



Winter 2001

The New American Plate

Dori L. Donough, RD

There is plenty of research available to show the relationship between Americans' poor eating habits and their increased prevalence for being overweight and obese. These eating habits also place people at an increased risk for cancer, heart disease, Type 2 diabetes, stroke, and high blood pressure.

To combat these problems, the American Institute for Cancer Research (AICR) promotes a diet based mostly on vegetables, fruits, whole grains, and beans since it has been shown to protect us from these diseases and to help us reach or keep our weight in a healthy range. To reinforce this idea, AICR has come up with a new way of looking at the foods we eat with "The New American Plate" program.

The New American Plate suggests that two-thirds or more of our diet should come from plant-based foods, otherwise known as vegetables, fruits, whole grains, and beans, and that one-third or less should come from animal proteins (meat, poultry, seafood, and dairy products). Since eating habits can't be changed overnight, ACIR has established four stages or "plates" to use during your transition. How close are you to "The New American Plate?"

Stage 1: The Old American Plate

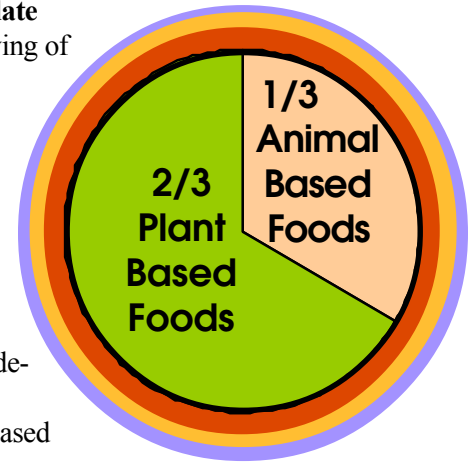
This typical American meal is heavy on meat, poultry, or fish — totaling over eight-ounces per meal. The other half of the plate contains two side dishes often laden with butter or other high-fat condiments. These "home-style favorites" are full of fat and calories and lack fiber and phytochemicals found in plant-based foods.

Stage 2: The Transitional Plate

This plate is on the right track with a large helping of vegetables such as green beans flavored with herbs and whole-grain seasoned brown rice with a moderate portion of four to six ounces of meat.

Stage 3: A Better Plate

The three-ounce serving of cooked meat (which meets the AICR's guideline for cancer prevention) may sound small, but it is partnered with a plate-full of two kinds of vegetables and a whole-grain side-dish to increase the proportion of plant-based foods and to help fill you up.



Stage 4: The New American Plate

Red meat, poultry, or seafood is limited to a three-ounce cooked portion and acts as a condiment, adding flavor and substance to a one-dish dinner or a "one-pot meal," like a stir-fry, casserole, or grain-based salad. These plate-filled meals are bursting with colorful vegetables, hearty grains, and cancer fighting vitamins, minerals, and phytochemicals. If you are not up for a "one-pot meal" that uses meat as a condiment, think of meat as a side dish and fill the rest of the plate with many servings of plant-based foods.

You won't go hungry with "The New American Plate" since each stage of the transition offers more food while you consume fewer calories. And, neither you nor your family will experience a "cold turkey" switch.

Continued on Page 6

A Look Inside . . .

The Revival of the Crock Pot	2
Nutrient-Rich Legumes	3
Goin' Fishing	4
What's So Nutritious About Game Meat?	5

The Revival of the Crock Pot

by Mary Alice Gettings, MS, RD, CDE



In the past several years, the *crockpot* (or *slow cooker*) has emerged as a popular appliance for quick meal preparation. And, if it and the food have been handled properly, it is a very safe, handy way to provide nutritious meals for your family and friends.

Testing Your Crockpot

The food safety concern surrounding the crockpot is its ability to reach a temperature above 140° Fahrenheit (F) within four hours. Since bacteria grow rapidly between the temperatures of 40° and 140° F, it is of great importance that food not be in that range for more than four hours so as to limit this growth. To determine if your slow cooker is reaching this temperature, you will have to do some experimenting on a day that you are home. Prepare a recipe and check to see if the temperature rises above 140° F within four hours on the low setting. It would be better to prepare a thick food, like chili, gumbo, or stew, since this would take longer to reach the temperature as compared to a thin food, like chicken noodle soup. Quickly take the temperature, *with a thermometer*, since it drops rapidly when opening the lid. If the temperature doesn't reach 140° F within four hours, there is a problem with the crockpot and it should be thrown away.

Preparing Food in a Crockpot

When cooking meat or poultry in the slow cooker, make sure it is completely defrosted and cut into small pieces. These appliances were not made to help thaw or cook large pieces of meat or poultry. If unthawed meat/poultry or large pieces of meat/poultry are placed in the crockpot, they will not reach 140° F quick enough and could possibly result in a foodborne illness.

If you cut the meat/poultry and vegetables into smaller pieces the night before, make sure you store them in the refrigerator to limit bacterial growth and in separate containers to avoid cross-contamination. Since vegetables take longer to cook in the slow cooker, place them on the bottom and to the sides. Add the meat and then the liquid, like broth, water, or sauce. Fill the slow cooker no less than half-full and no more than two-thirds full. Only lift the lid occasionally to stir the food and check for doneness.

While it is safe to cook food on low all day, it is suggested, if possible, that you place the setting on high for the first hour to help the temperature reach 140° F as quickly as possible.

Power Outage

If the power goes out while you're not home, you will have to throw the food away. If it goes out while you are at home, finish cooking the food on the gas stovetop or grill or in the gas oven. If the food is completely cooked and the power goes out, it will be safe to eat for up to two hours.

Storing Leftovers

Any leftovers should be placed in shallow containers and in the refrigerator within two hours after cooking is completed. Although it is not proper to reheat leftovers in a crockpot, you can place foods that have been reheated to 165° F (on the stovetop or grill or in the microwave or oven) in a preheated slow cooker.

Converting Conventional Recipes

Many preparation steps are not necessary when using a slow cooker. For example, vegetables do not need sauteed or browned. In addition, all ingredients can be added at the beginning of cooking with the exception of milk, sour cream, or cream, all of which should be added during the last hour of cooking.

Liquids in the slow cooker do not boil away as they do in conventional cooking. You may need to reduce the liquid by half. There are exceptions to the rule - soups and recipes with long grain converted rice (1/4 cup liquid per 1 cup of rice).

The following table provides a conversion from conventional cooking times to slow cooker cooking times.

Conventional Method	Slow Cooker Method
15 to 30 minutes	High: 1.5 to 2.5 hours Low: 4 to 8 hours
30 to 40 minutes	High: 3 to 4 hours Low: 6 to 10 hours
50 minutes to 3 hours	High: 4 to 6 hours Low: 8 to 18 hours

Most uncooked meat/poultry and vegetable combinations will require at least 8 hours on low.

For more information on food safety, contact your local Penn State Cooperative Extension office.

Nutrient-Rich Legumes

by Cindy Javor, RD

While **legumes** have been consumed around the world for over 10,000 years, most of us know little about what a healthy and versatile food they can be. Legumes provide many nutrients — protein, fat, carbohydrates, and fiber — that your body needs. In addition, they are also low in saturated fat and are cholesterol-free. They officially fall under meat, poultry, fish, dry beans, nuts, and egg group in the Food Guide Pyramid, but can also be considered a part of the grain group.

What are some types of legumes? The most common legume crop in the world is the soybean. Other legumes include *black-eyed peas*; *chickpeas* (*garbanzo beans*); *lentils*; and *black, red, white, navy, and kidney beans*. Generally, a one-half cup serving of cooked, dry beans can be substituted for one ounce of meat. This same portion size can also count as a grain serving. While the soybean is the only legume that contains all of the building blocks of a complete protein (like that of animal products), most all

legumes provide iron, folic acid, calcium, magnesium, potassium, and B vitamins to help meet daily vitamin and mineral requirements (see chart *Nutrient Content of Popular Legumes* below).

A misconception about legumes is that they are difficult to prepare. Actually, legumes are easy to prepare and can be eaten alone or combined with other foods. Legumes generally pick up the flavor of foods and spices with which they are cooked. For example, soy has been used in everything from stir-fry dishes and burgers to smoothie beverages and cheesecake. Chickpeas can be enjoyed as a roasted snack or used in salads and dips. Many have enjoyed navy beans in the popular candy Boston Baked Beans™ and kidney beans in chili.

The traditional and basic method for cooking dry beans is to soak them in water overnight and cook them for two to three hours the next day. Lentils, however, cook quickly and do not require soaking. It is important to follow the directions for cooking dried beans and legumes so that the finished

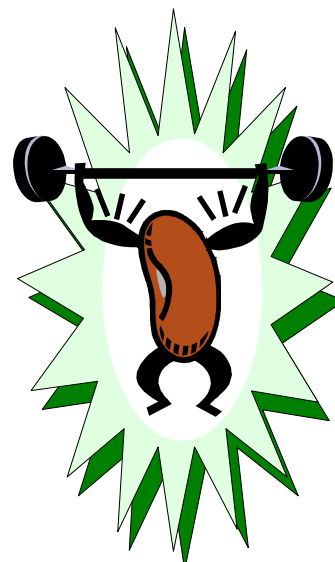
product is soft and tasty. If you don't have time to fuss with the dried product, you can probably find most legumes in a can on the grocery shelf. While they are higher in sodium, rinsing them may help to reduce the sodium content, although it will not be as low as that found in dried beans.

One of the biggest complaints about eating legumes and beans is the possible intestinal gas it can cause. Soaking the beans and disposing of this liquid before cooking is one way to alleviate some gas production. Another solution is to buy over-the-counter aides, which claim to reduce gas buildup. These work by breaking down the protein responsible for gas production.

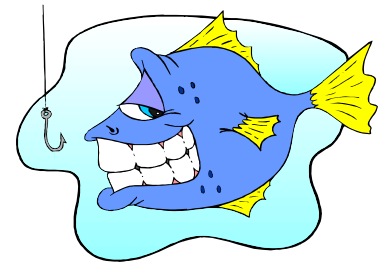
What better way to warm the family on a cold winter day than to offer a bowl of piping hot soup or stew featuring tasty and nutritious legumes. The soup can be made in the slow cooker and kept hot until mealtime. This hearty dish will fill the stomach and keep it full thanks to the high fiber content.

Nutrient Content of Popular Legumes

	Calories	Protein (grams)	Carbohydrate (grams)	Fiber (grams)	Iron (milligrams)
Black Beans	280	15	40	15	4
Chickpeas	270	15	45	13	5
Kidney Beans	225	15	40	13	5
Lentils	230	18	40	16	7
Lima	150	12	30	8	1
Navy	300	20	55	13	5
Pinto Beans	235	14	45	15	5



Goin' Fishing



by Katherine Wenzel, RD

After working as a hospital dietitian for several years, I have done a lot of listening to what and how much people eat. One item that the majority of people I have counseled do not eat is FISH. I've heard every excuse in the book as to why people don't eat fish — "It makes the house stink," "I don't know how to prepare it," or "My family doesn't like it." Well, hopefully the following information will encourage you to eat more fish and to help you to find solutions to these excuses.

Research indicates that people who eat fish regularly have lower rates of heart disease and stroke. A study published in *The Journal of the American Medical Association* (October 1995) indicates that one serving of fatty fish per week can reduce the risk of cardiac arrest by 50 to 70 percent. It is the **omega-3 fatty acids** in the fish that make the blood less sticky so that it flows through the blood vessels more easily and is less likely to form clots. Omega 3's are found in such cold-water fish as herring, salmon, bluefin tuna, mackerel, swordfish, trout, and sardines. Various studies have found that omega-3's play a role in reducing not only the risk of cardiac arrest, but also extending life expectancy, lowering blood pressure and cholesterol levels, lessening the symptoms of rheumatoid arthritis, assisting in optimal eye and brain development in infants, and easing depression. More ongoing research by Dr. Joel Kremer of the Albany Medical College in Albany, New York, reveals the ability of omega-3's to improve tender joints and reduce morning stiffness in rheumatoid arthritis. The bottom line of all this research, and of the American Heart Association's recommendation to eat two or more servings of fish a week, is that fish has been proven to provide protective health benefits to consumers.

To increase the fish in your diet, try the following **10 Easy Ways to Enjoy More Fish and Shellfish**, recommended by the National Fisheries Institute:

1. Make the switch to eating more seafood gradual. Start by substituting one fish or shellfish meal per week for a meat entree. Work your way up to several seafood meals a week.
 2. Win meat-lovers over to fish by serving them "meatier" types like swordfish, fresh tuna, halibut, and shark. These types of fish are great marinated or with barbecue sauce and then grilled.
 3. Substitute fish or shellfish for meat and poultry in your favorite casseroles, stir-fries, Mexican dishes, salads, soups, and pasta recipes.
 4. "Doctor up" seafood with lemon and lime juices, herbs (like dill and basil), onions, garlic, ketchup, tarter sauce (made with nonfat mayonnaise), and low-fat sauces.
 5. Buy a low-fat seafood cookbook and learn several easy fish or shellfish recipes that become part of your repertoire of family favorites. Or check out the National Fisheries Institute website for recipes at www.nfi.org.
 6. Cook it right — high temperature, short time, and not overcooked. For example, when baking fish, do so in an oven preheated to 450° F and cook for 10 minutes per inch of thickness or until the fish just starts to flake in the middle.
 7. Save money by taking advantage of canned and frozen fish and shellfish, as well as seafood specials at the supermarket. Less familiar types of fish are often less expensive as well. Look for recipes and ask for cooking ideas at the seafood counter.
 8. Make lunch count by having fish or shellfish at least once or twice a week. Try a broiled fish sandwich or a tuna or salmon salad made with low-fat mayonnaise.
 9. Introduce your family to fish burgers or "fish loaf" made by using canned salmon, tuna, or mackerel in place of meat in your favorite meat loaf recipe. Bake in a loaf pan, or shape into burgers, then brown them in a non-stick skillet.
 10. Be adventurous with seafood cooking methods. For instance, instead of traditional baking and broiling, try poaching in wine and herb-seasoned broth, grilling with barbecue sauce, and stir-frying or steaming with a potpourri of vegetables.
- As for decreasing fish odors while cooking — put a dash of vinegar in the poaching liquid or add sesame oil before cooking. To take the smell off of your hands, rub them with vinegar or salt after handling fish to remove odors.
- It is important that pregnant women and women of child-bearing age who may become pregnant are aware of a consumer advisory announced by the U.S. Food and Drug

Continued on Page 5

What's So Nutritious About Game Meat?

by Cindy Javor, RD

There are a variety of crucial nutrients found in animal foods — including game meats — such as protein, fat, and iron. Animal products provide us with complete protein, a nutrient that we need every day. Complete proteins are those that help build, maintain, and repair body tissues and increase resistance to infection and disease. They are complete because all of the essential amino acids (the building blocks of protein) are present in the correct quantities in these animal foods. Protein found in plant foods such as cereals, grains, vegetables, legumes, nuts, and seeds are considered incomplete. In other words, they do not contain all of the essential amino acids in the correct quantities. When eaten within a few hours of each other, certain incomplete protein foods will form a complete protein in the body. An example is eating split pea soup and cornbread.

The amount of protein a person requires varies and is based upon an individual's age and sex. The National Research Council is recommending that the average adult man consume 56 grams of protein per day, the average woman 46 grams, and a child under 10 years half the adult recommendation. As you can see on the chart *Nutrient Content of Game Meats*, adults can obtain between 23% and 30% of their daily protein requirement in a 3-1/2 ounce portion (the approximate size of a deck of cards) of meat.

Hunters and those who enjoy the fruits of their labor frequently ask about the fat content of their favorite game. While fat in meat is necessary for flavor and juiciness, too much may increase blood cholesterol levels and eventually lead to heart disease. The good news is that some game meats, such as venison (deer), contain about one-third the amount of fat as is found in beef. The leanness of venison requires creative cooking to add flavor and keep it moist.

Of the game meats on the chart, the one to eat less of is duck. As indicated on the chart, it has about 2 grams more fat than beef and 6 grams more than turkey per serving. "Tom Turkey" without the skin is going to give you the least fat and cholesterol in your diet.



Nutrient Content of Game Meats
(per 3-1/2 ounces of cooked lean meat)

	Protein (percent)	Fat (grams)	Calories	Cholesterol (milligrams)
Turkey	29.3	5.0	170	76
Beef	29.9	9.3	211	86
Duck	23.5	11.2	201	89
Deer	30.2	3.2	158	112

Another important nutrient in which many people, especially children, are deficient is iron. This mineral is one of the most important nutrients found in game meats. Iron is present in every cell of the body and is primarily responsible for carrying oxygen to cells and carbon dioxide away from cells.

All in all, many types of game meat are very healthy, especially if they are handled with care in the field and properly prepared in the kitchen. Call your local Penn State Cooperative Extension Office for the pamphlets *Venison and/or Game Birds from Field to Table*.

Go in' Fishing

Continued from Page 4

Administration (FDA) in March 2001. Some fish contain high levels of a form of **mercury** called **methylmercury** that can harm an unborn child's developing nervous system (if they are eaten regularly). The FDA recommends that these women not eat larger predatory fish including shark, swordfish, king mackerel, and tilefish. The FDA also cautions nursing mothers and young children not to eat these fish. It is safe to eat up to 12 ounces a week of other kinds of fish including shellfish, canned fish, smaller ocean fish, or farm-raised fish — just pick a variety of different species. For more information about the risks of mercury in seafood, call 1-888-SAFEFOOD. For general fish and seafood information, check out the National Fisheries website at <www.nfi.org>.

The New American Plate Continued from Page 1

Learning About Servings

To adopt The New American Plate, it's necessary to learn about the difference between a **serving size** and a **portion size**. Serving sizes have been standardized by the USDA and allows individuals, health professionals, and food manufacturers to speak in the same language. Many times serving sizes are *smaller* than most people think. Portion size, however, is how much you put on your plate. It may measure to be more than one serving size, or possibly less than the USDA's standardized serving size. Let's take a look at pasta. The USDA standard serving size is ½ cup. Many Americans serve themselves a portion of three cups or more — that's at least six servings.

Many times, people have problems maintaining a healthy weight not because of what they eat but rather how much they eat and a lack of

physical activity. AICR's idea for "The New American Plate" reflects the Dietary Guidelines for Americans and can be easily compared to the recommendations of the Food Guide Pyramid. All of these resources encourage an overall healthy diet of moderation and should not be confused with or replaced by fad diets and other quick-fix plans that do not have long-term health in mind.

When can vegetable dishes become high-calorie foods?

Frying and cooking in oil or butter adds fat and calories to your food. Also limit foods covered with high-fat toppings such as alfredo sauce, gravy, cheese sauce, regular salad dressing, full-fat sour cream, margarine, and butter.

To keep your foods healthy as well as tasty, try baking, steaming, microwaving, or stir-frying. Choose flavorful low-fat toppings such as marinara sauce, salsa, mustard, reduced-sodium soy sauce, flavored vinegars, lemon juice, reduced-fat salad dressings, and marinades. Cook with fragrant herbs and spices, and use small amounts of strong flavored cheese.

Typical meals can be transformed by serving usual foods in new proportions to meet the "New American Plate" standards. For example, a typical lunch that may include a sandwich with 4 oz. of meat, snack crackers, and cookies could be replaced with a sandwich with 2 oz. of meat, sliced tomato, cucumber, and lettuce or spinach with a piece of fresh fruit and a cookie, if desired.

To obtain "The New American Plate" brochures with recipes, write to AICR, 1759 R Street NW, PO Box 97167, Washington, DC 20090-7617 or call 1-800-843-8114.

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... Bringing you the latest research on nutrition and food safety.

~ Editor ~

Mary Alice Gettings, MS, RD, CDE
Nutrition and Health Agent

~ Desktop Publisher ~

Susan Funk
Penn State Cooperative Extension

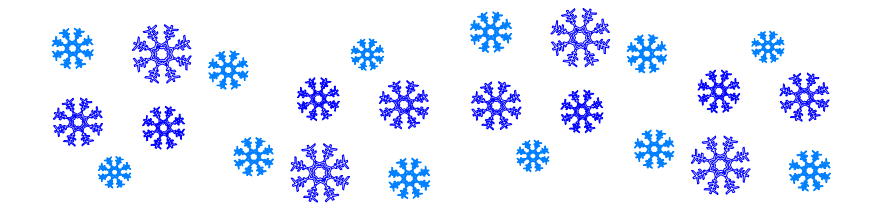
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To learn more about nutrition
programs in your county, contact:



Mary Alice Gettings, M.S., R.D., C.D.E.
Penn State Cooperative Extension
1000 Third Street - Suite 102
Beaver PA 15009-2026
724-774-3003



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