

How to Grill Safely in the Summer

For many, summertime means breaking out the grill, but some worry grilling may be linked to cancer risk. The good news is that with some specific grilling practices, there are many ways for people to safely enjoy grilled foods without added stress.

June 24, 2020 By Stephanie Meyer

Stephanie Meyers, RD, LDN, CNSD, a nutritionist with Dana-Farber's Leonard P. Zakim Center for Integrative Therapies and Healthy Living, shares some grilling tips for patients and survivors.

Where does the concern about grilled food and cancer risk come from?

The concern does not stem from the grill itself, but from the process that food — or more specifically, meat — goes through when it is cooked on a grill. There are two chemicals that can form when animal muscle meat is grilled over high heat, which have become the main source of cancer concerns.

When grilled over high heat, proteins in red meat, pork, poultry, and fish can be converted into chemical compounds called heterocyclic amines (HCAs). As the meat continues to cook, fat and juices can then drip down onto the heated surfaces of the grill, which creates smoke. That smoke can contain chemicals called polycyclic aromatic hydrocarbons (PAHs). As the smoke rises up past the food, it may deposit those PAHs onto the surface of the meat.

What the research currently says about HCAs and PAHs

At the moment, the majority of the research looking at HCAs' and PAHs' connection to different types of cancers have been conducted in animal studies. The National Cancer Institute reports that HCAs and PAHs have been shown to cause cancer in animal models, but the doses used in those studies were thousands of times higher than people would normally be exposed to. There have not been any large trials conclusively showing that HCAs and PAHs are tied to cancer in humans.

While it is true that HCAs and PAHs are carcinogens that can form while grilling meat, it would be inaccurate to say that eating grilled foods increases a person's risk of all types of cancers.

How to reduce exposure to HCAs and PAHs

Grill less meat and more vegetables

Vegetables do not create HCAs or PAHs when grilled because they are not a protein, so they are the best choice for the grill. They can be delicious when grilled up the right way as well.

You can use a grilling basket to cook up all kinds of veggies on the grill. Try tossing large pieces of cut-up vegetables with olive oil, garlic, onions, and sea salt, and then throw them in the basket to grill. [The Kitchn](#) has a great guide to grilling all sorts of vegetables.

When meat is on the menu, choose leaner cuts like chicken, fish, turkey burgers, or 93% lean beef. The less fat in the meat, the less it will drip and create smoke.

Prep your meat wisely

Trimming off excess fat, removing skin from the meat, and marinating meats are all prepping techniques that can reduce exposure to HCAs and PAHs. Marinades can be great, especially those that contain lemon or vinegar. The acidity of the lemon or vinegar helps reduce smoke and the adherence of PAHs to meat. They also don't result in charred meat, like marinades with honey or sugar do. Some marinades to try include [Epicurious' The Only Marinade You'll Ever Need](#) and [Easy Family Recipes' Apple Cider Vinegar Chicken Marinade](#).

Limit cooking time and exposure on the grill

The less time the food is on the grill, the less likely HCAs and PAHs will form. Thawing meat in the fridge before grilling it is a good way to go. Frozen meats take more time to cook on the grill, which is what we're looking to avoid. Smaller cuts of meat, like kebabs, will also cook faster. Kebabs are great for adding vegetables to as well.

Use certain grilling techniques

- Keep food at least six inches from the heat.
- Grill salmon on cedar planks or a sheet of tin foil with holes poked in it
- Flip burgers often to keep juices from dripping.
- Avoid charring or overcooking.

Grilling is a time-honored summer tradition, and with these tips and tricks, anyone can enjoy the grilled foods of their choice.

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