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## Letters

### A grilling on meaty issues

After reading the article "Well done research" (SN: 4/24/99, p. 264), I was unsure about one thing: Are HCAs a by-product of the coals in grilling? And, if so, can vegetables also have HCAs after being grilled? A friend of mine will not grill even veggies because she thinks they also can get HCAs.

*Monica Cobbey  
Arlington, Texas*

*Heterocyclic amines form through a chemical reaction involving some constituents of the meat. Even heavily grilled veggies should therefore remain HCA-free.* —J. Raloff

**While it is** heartening to learn that the modern mainstream is learning the value of mixing tart fruits and meats, it's something of a letdown to find that this "novel" antioxidant has been patented, given that Indians subsisted for centuries on fruited pemmican.

*Vernard Foley  
Purdue University  
West Lafayette, Ind.*

**The local health** food store has dried cherries at \$8.49 per pound. How many of these would one need to include in ground hamburger for anticancer activity? Alternatively, my daily vitamin E tablets are labeled 400 IU. Is that the same as 400 milligrams? Does that mean that I would need only one of these tablets for 10 pounds of hamburger?

*Dan Baright  
Lebanon, Mo.*

*Vitamin E is a mix of related tocopherol molecules. There's no automatic rule for converting milligrams of vitamin E to international units (IUs) because any conversion will require you to know the particular proportion of different tocopherols present in the vitamin E studied. In one study that we reported on, 1 mg of vitamin E equaled about 1.4 IU, so 280 mg translated to about 400 IU.* —J. Raloff

**With reference** to your cover story, our barbecue customs here in north Georgia may aid in reducing the risks outlined.

When cooking pork ribs, my family recipe (passed down from an ancestral backcountry chef) calls for parboiling the ribs for approxi-

mately 1 hour, until the meat is tender but not quite falling off the bones. We then marinate them overnight (in a highly confidential sauce) before grilling them briefly.

While I believe the custom arose to reduce the risks associated with underdone pork, I see no reason why it could not be used with all red meats. I also bake my chicken in the oven and "finish" it on the grill with the sauce because there's nothing nastier than biting into a leg of chicken you mistakenly thought was cooked through.

*Martha Glisson  
Vinings, Ga.*

**Does meat produce** HCAs only when cooked directly on a charcoal or gas fire or can these carcinogens develop in meat cooked on a stove, in a pan, or on an electric or gas burner?

*Suzanne Howze  
West Lafayette, Ind.*

*The source of the heat—a barbecue grill, kitchen cooktop, or electric-resistance coil in an oven—is not what matters. What are important are the temperature the meat is heated to, the grilling time, and the fat content of the meat.* —J. Raloff

- 14 The Secret Lives of Squirrel Monkeys  
Social behavior takes surprising turns among these tiny primates  
*Bruce Bower*

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**Cover:** Observations of wild squirrel monkeys have revealed huge differences in social behavior from one group to the next, thus challenging influential views about primate social evolution. **Page 14** (Photo: Sue Boinski)

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