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Advancing cancer prevention and survival through nutrition education and research.

The Five Worst Packaged Lunchbox Meals

A Report from the Cancer Project

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As American families juggle busy schedules and rising food costs, a growing number of parents are sending children off to school with packaged lunchbox meals. Although Oscar Mayer's Lunchables and similar packaged lunches seem like cheap and convenient options, many pack a hidden cost. These products are often high in fat and cholesterol and contain processed meats, high-fat dairy products, and other unhealthful items that contribute to childhood obesity and raise the risk of chronic diseases later in life. To determine which products pose the greatest danger to children's health, dietitians with the Cancer Project analyzed packaged lunchbox meals made by five major companies.

Findings

Cancer Project dietitians found that most popular packaged lunchbox meals are high in fat, saturated fat, calories, and sodium and contain little or no fiber or healthful fruits and vegetables. Many also contain processed meats, which are linked to increased colorectal-cancer risk. The five most unhealthful lunchbox meals are ranked from worst to least bad.

The Five Worst Packaged Lunchbox Meals		
Rank	Meal	Manufacturer
1	Lunchables Maxed Out Cracker Stackers: Cracker Combo Ham and Cheddar	Oscar Mayer
2	Lunchables Maxed Out Cracker Stackers: Cracker Combo Turkey and Cheddar	Oscar Mayer
3	LunchBoxers: Pizza	Norwegian Jake's
4	LunchMakers Fun Kits: Bologna Cracker Crunchers	Armour-Eckrich
5	Lunchables Nachos Cheese Dip and Salsa	Oscar Mayer

Detailed results, including nutritional information, can be found on page 5.

Background

Packaged lunchbox meals are a multimillion-dollar industry. Oscar Mayer, a subsidiary of Kraft Foods, has 43 types of Lunchables, which command 85 percent of the \$750-million market.¹ Most of these meals are high in fat and cholesterol and contain no fruits or vegetables. A Lunchables Web site says the company's mission is to "nutritionally improve every product in the Lunchables product line." But just eight of the 43 Lunchables are deemed "Sensible Solutions" or "better-for-you foods" by Kraft Foods. In 2007, Kraft Foods launched Lunchables Jr., designed for 3- to 5-year-olds.²

Lunchables are not alone in this market. Cancer Project dietitians also reviewed Armour-Eckrich's 13 types of LunchMakers, many of which include cancer-promoting processed meat; Norwegian Jake's six LunchBoxers, which include artery-clogging chicken and processed meats; Kraft Foods' Easy Mac; and Smucker's Uncrustables.

High-fat foods like these have contributed to America's childhood obesity epidemic. The prevalence of overweight in children ages 6 to 19 has tripled over the past two decades.³ Childhood obesity sets the stage for the development of chronic diseases. One recent study found that obese children as young as 10 have the arteries of an average 45-year-old.⁴ As young people consume more high-fat foods, such as packaged lunchbox meals, they increase their long-term risk of heart disease,⁵ diabetes,⁶ and some types of cancer.^{7,8,9} One in three children born in 2000 will develop diabetes at some point in his or her life, according to federal health experts.¹⁰

Review Process

In March 2009, dietitians with the Cancer Project reviewed nutritional information for nearly 60 packaged lunchbox meals made by five companies: Armour-Eckrich, Kraft Foods, Norwegian Jake's, Oscar Mayer (a subsidiary of Kraft), and Smucker's. Dietitians obtained nutritional information by reviewing product packaging and company Web sites.

Dietitians evaluated each lunchbox meal based on key nutritional data, including the item's total fat, saturated fat, cholesterol, calories, sodium, sugar, and fiber. Ratings are also based on carcinogenic criteria, including the presence of processed meat, which can increase the risk of colorectal cancer, and cheese and other high-fat dairy products, which appear to play an important role in cancer risk.

Key Factors

Here is more detailed information about the key factors in the Cancer Project's evaluation process:

High fat content: Diets high in fat, especially saturated fat, have been linked by scientific research to increased risk of cancer, diabetes, and heart disease. High-fat, low-fiber foods boost the hormones that promote cancer. Specifically, diets high in meat, dairy products, fried foods, and vegetable oils cause an increase in the production of estrogens. Evidence suggests that high concentrations of estrogens in the bloodstream increase risk of cancer of the breast and other organs sensitive to sex hormones. High-fat, meat-heavy diets have also been linked to increased risk of colorectal cancer.

Cholesterol: Cholesterol is a waxy substance found in the bloodstream and in the body's cells. Every animal cell, whether from a human or any other animal, contains some of it. Blood-cholesterol levels are strongly linked to risk of heart disease. High levels of LDL, also known as "bad" cholesterol, and low levels of HDL, or "good" cholesterol, increase the risk of heart disease and stroke. Saturated fats are a major contributor to increased levels of LDL. Trans fats also increase LDL levels. Consuming large amounts of dietary cholesterol may eventually lead to reduced heart function.

Trans fats and partially hydrogenated oils: Partially hydrogenated oils are liquid oils that have been chemically hardened to make them more solid. They are often used as a preservative in snack foods to increase shelf life. Trans fats raise LDL-cholesterol levels and lower HDL-cholesterol levels, increasing the risk of cardiovascular disease.

Processed meats: Consuming processed meats—including hot dogs, pepperoni, bacon, and some deli meats—is a key risk factor for colorectal cancer, according to a comprehensive report released in 2007 by the American Institute for Cancer Research (AICR) and the World Cancer Research Fund. After reviewing 58 published studies on nutrition and cancer risk, AICR scientists concluded that processed meats increase one's risk of colorectal cancer by an average of 21 percent for every 50 grams of processed meat consumed daily. A 50-gram serving is approximately the size of a typical hot dog.

Dairy products: Dairy products, including milk, cheese, and yogurt, are typically high in fat and cholesterol, and researchers are discovering that dairy products appear to play an important role in cancer risk. In observational studies, dairy-product intake is associated with prostate-cancer risk. When humans drink cow's milk—even skim milk or fat-free milk—it causes biological changes in the body, including a rise in the amount of insulin-like growth factor 1 (IGF-1) in the bloodstream. IGF-1 is a powerful stimulus for cancer-cell growth. In addition, milk appears to interfere with the activation of vitamin D in the body. Vitamin D helps the body absorb calcium from the digestive tract. It also protects the prostate

against cancer. Dairy products may also increase the risk of ovarian cancer. Studies suggest that galactose, a byproduct of lactose digestion, may have a toxic effect on a woman's ovaries.

Sodium: Diets high in sodium can increase the risk of high blood pressure, a condition that can lead to cardiovascular disease and kidney problems. A typical child aged 4 to 8 needs only 1,200 milligrams of sodium a day, according to the Institute of Medicine. But the average child in the United States consumes more than twice that amount. Processed foods often contain large amounts of sodium, and high sodium content in children's food helps condition their taste buds so they develop a lifetime habit of consuming unhealthful levels of sodium.

Fiber: Diets high in fiber and low in fat help reduce the amount of estrogen circulating in the blood. Fiber is also important in preventing colon cancer, as it helps move food waste, extra hormones, and carcinogens out of the body. Fiber may help the immune system function properly. Building a diet from fiber-rich plant foods is important for cancer prevention and survival as well as overall health. Most Americans do not get enough fiber, and one key reason is that many commonly consumed dishes filled with meat, eggs, and dairy contain little or no fiber. On average, Americans currently consume less than half the recommended 35 grams to 40 grams of fiber per day.

Sugar: Simple, refined sugars provide calories but no nutritional benefit when it comes to cancer prevention and survival. Refined sugars are easy to overconsume because they are not filling. Therefore, they can promote weight gain, which increases the risk for certain types of cancer. In addition, some evidence suggests that elevated insulin levels resulting from consumption of refined sugars may increase cancer risk and impair survival. For these reasons, it is important to choose more healthful sweet foods, such as whole and dried fruits with cancer-fighting nutrients and fiber.

Rating System

Items with the most points were ranked as the least healthful. Points were given if the menu item had the following:

- **Processed meats:** 1 point
- **High-fat dairy products:** 1 point
- **Fat grams:** 10 to 19 (1 point), 20 to 29 (2 points), 30 or more (3 points)
- **Saturated-fat grams:** 2.5 to 4.9 (1 point), 5 to 7.4 (2 points), 7.5 to 9.9 (3 points), 10 or more (4 points)
- **Cholesterol milligrams:** 15 to 29 (1 point), 30 to 44 (2 points), 45 to 59 (3 points), 60 or more (4 points)
- **Fiber grams:** less than 3 (1 point)
- **Calories:** 300 to 399 (1 point), 400 to 499 (2 points), 500 to 599 (3 points), 600 or more (4 points)

- **Sodium milligrams:** 400 to 799 (1 point), 800 to 1,199 (2 points), 1,200 to 1,599 (3 points), 1,600 or more (4 points)
- **Sugar grams:** 10 to 19 (1 point), 20 to 29 (2 points), 30 to 39 (3 points), 40 or more (4 points)
- **Trans-fat grams:** 0.5 or more per serving (1 point)

Using these scores, Cancer Project dietitians then chose the five worst prepackaged lunchbox meals. To break a tie between LunchBoxers: Pizza and LunchMakers Fun Kits: Bologna Cracker Crunchers, these items were further compared by ranking nutritional criteria—total fat, saturated fat, calories, and sodium—from highest to lowest. Based on these factors, LunchBoxers: Pizza was named the third-worst packaged lunchbox item, with LunchMakers Fun Kits: Bologna Cracker Crunchers taking fourth place.

Detailed Results

All nutrient information is for a single lunchbox meal.

Lunchables Maxed Out Cracker Stackers: Cracker Combo Ham and Cheddar (5.4 ounces) – Oscar Mayer¹¹

Rank: Worst packaged lunchbox item

Overall score: 24

660 calories, 22 grams of fat, 9 grams of saturated fat, 50 milligrams of cholesterol, 1,600 milligrams of sodium, 57 grams of sugar, 2 grams of fiber, 1 gram of trans fat

Cancer Project dietitians named the Lunchables Maxed Out Cracker Stackers: Cracker Combo Ham and Cheddar the worst prepackaged lunchbox meal because of its high levels of calories, fat, saturated fat, cholesterol, and sodium. This ham-and-cheddar cracker combo has 9 grams of saturated fat, 50 milligrams of cholesterol, 1 gram of trans fat, and 660 calories. It also contains ham, a processed meat linked to increased risk of colorectal cancer. This one meal also packs 1,600 milligrams of sodium—more than children 4 to 8 should consume in an entire day, according to the Institute of Medicine. The high levels of sodium commonly found in lunchbox meals can contribute to high blood pressure and calcium loss from bones.

Lunchables Maxed Out Cracker Stackers: Cracker Combo Turkey and Cheddar (5.4 ounces) – Oscar Mayer¹²

Rank: Second-worst packaged lunchbox item

Overall score: 23

680 calories, 22 grams of fat, 9 grams of saturated fat, 45 milligrams of cholesterol, 1,440 milligrams of sodium, 61 grams of sugar, 2 grams of fiber, 1 gram of trans fat

The Maxed Out Cracker Combo Turkey and Cheddar contains 680 calories and 61 grams of sugar—more calories and sugar than any other packaged lunchbox meal examined in this report. This product also has 9 grams of saturated fat, a gram of trans fat, and 1,440 milligrams of sodium, which all contribute to cardiovascular disease risk. It also contains processed meat, which can increase the risk of colorectal cancer later in life.

LunchBoxers: Pizza (6.6 ounces) – Norwegian Jake’s¹³

Rank: Third-worst packaged lunchbox item

Overall score: 18

431 calories, 26 grams of fat, 14 grams of saturated fat, 61 milligrams of cholesterol, 1,288 milligrams of sodium, 7 grams of sugar, 2 grams of fiber, 0 grams of trans fat

Norwegian Jake’s Web site says food items in LunchBoxers are “chosen to ensure nutritional benefits.” But this product includes 26 grams of fat and 61 milligrams of cholesterol. LunchBoxers: Pizza also contains high-fat dairy (mozzarella cheese) and processed meat (pepperoni). The lunchbox meal also features a candy bar, which helps bring the total saturated fat of this meal to 14 grams—63 percent of daily maximum value.

To break a tie between this item and the LunchMakers Fun Kits: Bologna Cracker Crunchers, dietitians further compared these two items by ranking nutritional criteria—total fat, saturated fat, calories, and sodium—from highest to lowest. Based on these factors, LunchBoxers: Pizza was named the third-worst packaged lunchbox item, with LunchMakers Fun Kits: Bologna Cracker Crunchers taking fourth place.

LunchMakers Fun Kits: Bologna Cracker Crunchers – Armour-Eckrich¹⁴

Rank: Fourth-worst packaged lunchbox item

Overall score: 18

408 calories, 20 grams of fat, 9 grams of saturated fat, 45 milligrams of cholesterol, 830 milligrams of sodium, 39 grams of sugar, 2 grams of fiber, 0 grams of trans fat

The foundation of this meal is bologna, a processed meat linked to increased cancer risk. There are also 9 grams of saturated fat and 45 milligrams of

cholesterol. The LunchMakers Fun Kits: Bologna Cracker Crunchers provides no fruits, vegetables, grains, or legumes. Whole foods like these are rich in phytochemicals and fiber, which help reduce the risk of disease. Instead, this LunchMaker Fun Kit includes Hawaiian Punch and a Nestlé Crunch bar.

Lunchables Nachos Cheese Dip and Salsa (4.8 ounces) – Oscar Mayer¹⁵
Rank: Fifth-worst packaged lunchbox item

Overall score: 17

590 calories, 26 grams of fat, 9 grams of saturated fat, 15 milligrams of cholesterol, 920 milligrams of sodium, 41 grams of sugar, 1 gram of fiber, 0 grams of trans fat

This meal delivers 26 grams of fat and 15 milligrams of cholesterol from the high-fat dairy in the nacho-cheese dip and the milk chocolate candy bar provided as dessert. Thanks in part to the “cherry flavored juice drink,” this meal also includes 41 grams of sugar. The Lunchables Nachos Cheese Dip and Salsa also contains 920 milligrams of sodium—more than three-quarters of the recommended daily intake for children aged 4 to 8.

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