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# Culinary Nutrition News: Protein: Meats on the Menu

Provided through a partnership between ACEF Chef & Child Foundation and Clemson University, and sponsored by French's Foodservice.

Recently, we've been emphasizing the health benefits of eating more like a vegetarian by cutting back on meat portions and filling the gap with plant foods. This concept also entails swapping out animal-based proteins for more plant-based proteins. Thomas Jefferson, considered an avid foodie in his time, once said, "[I eat meat] as a condiment to the vegetables which constitute my principal diet." This statement reflects much of society's current thinking. However, meat is a nutritious food, supplying all essential amino acids, as well as a plethora of vitamins and minerals. Allow us to turn the table—and plate—slightly to show meat lovers how to utilize protein.

## Protein on MyPlate

Meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts and seeds supply many nutrients. One nutrient, protein, is irreplaceable and essential, as it is vital for growth. We use it to build, maintain and repair tissues; to produce hormones, enzymes and antibodies; to transport nutrients and oxygen through the body; and to regulate the balance of bodily fluids. Not only do proteins function as building blocks for bones, muscles, cartilage, skin and blood, but they are also building blocks for enzymes, hormones and vitamins. Proteins are one of three nutrients, along with fats and carbohydrates, that provide calories. If

there are not sufficient carbohydrates available, protein can also be used for energy. However, carbohydrates cannot perform all the functions protein does.

According to the U.S. Department of Agriculture's (USDA) latest food icon, MyPlate, all foods made from meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts and seeds are considered part of the "Protein Foods Group." MyPlate advises us to select a variety of protein foods to improve nutrient intake and for health benefits. It also advises that meat and poultry choices be lean or low-fat.

## Meat

Seated at the top of the food chain, when consumed in moderation, meat has advantages. Meat provides B vitamins that help the body release energy and build tissue, aid in the formation of red blood cells and play a vital role in the function of the nervous system. Meat also supplies iron, which is used to carry oxygen in the blood; magnesium, which is used in building bones and releasing energy from muscles; and zinc, which is necessary for biochemical reactions and helps the immune system function properly. Still, consuming excessive quantities of meat may be problematic to your health by increasing the risk of chronic

## Daily Recommendation for Protein

|          |                 |                    |
|----------|-----------------|--------------------|
| CHILDREN | 2-3 years old   | 2 oz. equivalents  |
|          | 4-8 years old   | 4 oz. equivalents  |
| GIRLS    | 9-13 years old  | 5 oz. equivalents  |
|          | 14-18 years old | 5 oz. equivalents  |
| BOYS     | 9-13 years old  | 5 oz. equivalents  |
|          | 14-18 years old | 6½ oz. equivalents |
| WOMEN    | 19-30 years old | 5½ oz. equivalents |
|          | 31-50 years old | 5 oz. equivalents  |
|          | 51+ years old   | 5 oz. equivalents  |
| MEN      | 19-30 years old | 6½ oz. equivalents |
|          | 31-50 years old | 6 oz. equivalents  |
|          | 51+ years old   | 5½ oz. equivalents |

\*These amounts are appropriate for individuals who get less than 30 minutes per day of moderate physical activity, beyond normal daily activities. Those who are more physically active may be able to consume more while staying within calorie needs.

\*\*In general, 1 oz. of meat, poultry or fish, ¼ cup cooked beans, 1 egg, 1 tablespoon of peanut butter, or ½ oz. of nuts or seeds can be considered as 1 ounce equivalent from the Protein Foods Group.

diseases such as diabetes, heart disease and cancer. This is why it is important to select lean meats and scale back on portions.

## Poultry

Chicken, turkey, duck, goose, Cornish hen, guinea fowl, quail and pheasant are all considered delectable poultry. Most poultry ranks high nutritionally, being classified as complete proteins and good sources of calcium, phosphorus, iron and B vitamins.

### Try It!

Poultry skin may be left on during roasting and baking to help prevent the loss of natural juices without adding any significant amount of fat to the meat (provided the skin is not consumed). Furthermore, tucking herbs or other aromatics under the skin before cooking is a clever way to introduce an extra flavor element.

## Fish and shellfish

Fish and shellfish are excellent additions to a healthy menu because they are naturally low in calories and saturated fats. Many fish are also good sources of omega-3 fatty acids. However, certain types of shellfish, such as squid, are known to be high in cholesterol. Others, such as shrimp, scallops and lobster, are more moderate in cholesterol but very low in total fat. To maintain the healthful integrity of a piece of fish, it is best to choose preparation methods that do not require heavy, creamy sauces or deep-frying.

### Try It!

One popular method of cooking tender fish, as well as poultry breasts, is shallow poaching.

Fish is placed on a bed of aromatic ingredients then combined with a few ounces of flavorful liquid, loosely covered, and gently poached until done. The cooking liquid is then reduced and used as part of the accompanying sauce. Rather than enriching the sauce with butter and cream, try combining the cooking liquid with a light vegetable coulis. Another option is to create a sauce by thickening the cooking liquid with a little cornstarch or arrowroot, and adding a small amount of evaporated skim milk to mimic the mouthfeel, flavor and color of cream.

## Lean Meats, Poultry and Game

|                     |   |
|---------------------|---|
| <b>BEEF</b>         | Well-trimmed cuts from the tenderloin, loin and top round, as well as tripe, tongue and heart |
| <b>VEAL</b>         | Rib and loin chops, roasts, steaks  |
| <b>PORK</b>         | Tenderloin, loin, center-cut ham (fresh and cured)  |
| <b>LAMB</b>         | Leg, arm and loin cuts  |
| <b>POULTRY</b>      | Turkey and chicken (light meat), as well as well-trimmed duck breast                          |
| <b>GAME ANIMALS</b> | Venison, rabbit, buffalo  |
| <b>GAME BIRDS</b>   | Pheasant, grouse, quail, partridge, as well as well-trimmed goose breast                      |

Source: *The Culinary Institute of America's The Professional Chef's Techniques of Healthy Cooking Second Edition* (John Wiley & Sons, Inc., 2000)

| 3-oz. cooked serving:                | Calories | Total fat (g) | Saturated fat (g) | Cholesterol (mg) |
|--------------------------------------|----------|---------------|-------------------|------------------|
| <b>LEAN CHICKEN</b>                  |          |               |                   |                  |
| Skinless chicken breast*             | 139      | 3.1           | 0.9               | 73               |
| Skinless chicken leg*                | 162      | 7.1           | 2.0               | 80               |
| Skinless chicken thigh*              | 177      | 9.3           | 2.6               | 81               |
| <b>LEAN CUTS OF PORK</b>             |          |               |                   |                  |
| Pork tenderloin*                     | 120      | 3.0           | 1.0               | 62               |
| Pork boneless top loin chop**        | 173      | 5.2           | 1.8               | 61               |
| Pork top loin roast*                 | 147      | 5.3           | 1.6               | 68               |
| Pork center loin chop**              | 153      | 6.2           | 1.8               | 72               |
| Pork sirloin roast*                  | 173      | 8.0           | 2.4               | 76               |
| Pork rib chop**                      | 158      | 7.1           | 2.2               | 56               |
| <b>LEAN CUTS OF BEEF</b>             |          |               |                   |                  |
| Beef eye of round *                  | 141      | 4.0           | 1.5               | 59               |
| Beef top round***                    | 169      | 4.3           | 1.5               | 76               |
| Beef tip round*                      | 149      | 5.0           | 1.8               | 69               |
| Beef top sirloin**                   | 162      | 8             | 2.2               | 76               |
| Beef top loin**                      | 168      | 7.1           | 2.7               | 65               |
| Beef tenderloin**                    | 175      | 8.1           | 3.0               | 71               |
| <b>FISH (*dry heat, **most heat)</b> |          |               |                   |                  |
| Cod*                                 | 89       | 0.7           | 0.1               | 40               |
| Flounder*                            | 99       | 1.3           | 0.3               | 58               |
| Halibut*                             | 119      | 2.5           | 0.4               | 35               |
| Orange roughy*                       | 75       | 0.8           | 0.0               | 22               |
| Salmon*                              | 175      | 11.0          | 2.1               | 54               |
| Shrimp**                             | 84       | 0.9           | 0.2               | 166              |

\* Roasted, \*\* Broiled, \*\*\* Braised

Source: U.S. Department of Agriculture Nutrient Database Release 18, or the 2006 Revised USDA



Fish is an excellent choice for a healthful menu since it is naturally low in calories and saturated fats.

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## Pork

In terms of fat, calories and cholesterol, pork compares favorably with many other meats and poultry. In fact, some cuts of pork are as lean or leaner than chicken. Pork tenderloin, for example, is just as lean as skinless chicken breast and meets the government guidelines for “extra lean.” In total, six pork cuts meet the USDA’s guidelines for “lean,” with less than 10 grams fat, 4.5 grams saturated fat and 95 milligrams of cholesterol per serving.

### Try It!

Tenderize lean meats by brining. The immersion of meat in a solution of salt and water is an ancient technique that makes lean meats, such as pork or turkey, juicy and tender. The method is best used with lean cuts such as pork chops, pork loin, tenderloin and sirloin. Very little sodium is actually absorbed by the meat.

## Plating-up portions

The typical American plate is often composed of a large helping of meat, poultry or fish, ranging anywhere from 6 to 12 ounces, served with small servings of vegetables and starches as sides. When designing a healthy plate, the focus should be on making the most of grains,

legumes, fruits and vegetables, and less on heavy portions of meat, poultry and fish. By downsizing the portion size of these fat- and calorie-dense foods to the more reasonable range of 3 to 4 ounces, menu items can begin to exemplify superiorly nutritious rankings.

## Good value

Considering the fact that many people who want to eat healthier are still not accustomed to smaller portions, the biggest challenge is decreasing meat portions without jeopardizing the customer’s perception of value and quality. There are a number of strategies you can employ to prevent customers from feeling gypped. First, after scaling back on meat, poultry and fish portions, compensate the void with generous amounts of fruits, vegetables, grains and legumes. These items add bulk, variety, texture, color and flavor.

## Presentation

Presentation is another valuable tool in preserving value perception. Stuffing a meat, fish or poultry item with vegetables or grains adds bulk, improves visual appeal and enhances the perceived portion size. Thinly slicing and fanning

cooked meat, poultry or even fish on the plate gives the appearance of a larger portion. Also, pounding out, or butterflying, a piece of meat before cooking has the same effect. Another important presentation element is height, which draws the eye up and away from the individual portions of food on the plate. Furthermore, rather than separating each individual component of a dish, it’s best to serve everything as one harmonious unit. Balancing flavors and textures is key—no new feat for chefs. The point of presentation is not necessarily to deceive customers, but to prevent them from feeling as though they are being cheated.

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## About the American Culinary Federation and the Chef & Child Foundation



The American Culinary Federation, Inc., established in 1929, is the premier professional organization for culinarians in North America. With more than 20,000 members in 225 chapters nationwide, ACF is the culinary leader in offering educational resources, training, apprenticeship and accreditation. In addition, ACF operates the most comprehensive certification program for chefs in the United States. ACF is home to ACF Culinary Team USA, the official representative for the United States in major international culinary competitions, and to the Chef & Child Foundation, founded in 1989 to promote proper nutrition in children and to combat childhood obesity. For more information, visit [www.acfchefs.org](http://www.acfchefs.org).

## About Clemson University



CU CHEFS@ (Clemson University's Cooking and Healthy Eating Food Specialists) instructional program, led by Dr. Margaret Condrasky, associate professor in Food Science and Human Nutrition, is a registered trademark of Clemson University designed to promote changes in menu planning, food purchasing, food preparation and food consumption behaviors with a goal of fostering good health through healthy nutrition. "Culinary nutrition" is the application of nutrition principles combined with food science knowledge displayed through a mastery of culinary skills. The results are healthy eating behaviors grounded in culinary

confidence and nutrition alertness. CU CHEFS@ promotes an awareness of the latest trends in foods and nutrition through the demonstration of proficient culinary skills to produce flavorful, health-inspired menus for schools, churches and restaurants. Clemson University, located in Clemson, S.C., is ranked 22 among the nation's top public institutions. Since 2001, Clemson has doubled external research funding, raised the academic profile of the student body, increased retention and graduation rates, launched high-profile economic development and earned national accolades, including being named *Time's* Public College of the Year.

## About French's Foodservice



French's Foodservice is proud to sponsor this series of nutritional articles authored by Clemson University for the ACFEF's Chef & Child Foundation. At French's Foodservice, we believe that "you are what you serve," and have built our reputation by providing the highest-quality ingredients to meet the ever-changing needs of the foodservice industry. As chefs, restaurateurs, educators and nutritionists, you positively impact the health of our nation by advocating the positive impact of healthy eating, especially among children. We are proud to support this worthy cause.

Over the last 100 years, French's has become one of the most recognized and respected brands in America. Today, the French's Foodservice family of brands delivers the highest-quality, most flavorful products possible. For the brands your patrons know and love and the incredible flavors that enhance everything from soups and salads to sandwiches and entrées, entrust your patrons to the flavors of French's.