

NUTRITION

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SAFER GREENS It seems that every month a foodborne-illness outbreak makes the six o'clock news. Leafy greens, such as lettuce and spinach, are some of the biggest culprits—perhaps because they're usually eaten raw. (Cooking kills most of the bacteria that makes us sick.) From 1996 to 2005, outbreaks of illnesses associated with contaminated leafy greens increased nearly 40 percent (consumption during that period rose 9 percent) and in 2006 *E. coli* in spinach sickened 205 and caused three deaths.

That's why many people applauded the FDA's decision last August to permit the irradiation of spinach and iceberg lettuce—the two most commonly consumed leafy greens—at levels high enough to eliminate harmful bacteria, such as *E. coli* and *salmonella*.

It may sound odd to zap food with high-energy rays to destroy bacteria, but "it's basically concentrated sunshine," says Christine M. Bruhn, Ph.D., director for the Center for Consumer Research at the University of California, Davis. "The gamma rays used for irradiation are the same rays that come from the sun." And it is very effective: irradiation destroys 99.9 percent of common foodborne pathogens—even those embedded in the plant tissue (washing the vegetables with water or a chlorinated rinse does not). It does this

without compromising taste, texture or nutrition, according to a 2008 study in the *Journal of Food Science*, which compared these qualities of irradiated versus nonirradiated leafy greens. "From a scientific point of view, it would be difficult to find a justification for *not* eating irradiated lettuce," says Jim Dickson, Ph.D., professor in the Department of Animal Science at Iowa State University.

But some researchers worry that irradiation offers consumers—and farmers—a false sense of security. "Irradiation is not a replacement for good agricultural practices," cautions Catherine Donnelly, Ph.D., professor of microbiology and food science at the University of Vermont. Plus, dirty hands or contact with other foods in the kitchen, such as chicken, can easily contaminate leafy greens after irradiation. Irradiation also is an expensive process and not many consumers are demanding it.

BOTTOM LINE: Irradiation makes spinach and iceberg lettuce safer. Irradiated foods are labeled "treated with radiation" or "treated by irradiation" and carry the international symbol for irradiation, which resembles a flower. But, due to cost and low demand, irradiated greens may not be available at many markets—at least for now. —Amy Paturel