



Nutri-Facts

Issue #21, March 2003

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Greetings all!

April is National Pecan Month. To help celebrate, this issue of Nutri-Facts is featuring pecans. Although these nuts, like others, are rich in calories and fat, research suggests that pecans may be beneficial to our health when incorporated into a healthful diet. Other types of nuts may also be beneficial but this is Texas and I like promoting foods produced here in the Lone Star State. Therefore, I am going to focus just on pecans. I realize that peanuts are also grown in Texas but technically speaking, peanuts are a legume - not a nut. If enough Nutri-Facts readers would like an issue on peanuts, let me know.

For agents, this issue features information about pecans including their nutritional value, a review of recent studies and tips for purchasing and storage. Web sites for recipes that use pecans are also included. In addition, a consumer fact sheet (with an optional page of recipes) and a brief news release are included for your use.

As always, I appreciate any comments/suggestions for future issues of Nutri-Facts.

Eat Well,
Jenna

Agent information sheet - Nutri-Facts #21, March 2003

According to the Texas Department of Agriculture, more than 70 million pounds of pecans were produced in 2001. This multi-million dollar industry, however, includes more than just pecans for pies, cookies, and the traditional holiday fruit cake. The shells are used to make filler for plastic and the wood from pecan trees is used to make furniture, flooring, and baseball bats. From a nutrition perspective, these nuts are showing promise of protecting against heart disease. Keep reading to learn more about the nutritional value and potential health benefits of pecans.

Nutrition in a nutshell

Pecans, like many nuts, are packed with important nutrients. A one-ounce serving (**about 20 pecan halves**) of unroasted pecans provides 195 calories, 2.6 grams of protein, 20 grams of fat (30% Daily Value), and 2.7 grams of fiber (10% Daily Value). In addition, pecans provide about 10% of the recommended amount of magnesium, a mineral that plays important roles in energy metabolism, protein synthesis, and normal muscle and nerve function. Other nutrients, including vitamin E and zinc are also found in pecans. Pecans are naturally sodium- and cholesterol-free.

Compared to other foods, pecans are high in calories (more than 90% of pecan's calories come from fat). For those reasons (and maybe others), some individuals may be reluctant to include them in their diets. However, according to the United States Department of Agriculture, most of the fat in pecans is either monounsaturated or polyunsaturated. In fact, less than 10% of the fatty acids found in pecans are of the saturated variety. Monounsaturated fat has been shown in several research studies to be beneficial in promoting healthy blood cholesterol levels.

Potential health benefits of pecans

To date, at least two papers have been published which demonstrate the potential health benefits of pecans. The first study, published in the *Journal of the American Dietetic Association*, researchers compared the blood lipid levels and dietary intakes of healthy people with normal blood lipid levels. The individuals were divided into a study group and a control group. The study group ate a self-selected diet plus 68 grams of pecans a day (about 48 pecan halves) for 8 weeks. The control group ate only a self-selected diet, no pecans. Researchers found that subjects who ate the pecans had lowered total and LDL-cholesterol levels compared to the subjects in the control group. Body weights of individuals who ate pecans did not change. The absence of weight gain by the subjects who ate pecans was a surprising outcome noted by the authors. However, the authors acknowledged that physical activity was not measured in this study; therefore it is possible that the subjects who ate the pecans altered their physical activity to compensate for the increased calorie intake. Also, the authors noted that weight gain could have occurred had the study been longer than 8 weeks. Still, the study does suggest that pecans can be included as part of a healthful diet.

The second study, published in the *Journal of Nutrition* investigated whether pecans could modify blood lipid levels in healthy men and women with normal to moderately high levels of cholesterol. For the first two weeks of the study, subjects ate a typical American diet (34% total fat; 15% saturated fat). Next, subjects were placed in one of two groups. The first group followed a Step I (one) American Heart Association (AHA) diet which contained about 30% fat. The other group

ate a diet that was enriched with pecans. The pecan-enriched diet was similar to the AHA diet in calories, but 20% of the calories were obtained from pecans which "were served plain, in salads, gravies, shakes and as toppings." After 4 weeks, the groups switched diets. On average, subjects received 2.5 ounces of pecans per day. The pecan-enriched diet was higher in fat (39.6% of calories from fat). Although both diets improved blood lipid levels, subjects who replaced 20% of the energy with pecans observed decreases in their total and LDL-cholesterol levels that were significantly greater compared to the Step I group. Furthermore, body weights did not change. The authors concluded that nuts, like pecans, could be an important component of a cholesterol-lowering diet.

Note from Jenna: The second study was **very** controlled. Meal preparation was controlled and each food was accurately weighed to the nearest gram. Subjects ate two meals per day at the research facility Sunday through Friday; all lunches and Saturday meals were prepared and packed for carry out. Because pecans were included in the test diet, modifications were made to ensure that the subjects who ate the pecan-enriched diet did not consume a higher amount of calories compared to the control group. Therefore, if individuals decide on their own that they want to include pecans in their diet to help promote healthy cholesterol levels, they will need to make modifications in their diet to account for the increased calorie intake. In other words, you can't add a handful of pecans (or two) in addition to an unhealthy diet and expect to get the same results. However, these results do suggest that pecans may have beneficial health properties.

Buying Pecans

According to the Texas Department of Agriculture, pecans are available year around. Fresh pecans, however are typically available between October and January. When buying fresh pecans that have been shelled, look for clean nuts that are plump, and uniform in size and color. Unshelled pecans should be heavy for their size, smooth, clean, and free from scars, cracks, holes, and mold. If unshelled pecans rattle when they are shaken, this may indicate that the pecan is not well-filled. If purchasing shelled, pre-bagged pecans from a grocery store or supermarket, be sure to check the "Sell by" date stamped on the package.

On average, 2 pounds of unshelled pecans will yield one pound of nut "meat."

Storing Pecans for Best Quality

For best quality, store unshelled pecans in a cool, dry place. Use within four months. Once shelled, the pecans need to be refrigerated or frozen. Storing shelled pecans at room temperature is not recommended because they can become rancid. Refrigerate shelled pecans in an airtight container and use within 9 months for best quality. For longer storage, freeze pecans in a self-sealing bag designed for freezer storage and store at 0 degrees F. Use within two years.

Using Pecans

Pecans are not just limited to the holiday fruit cake. In fact, pecans can be included in almost any food including quick breads, cookies, candies, vegetable dishes, and salads. Below is just one recipe that uses pecans.

Zucchini with Pecans

Serves 4 to 6

What you need...

- 1 teaspoon olive oil
- 3 cups zucchini, cut into julienne strips
- 2 tablespoons sliced red onion or pimiento
- 1/4 cup red bell pepper
- 1/8 teaspoon garlic salt
- 1/8 teaspoon white pepper
- 2 tablespoons chopped pecans, toasted

How to make it...

1. Wash your hands. Make sure your food preparation surface is clean.
2. In a medium sized skilled, heat the olive oil.
3. Add zucchini and saute until crisp tender.
4. Add the onion, bell pepper, garlic salt, pepper and toasted pecans, tossing to coat completely.
5. Cook for an additional 3 to 4 minutes or until all ingredients are thoroughly heated.

Source: Texas Pecan Growers Association.

For additional pecan recipes, check out the following web sites (note that these recipes have not been tested by Texas Cooperative Extension):

<http://www.georgiapekans.org/newrecipes/recipes-a.htm>

<http://homecooking.about.com/library/archive/blfruit34.htm>

For individuals who are allergic to nuts

Some individuals are highly allergic to tree nuts, including pecans. According to the Food Allergy and Anaphylaxis Network (<http://www.foodallergy.org/>), there is no cure for a food allergy. The only way to prevent an allergic reaction is to avoid that food altogether. Individuals who are allergic to tree nuts, like pecans, are often advised to avoid peanuts as well. In addition, if an individual has been diagnosed with an allergy to a specific tree nut, it is advisable to avoid all tree nuts. For individuals with a nut allergy (or any food allergy), reading food labels is a must because one never knows when/where/how the offending food may be present. For example, tree nuts have been used in foods like ice cream, cereals, crackers, barbecue sauce and chili.

Pecan Trivia (for those of you who are nuts about pecans)

Q. Which state produces the most pecans?

A. Georgia is the top producing state in the U.S. in most years. Texas is usually second, with an average crop for the Lone Star State equaling about 60 million pounds.

Q. How did the pecan become the Texas State Tree?

A. In March 1906 just before he died, former Texas Governor James Stephen Hogg requested that a pecan tree be planted at the head of his grave rather than a traditional monument. He wanted the nuts from that tree to be given out and widely planted to help make Texas "a land of trees." His wish was carried out. People began to take special notice of pecan trees and in 1919 the Texas Legislature made the pecan the state tree. Gov. Hogg is buried at Oakwood Cemetery in Austin.

Q. How many pecan pies does it take to circle the Earth?

A. Assuming that the pie is 9 inches in diameter, it would take approximately 97,812,000 pecan pies to circle the earth!

Q. How many pecans are in a pecan pie?

A. According to the Georgia Pecan Commission, pecan pies use about 1/2 lb- 3/4 lb of pecans. It takes about 310 pecans halves to fill a one-pound bag. So there are about 78 pecans used in every pecan pie!

Q. Where does the word pecan come from?

A. According to the Texas Department of Agriculture, "pecan" comes from the Algonquin Indian word "paccan" or "pakan," which means "a nut so hard you have to crack it with a stone."

And finally, for those of you who just can't get enough knock knock jokes.....

Knock Knock Who's there! Pecan! Pecan who? Pecan somebody your own size!

Ideas for Agents

This issue could easily be turned into a quick one-shot program on pecans, not only during April but also near the holiday season. It could also be coupled with a Ag-based program that features growing and managing pecan trees. For a warm-up activity or ice breaker, host a "Who is the Nuttiest?" contest. Use the information in the pecan trivia section and see which audience member can answer the most questions correctly. The winner can be named "The Nuttiest" (or some other title that you think is appropriate).

References (and sources for more information and recipes):

Web sites:

USDA Food Composition Database: <http://www.nal.usda.gov/fnic/foodcomp/Data/index.html>

National Pecan Shellers Association: <http://www.ilovepecans.org/>

Texas Pecan Growers Association: <http://www.tpga.org/>

Texas Pecan Board: <http://www.texaspecans.org/>

Texas Department of Agriculture: <http://www.agr.state.tx.us/>

Georgia Pecan Commission: <http://www.georgiapekans.org/>

The Food Allergy and Anaphylaxis Network: <http://www.foodallergy.org/>

Publications:

Morgan WA, Clayshulte BJ. Pecans lower low-density lipoprotein cholesterol in people with normal lipid levels. *Journal of the American Dietetic Association*. 2000;100:312-318.

Rajaram S, Burke K, Connell B, Myint T, Sabate J. A Monounsaturated Fatty Acid-Rich Pecan-Enriched Diet Favorably Alters the Serum Lipid Profile of Healthy Men and Women. *Journal of Nutrition*. 2001; 131:2275-2279

Burleigh County Extension, North Dakota State University. Are you nutty for nuts? North Dakota State University, Bismarck, North Dakota, January 2003 Newsletter. Accessed 2/25/03 at <http://www.ext.nodak.edu/county/burleigh/food/Jan%202003.htm>

Go Nuts for Pecans!

When Americans think of pie they often think of apple pie. In Texas, however, the pie of choice is often pecan. These tasty nuts are a favorite ingredient of many cooks, both accomplished and novice. If you haven't given much thought to this valuable Texas crop, think again. Research has found that pecans may do more than make our taste buds happy.

Nutrition in a nutshell

We are not nuts - pecans are nutritious!. Yes, they are high in fat, but more than 60% of it is monounsaturated. Monounsaturated fats are thought to be beneficial in promoting healthy blood cholesterol levels. In fact, research suggests that pecans may help lower LDL-cholesterol levels when included as part of a healthful diet. LDL-cholesterol is often called the "bad cholesterol" and can increase our risk of developing heart disease. Pecans are naturally sodium- and cholesterol-free. A one-ounce serving (about 20 pecan halves) of unroasted pecans also provides a source of protein, magnesium, vitamin E, and zinc.

Buying Pecans

When buying fresh pecans, look for clean nuts that are plump, and uniform in size and color. Unshelled pecans should be heavy for their size, smooth, clean, and free from scars, cracks, holes, and mold. If buying shelled, pre-bagged pecans from a grocery store or supermarket, be sure to check the "Sell By" date stamped on the package.

On average, 2 pounds of unshelled pecans will yield one pound of nut "meat."

Storing Pecans

For best quality, store unshelled pecans in a cool, dry place and use within four months. Shelled pecans should be refrigerated or frozen. Storing shelled pecans at room temperature is not recommended because they can become rancid. Refrigerate shelled pecans in an airtight container and use within 9 months for best quality. For longer storage, freeze pecans in a self-sealing bag designed for freezer storage and store at 0 degrees F. Use within two years.

Nutrition Facts	
Serving Size (28g)	
Servings Per Container	
Amount Per Serving	
Calories 200	Calories from Fat 180
% Daily Value*	
Total Fat 20g	31%
Saturated Fat 2g	9%
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 4g	1%
Dietary Fiber 3g	11%
Sugars 1g	
Protein 3g	
Vitamin A 0%	Vitamin C 0%
Calcium 2%	Iron 4%
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Saturated Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	



Developed by Jenna Anding, Ph.D., R.D., assistant professor and Extension nutrition specialist, 2/03

Educational programs of Texas Cooperative Extension are open to all people without regard to race, color, sex, disability, religion, age, or national origin.

News release, March 2003

Are nutrition experts going nuts? When it comes to pecans, the answer is yes. Pecans are nutritious. Not only are pecans a source of protein and dietary fiber, they also contain potassium, magnesium, and zinc. But wait, aren't pecans high in fat? "Yes, pecans are high in fat and calories, says Jenna Anding, Ph.D., R.D., L.D., assistant professor and Extension nutrition specialist with Texas Cooperative Extension. A one-ounce serving (20 pecan halves) contains around 20 grams of fat and 200 calories." But don't put away the nut cracker just yet. Research suggests that pecans may play a role in preventing heart disease. "Pecans contain high amounts of monounsaturated fats, which have been shown to promote healthy blood lipid levels," says Anding. "High levels of LDL-cholesterol in the blood are thought to increase one's risk for developing heart disease," explains Anding. Research has shown that eating as little as two and one-half ounces of pecans (about 48 pecan halves) per day can help some individuals lower their LDL-cholesterol levels.

So, does that mean that we can eat unlimited amounts of pecan pie, pecan pralines, and butter pecan ice cream? "Not exactly, says Anding. To get health benefit from pecans, we need to consume them along with a well-balanced, nutritious diet - not in place of one. If someone wants to add pecans into the diet, be sure to substitute them for other high calorie, less nutritious foods." Forty-eight pecans contains nearly 500 calories. If adjustments in one's diet or exercise habits are not made, then these extra calories may very well result in weight gain."

According to the Texas Department of Agriculture when buying shelled pecans, people should look for nuts that are clean, plump, and uniform in size and color. Unshelled pecans should be heavy for their size, smooth, clean, and free from scars, cracks, holes, and mold. Anding suggests that individuals purchasing commercially packaged pecans that are already shelled should be sure to check the "Sell By" date stamped on the package.

Whether chopped, halved, or whole, pecans are a tasty addition to salads, quick breads, vegetable dishes, and desserts. **(OPTION: INSERT ONE OR TWO RECIPES THAT CONTAIN PECANS, IF SPACE PERMITS)**

If you are interested in learning more about the potential health benefits of pecans as well as tips for adding pecans to your diet, contact _____, county Extension agent for Family and Consumer Sciences at _____ (phone number).