diabetes by 35 percent. Those who ate these products five or more times per week experienced 50 percent increased risk.

Van Dam RM, Willett WC, Rimm EB, Stampfer MJ, Hu FB. Dietary fat and meat intake in relation to risk of type 2 diabetes in men. *Diabetes Care.* March 2002;25(3).