Grilling’ OK, but Don’t Get Burnt
By: Donna Hollinger
Iowa City Press Citizen – July 2009

Summer barbequing is a national past time anticipated with equal fervor to the opening of major league baseball and outdoor swimming pools. Fans relish back yard barbeques as the perfect opportunity to bring people together and enjoy tasty food. Concerns, however, about possible health risks associated with grilled meats, may lead some people to question their choice of outdoor activities.

The issue is compounds such as heterocyclic amines (HCAs) and polycyclic aromatic hydrocarbons (PAHs) which may increase cancer risk. HCAs are formed when meats or seafood are cooked at very high temperatures. PAHs are formed when fat from these same products drips onto hot coals and produces smoke which can then interact with grilled food items.

So what can a health-conscious griller do?

Consider the following:

- **Think lean.** To reduce PAHs formed by dripping fat, choose lean cuts of meat. Possibilities include sirloin steaks, pork tenderloins, and chicken or turkey breasts. Trim visible fat and remove poultry skin prior to grilling.

- **Mix up a marinade.** Marinating meats with antioxidant-rich herbs and spices before grilling boosts flavor while dramatically reducing HCA formation. Marinades containing rosemary and thyme may be particularly effective. Incorporating some oil into the marinade preparation helps herbs adhere to the surface of the meat.

- **Try pre-cooking meats.** To get a great grilled taste with less grill exposure, microwave meat for two minutes prior to grilling. Discarding any liquid produced reduces flare-ups and carcinogen production.

- **Moderate your heat.** Grilling meat over medium heat prevents charring and blackening which is associated with greater health risk. Medium heat also produces a more tender and flavorful meat product. For charcoal grilling, medium heat is attained when coals cease flaming. In addition, at medium heat, you are able to carefully hold your hand at cooking level over coals for about four seconds before the heat causes you to pull away.

- **Try seafood.** Grilled seafood is sensational and requires less cooking time which translates to less HCA formation. Salmon, tuna, shrimp, scallops... options abound. A clean, well-oiled grill helps to prevent sticking. If you grill fish frequently, a wire fish basket might be a worthwhile investment allowing you to turn fish with ease. Fish cooks quickly, so a rule of thumb is 10 minutes per inch of thickness or until the flesh turns opaque. Olive oil, lemon juice, and fresh herbs of choice make flavorful seasonings.
• **Get creative with kabobs.** Kabobs feature smaller pieces of meat so cook more quickly with less risk. Adding antioxidant-rich vegetables to kabobs ups their nutrient value. Consider turning kabob-making into a group activity. Provide small bowls filled with chunks of lean meat, seafood, and colorful vegetable pieces and assemble kabobs together. Guests choose their favorites, so everyone wins. Making kabobs is fun for children and provides the perfect opportunity to try different foods.

When grilling out, healthful choices and delicious food can be synonymous.

#####

Donna L. Hollinger MS, RD, LD is a registered dietitian in the Nutrition Center at the UI College of Public Health. The Nutrition Center focuses on research, education and counseling in nutrition and lifestyle change. Contact her at donna-hollinger@uiowa.edu.