

MAKE YOUR BBQ DAYS HEALTHIER

By Dr. Pamela Latimer

Have fun this summer outside, but consider taking a few precautions while barbecuing.

Experts say you can minimize the health risks without sacrificing that delicious charcoal taste.

A nutritionist at the Dana-Farber Cancer Institute, Meyers says charring meat over an open flame produces cancer-causing substances (known as carcinogens) that may be harmful when eaten.

"I follow my own tips and grill a lot of veggies," she says. "I've been known to put all kinds of things on the grill just to see what happens." (Plums, kale, and Swiss chard are among her favorite past experiments.)

Unlike meat, vegetables don't create carcinogens when they char.

Grilling protein-filled foods such as meat and fish creates two kinds of chemical compounds that may contribute to cancer: heterocyclic amines (HCAs) and polycyclic aromatic hydrocarbons (PAHs).

HCAs form in meat when it's cooked at a high temperature. While frying and broiling produce these chemicals as well, those charred bits at the edges of barbecued meat contain HCAs in their purest state. HCAs, which are also found in [cigarette smoke](#), have been shown to cause cancer in organs including the stomach, colon, liver, and skin-but only in animal studies.

PAHs, the second type of compound, are formed when juices from meat drip onto coals or other hot surfaces and create smoke. The smoke contains these carcinogens, which are deposited onto the surface of meat as it swirls around the food.

But there are ways to minimize your exposure to carcinogens when grilling, Doyle adds.

Consider these following tips:

- ★ Cleaning the grill prior to cooking. If some parts of the new meal you're cooking get badly charred, cut those pieces off.
- ★ Precooking food slightly before grilling will help cut down on PAHs. Meyers recommends placing meat in the microwave and zapping it for between 60 seconds (for leaner cuts) and 90 seconds (for thicker, fattier pieces). This reduces the amount of time the food is on the grill and allows some of the juices to drain beforehand.
- ★ Marinades made with vinegar or lemon act as an "invisible shield" that changes the acidity of the meat and prevents PAHs from sticking. (On the other hand, sugary marinades such as barbecue sauce that encourage charring should be used only during the last one to two minutes on the grill.)
- ★ Grilling creates "**ambient fine particulate matter**"-air pollution, in other words. Anyone who is sensitive to smoke should avoid exposure to a grill-or fire, or trucks, " "
- ★ Cook over natural gas or propane grills to reduce the pollution emitted. If you own a charcoal grill, using a chimney starter instead of lighter fluid will also keep you from inhaling harmful chemicals.
- ★ Buying lean cuts of meat, trimming off most of the fat, and wrapping foods like fish in a foil packet will all help cut down on smoke by reducing the amount of juices that drip onto the grill.

Have a great summer and remember changing just a few things in your routine can make your meal much healthier. References available upon request.