

# Oats of STEEL

A bowl of hot oatmeal is a nutritional powerhouse. Help clients harness the benefits of this whole grain meal with tasty topping and preparation ideas.

By Carol M. Bareuther, RD



**It is the Horatio Alger of cereals, which sed, if not from rags to riches, at least from health food.”**

— Waverley Root, *Food: An Authoritative and Visual History and Dictionary of the Foods of the World* (1980)

arm wake-up food, oatmeal offers the added benefit of being good for you. However, this hearty morning dish didn't always hold such a well-respected place at the breakfast table.

Cultivated since the first century AD, oats were primarily fed to livestock. Ancient Rome's famous philosopher Pliny the Elder dubbed them a diseased meat. Fast forward a dozen centuries, and it may have been their hearty nature that helped them thrive in the cool, wet Scottish highlands, where they were valued as a major food source. English colonists brought oats to America and planted them in Massachusetts in the 1600s. But it wasn't until two centuries later that oats were hailed as a health food.

In 19th-century America, tables began sagging under the weight of huge breakfasts designed to fill farmers' stomachs. The *Oxford Encyclopedia of Food and Drink in America* lists a typical breakfast menu during this era: "hot breads, salt pork, sausages, and ham ... a few eggs, potatoes in different guises, fruit in compotes or in sparkling preserves, and even a mild vegetable or two, along with coffee, tea, or hot chocolate would complete the repast."

Everyone was fond of this heavy fare, which was also time-consuming to prepare. Immigrants, especially the Scots, Irish, and German, remained loyal to the oats of their homelands. In Akron, Ohio, a pioneer in oatmeal production and marketing, founded the German Mills American Oatmeal Company in 1856. According to the Ohio Academy of Science, Schumacher offered a rebuttal proclaiming that oat cereal contained every nutrient needed to keep man and child healthy—oats compared with the cost of meat—and was gentle on the digestive system. Schumacher's words marked a turning point in oats' history and effectively launched them into the health food category.

Americans' oat consumption is low in comparison to other grains, despite their health appeal. The USDA's Economic Research Service estimates per capita consumption of oats at 14.9 pounds—dramatically less than other grains. For example, per capita consumption of 14.9 pounds; corn, 18.6 pounds; and wheat, 94.6 pounds. One reason may be people's tendency to think of oats only as breakfast food.

Oatmeal may be an underdog food, but it holds top dog status when it comes to the health benefits it serves up.<sup>1,2</sup> Dietitians should educate the public about oatmeal's many varieties and suggest fast, flavorful fixing ideas to boost their consumption and reap its benefits.

## A Steaming Bowl of Good Health

Oats made health history in 1997 when they became the first food with an FDA health claim label. This decision was based on a review of research that showed the consumption of whole oat sources—oats, oat bran, and oat flour—decreased total cholesterol and low-density lipoprotein (LDL) cholesterol concentrations in the blood.<sup>3</sup>

A decade later, the evidence that oats are heart healthy is stronger than ever. According to a recent study, "Additional data collected after the health claim was approved has not changed the understanding of the totality of the evidence."<sup>1</sup> The authors acknowledged that the precise mechanism by which oat consumption reduces cholesterol remains a mystery. However, a broad body of research mentioned in this article points to a plausible explanation: The viscous soluble fiber component in oats, beta-glucans, increase bile acid excretion, which in turn increases bile acid synthesis and reduces circulating levels of cholesterol.<sup>1</sup>

A look back at the literature from the last decade reveals some intriguing additional ways in which oats work their cardiac protective magic. Mark B. Andon, PhD, RD, the Chicago-based director of nutrition for Quaker-Tropicana-Gatorade, says, "Like all plant foods, there are fellow travelers, or phytonutrients, in oats. These aren't essential nutrients in the classical sense, but they do offer health protective benefits. While most people think of fruits and vegetables when they hear the word *phytonutrients*, whole grains are a potent source of these substances."

In 1999, researchers at the Cereal Crops Research Unit at the USDA's Agricultural Research Service lab in Madison, Wis., established that whole oat products contain a class of phytonutrients known as *phenols*, which have significant antioxidant activity.<sup>4</sup>

A group of phenolic compounds unique to oats are avenanthramides, which occur in relatively high concentrations in the outer regions of the oat kernel. Since oats are normally consumed as a whole grain cereal, these compounds readily find their way into the breakfast bowl.

Andon says, "We do know that avenanthramides are bioavailable to humans and have been demonstrated in vitro to have the potential to affect a number of early atherogenic events."

For example, in the study "Avenanthramide, a Polyphenol From Oats, Inhibits Vascular Smooth Muscle Cell Proliferation and Enhances Nitric Oxide Production," published in the June

issue of *Atherosclerosis*, researchers at Tufts University found that the avenanthramides in oats can halt two crucial physiological processes in the initiation and development of atherosclerosis. The researchers concluded that the "regular consumption of oats in the daily diet may not only provide a benefit from its soluble fiber content in the reduction of cholesterol, but would also provide these polyphenols, which we have demonstrated as having several antiatherogenic and anti-inflammatory activities."

Avenanthramides work synergistically with other antioxidants. A clinical research published in the June 2004 issue of the *Journal of Nutrition*, researchers found that the phenolic antioxidants in oats worked in concert with vitamin C to protect LDL cholesterol from oxidation. If this research translates to humans, it highlights another way in which oats could reduce the risk of cardiovascular disease. It would also make a case for serving oats with C-containing foods such as citrus fruits, cantaloupe, blueberries, and kiwi with oatmeal.

Like vitamin C, vitamin E is an antioxidant nutrient that may prevent the deleterious oxidation of LDL cholesterol. Vitamin E plays a role in several other antiatherogenic mechanisms that take place at the molecular and cellular levels.<sup>5</sup> Oats do not contain tocotrienols, members of the vitamin E family, but

walnuts, almonds, peanuts, hazelnuts, and macadamia nuts are richer sources of vitamin E. Sprinkling a few nuts atop a bowl of oatmeal could dish up double cardiac benefits.<sup>6</sup>

Research has also linked oat consumption with lowering blood lipids, body weight, and blood pressure, the latter two being risk factors for heart disease.

In a small study conducted at Tufts University and published in 2001 in the *Journal of Nutrition*, Saltzman and colleagues found that all 43 of their adult study subjects lost weight after six weeks on a low-calorie diet. However, the 22 participants who consumed a hypocaloric diet that contained 1½ ounces of dry oats daily showed a greater improvement in their systolic blood pressure, total cholesterol, and LDL cholesterol levels than their study cohorts who ate the same calories but without the addition of oats. The researchers concluded that "the combination of weight loss along with the inclusion of oats appeared to have an additive influence on reducing lipid concentrations."

A growing body of research suggests that whole grains, including oats, may lessen the risk of type 2 diabetes.<sup>7</sup> Oats especially contain viscous soluble fibers that not only interact with bile acids to lower cholesterol but also blunt the rise in blood glucose following a meal by delaying stomach emptying

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ing a physical barrier to digestive enzymes and surfaces in the small intestine.'

It's the bottom line? What serving size of oats is recommended and how often should one eat oats to reap all of these 'A meaningful quantity on a regular basis—that is, not once in a while,'" says Andon. "That's why many FDA forms have the verbiage 'diets rich in.' Oats should be a part of a healthful diet that contains other whole grains, vegetables, low-fat dairy, and lean protein sources for adults."

### **Rate Comfort Food**

It is definitely a factor when it comes to eating oats, says Harrisman, director of food and nutrition strategies for The Dietitians Council, based in Boston. "Now they're becoming more food, too. Chefs have become aware of the popularity of grains in general and worked these ingredients into their spiffed-up ways. For example, oatmeal brûlée has become popular. It's torched till crusty on the top, just like a crème brûlée, and topped with fresh raspberries," she says. "It's a whole grain. "Neither the bran or germ is removed, therefore, all forms of the grain are similarly nutritious," says Harrisman.

The following is an oat vocabulary:

**Oat groats:** These are oat kernels with the outer hard husks removed and then toasted. Groats are the least-processed form of oats and take the longest to prepare. To prepare, rinse the groats and pick out any misshapen kernels. Combine 1 cup of dry oat groats with 2 cups of liquid. Bring to a boil, simmer for six minutes, and let stand covered for 45 minutes. This makes 2½ cups. Presoaking the oat groats in cold water for one hour before cooking can reduce the standing time by one half.

**Rolled oats:** These are oat groats that are steamed, pressed with a roller, and then dried. They also go by the name *old-fashioned oats*. Prepare by combining 1 cup of dry rolled oats with 2 cups of liquid and simmering for five minutes. The yield is 2 cups.

**Steel-cut or Scotch oats:** These are unrolled oats that have been cut into two or three pieces. Like groats, they have a chewy texture. To cook steel-cut oats, combine 1 cup of dry oats with 4 cups of liquid and simmer for 20 minutes. This makes 2 cups.

**Quick-cooking oats:** These are rolled oats that have been cut into smaller pieces than the steel-cut variety and rolled thinner. This processing means they cook quickly. To prepare, combine 1 cup of dry oats with 2 cups of liquid. Simmer for one minute and let stand for three to five minutes. This makes 2 cups.

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**Instant oatmeal:** These are oats that are precooked and dried. Warm can be directly mixed with hot water to make a thick, creamy-textured cereal. No further cooking is required.

### Do You Like It?

Everyone has a favorite way of flavoring oatmeal. Harriman "I like to cut up an apple and pear, mix it with rolled oats little cinnamon, and microwave. It's like eating apple pie." Mark H. Furstenberg, chef and owner of The Breadline in Arlington, D.C., and a visiting instructor at The Culinary Institute of America at Greystone, enjoys steel-cut oats combined with multigrain cereal. "I'll hydrate or soak this mixture overnight. Then all I have to do is add additional water and heat on any morning. I soak enough of the oats and grains to last the week so it's not something I have to remember to do every day," he explains.

### Seven-Way Steel-Cut Oats

4 cups water  
½ teaspoon fine-grain sea salt  
½ cups steel-cut oats

Boil the water in a saucepan. Add the salt and then the oats, stirring as you pour them in. Lower the heat and allow the oats to barely simmer, uncovered, for about 35 to 40 minutes. You want just a hint of activity in the pot as the oats cook down, like a sluggish lava field emitting only the occasional plop. As far as consistency goes, if you like your oatmeal on the thin side, opt for less time. For more structure, cook a bit longer. Season with additional salt, as needed. Seasoning with salt is important; it helps the oat flavor really come forward, which is necessary even if you're going to add a sweet topping.

Overnight, ready-in-the-morning method: Boil the water in a saucepan. Add the salt and then the oats, stirring as you pour them in. Remove from the heat and cover. Leave overnight. In the morning, reheat the oatmeal you want to eat (you may need to add a bit of water to achieve the right consistency) and refrigerate the rest. Serves 5 at once, or a workweek of tasty breakfasts for 1.

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As for flavorings, Furstenberg says, "In winter, I use dried fruits; in the summer, I use fruits like peaches and nectarines; and in the fall, it's apples and pears. I'll cook these with the cereal to soften them. I may [also] sprinkle a few nuts on the top—toasted nuts. Toasting really brings out the flavor of nuts. Like presoaking oatmeal, you can toast a batch of nuts in the oven on the weekend, store them in an airtight jar, and sprinkle them on your oatmeal throughout the week."

Fruits add their own natural sweetness to oatmeal, yet Furstenberg may add other sweetening ingredients as well. "Maple syrup is wonderful but use the real thing. Always use real, high-quality ingredients, whether it's maple syrup rather than imitation maple syrup or butter rather than margarine. This way, you get great taste, and you end up using less."

Several other toppings for oatmeal include brown sugar, molasses, honey, jam, orange marmalade, maple syrup, mini semisweet chocolate morsels, butter, soy milk, skimmed evaporated milk, cinnamon, nutmeg, berries, mangoes, crushed pineapple, bananas, raisins, dried cranberries, chopped dates, canned pumpkin pie filling, pecans, walnuts, almonds, sunflower seeds, peanut butter, fruit yogurt, wheat germ, and Grape Nuts cereal.

Heidi Swanson, author of *Super Natural Cooking: Five Ways to Incorporate Whole & Natural Ingredients Into Your Cooking*, says, "If eating oatmeal every morning for a week sounds boring, I've come up with seven suggestions for tasty accompaniments. Here are three of them:

1. "This is one of my favorite versions: Drizzle the oatmeal with pomegranate molasses and sprinkle with toasted walnuts. If it is on the tart side for you, add a sprinkling of natural cane sugar.

2. "Oatmeal pairs perfectly with just about any berry. Depending on the time of year, top with a handful of spring or summer berries, a drizzle of cream, and sprinkling of natural cane sugar and enjoy outside.

3. "Feeling decadent? Caramelize sliced bananas in a sauté pan with butter and a bit of natural cane sugar, and add to the oatmeal along with freshly grated orange zest, chopped toasted macadamias, and a capful of rum."

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