

# Probing Question: Is cloned meat safe to eat?

March 20 2008

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Picture the perfect steak. The first bite melts in your mouth, tender and dripping with flavor. You can barely keep chewing as your mind goes slack with joy. Yes, you could spend the rest of your life eating this same steak, over and over, with no complaint whatsoever.

The technology exists to create exact reproductions of genetically superior cows — those that have the most tender flesh or are the best milk-producers, said Ed Mills. But don't expect cloned steaks to hit the market in the near future.

Mills, associate professor of dairy and animal science at Penn State, noted that although U.S. companies have already produced more than 600 cloned animals, most were copies of prize-winning cows or bulls destined for stud farms, not the dinner table. Since 2001, the industry has had a self-imposed moratorium preventing cloned meat from entering the food supply. This gave the Food and Drug Administration time to conduct a risk assessment on the safety of eating meat from cloned animals.

The agency's conclusion? It's as safe as any other meat, said Mills, noting that the FDA's report found meat and milk from bovine, swine and goat clones "as safe to eat as food from conventionally bred animals." Unlike genetic engineering, which changes the DNA make-up of an animal, cloning produces a genetic replica of the original, Mills explained. Like an identical twin, the replica cow shares the original's genetic material. Thus, the FDA's finding, after years of reviewing the scientific literature, found no essential difference between the meat of cloned or

bred cows: Genetically identical animals produce the same meat. This conclusion echoes a 2002 report by the National Academy of Sciences.

That doesn't mean cloned meat will find its way to the supermarket anytime soon. Mills pointed to a 2006 survey by the Pew Initiative on Food and Biotechnology that found American consumers are uneasy about cloning, with 64 percent of respondents saying they would rather not eat cloned meat. In addition, noted Mills, a cloned cow might cost \$15,000, compared to \$2,000 for one naturally bred. Mills predicts that, because of the cost and public hesitation, few clones will be used for meat production. "I suspect that among the few hundred clones out there, some are of superior genetic material," he explained. "But in order to make those financially beneficial, we need to use them for breeding purposes, not eat them." Beginning with genetically superior stock means a better chance of producing genetically superior offspring, he explained.

The FDA's findings probably won't quell all doubts about the safety of cloned food, he added. "I think the real controversy revolves not around safety, but around fear." The FDA declared that because cloned products have no essential difference from regular products, consumers don't need to know the difference — products from cloned animals don't need labels. "But," Mills said, "to say that there's no need for labeling on a safety basis is not to say that there won't be labeling based on market demands." As consumers have grown more food-supply conscious, they've demanded more information about where their food comes from, he noted.

To date, 13 state legislatures — including California, Tennessee, New Jersey and Kentucky — have proposed bills requiring labels on cloned food. Consumer advocates have charged that the FDA rushed its findings, ignoring widespread public sentiment against animal cloning. (A recent Gallup poll found that 60 percent of Americans find cloning

morally indefensible.) In Europe, the mad-cow crisis of the mid-'90s spawned companies such as IdentiGEN, which specializes in DNA tracing of meat products. Some critics of the meat industry feel that — in the wake of the recent U.S. Department of Agriculture recall involving 143 million pounds of raw and frozen beef — we might be wise to adopt a similar strategy to help us track the origins of our meat supply.

For the moment, the public may need time to chew over the cloning issue before deciding whether to chow down on a “copy-cow” burger.

Source: Penn State

Citation: Probing Question: Is cloned meat safe to eat? (2008, March 20) retrieved 19 April 2024 from <https://medicalxpress.com/news/2008-03-probing-cloned-meat-safe.html>

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