

SWEATING THE SMALL STUFF | Grilling

It's peak grilling season, that most wonderful time of year when backyard chefs worry about serving platters of carcinogens to their guests.

Most people know that dangerous compounds—heterocyclic amines (HCAs) and polycyclic aromatic hydrocarbons (PAHs)—are formed when meat is grilled at high temperatures. But the risks of other grilling techniques are less clear. For details, we talked to Rashmi Sinha, deputy of the nutritional epidemiology branch at the National Cancer Institute.

Lots of people like the look of grill marks their meat. Are those hazardous?

Possibly. The marks may contain higher concentrations of HCAs and PAHs, since the hot metal is in contact with meat and both of these compounds are formed. This carbon residue has chemicals linked to breast, colon, lung and other cancers. The levels of residue are unknown, since grill marks have not been isolated for testing.

Do dirty, cruddy grill grates pose a health risk?

Cooking on a grill with charred-food buildup may produce more PAHs when it burns, which are found in smoke and can be unhealthy. Still, the grill itself isn't a risk, it's what you consume in the meat. "We haven't tested meats cooked on a clean grill vs. a dirty grill," Dr. Sinha says.

When making s'mores and the marshmallow catches on fire, is the charred outer layer bad for you?

When you burn any kind of carbon source, including a marshmallow, it produces PAHs, the same chemicals found in pollution and tobacco smoke. Research hasn't focused on marshmallows, though. "We formed a database using hundreds and hundreds of samples of meat that was grilled, was fried—all kinds of things," Dr. Sinha says.

What's important is to minimize the amount of time that food is on the grill—but it should be cooked all the way through. Also, people should consider cutting down on the number of times they eat grilled food. "Don't eat it every day."

—Beth DeCarbo



Grill marks on meat, left, are popular and possibly not healthful. There's little research on charred marshmallows.



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Road test: A number of products target the buildup of charred food on barbecue grill grates. In our small sample, Easy Off Oven Cleaner, left, removed the most crud with the least amount of scrubbing. Jaws multipurpose cleaner, center, and CLR Grease Magnet were also effective. None returned the grill grates to their original shiny state. All removed enough buildup to reduce the smoke emitted during grilling.