

Microwave Ovens Reconsidered

James M. Haig, N.C.

They are unquestionably convenient and almost impossible to avoid, but microwave ovens have always been shadowed by controversy. Despite the many serious health issues posed by microwaves, few people are aware of their potential dangers.

One study that did recently receive national press coverage found that broccoli cooked in a microwave oven lost almost all of its antioxidants (a stunning 97% depletion), compared to 11% lost by conventional steaming. Given that the antioxidants in broccoli and other cruciferous vegetables (like cauliflower, Brussels sprouts and cabbage) are known to have powerful anti-cancer effects (in part by modulating estrogen metabolism), this is indeed a serious loss. This reaffirms an earlier Russian study showing a 60-90% decrease in food value in microwaved foods.

Bad though this is, however, it may pale by comparison with some of the other problems posed by microwaving. A Swiss study from 1992 conducted by Dr. Hans Hertel, which was suppressed by several years of legal maneuvering by a powerful electrical appliance trade organization, found a decreased number of red blood cells, and of their oxygen bearing hemoglobin content, in people eating microwaved foods, along with increased cholesterol levels. Even more troubling is the creation in these foods of radiolytic compounds hitherto unknown in nature, the effects of which on the human body remain completely unknown.

The *pièce de resistance* of this same study, however, was its report an increased number of leukocytes, or white blood cells, present in the body after the ingestion of microwaved foods. White blood cells are the foot soldiers of the immune system, so what this suggests is that the body was perceiving the microwaved food as an invader, or toxin, rather than as nourishment. Perhaps the reason for this may have to do with the way microwaves restructure food molecules. The party line is that microwave ovens produce a type of electromagnetic energy similar to that naturally produced by the sun; but solar microwaves generate direct current (DC) while microwave ovens rely on alternating current (AC) to create heat by molecular friction or agitation.

Protein is made up of building blocks called amino acids. These amino acids can be found in two forms: those with a *levo* or left-handed molecular spin (indicated by the L-suffix), and those with a *dextro* or right-handed molecular spin (indicated by the D-suffix). Most amino acids are toxic in their D- form, and are not generally found this way in nature. But another study from earlier this year reported that microwaving does indeed reverse the molecular spin on at least one amino acid (the only one studied), changing it from the benign L- form to the toxic D- form. This may very well be the reason behind the Swiss discovery of the immune response mounted by the body following the ingestion of microwaved foods, as well the Russian report detailing the presence of numerous carcinogenic substances in such food.

In addition to the worrisome concerns over how the microwaving process alters food chemistry, microwave ovens also generate a large and powerful electromagnetic field when in use. This field, which can extend as far as six to eight feet from the appliance, has the potential to damage the DNA of any biological system (including you!) that it contacts, and at the very least would be expected to set off a cascade of rampaging free radicals, dangerous molecules missing an electron that steal electrons from otherwise healthy tissues, damaging them, sometimes irreparably, in the process. Because of this, it is extremely unwise to stand near a microwave oven when it is in use, and children in particular should be instructed in no uncertain terms to stay away from them. While technology can indeed offer us tremendous benefits, we would be foolish to ignore the very serious risks that microwave ovens pose to our health in favor of mere convenience. Plenty of other alternatives exist, including quick-heating toaster ovens.

References:

F. Vallejo, F.A. Tomás-Barberán, C. García-Viguera “Phenolic compound contents in edible parts of broccoli inflorescences after domestic cooking”. *Journal of the Science of Food and Agriculture*, Nov. 2003, Volume 83, # 14, pages 1511-6

Tom Valentine “The Proven Dangers of Microwaves”. *NEXUS Magazine* (April-May '95). Volume 2, #25

Anthony Wayne and Lawrence Newell. “The Hidden Hazards of Microwave Cooking”. www.mercola.com/article/microwave/hazards.htm

Joseph Mercola, D.O. “Do You Microwave Your Food?” www.mercola.com/fcgi