

# Researchers study benefits of white button mushrooms

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Mushrooms are among the many foods thought to play an important role in keeping the immune system healthy. Now, Agricultural Research Service (ARS)-funded scientists have conducted an animal-model and cell-culture study showing that white button mushrooms enhanced the activity of critical cells in the body's immune system.

In the United States, white button mushrooms represent 90 percent of the total mushrooms consumed.

The study was conducted at the Jean Mayer USDA Human Nutrition Research Center on Aging (HNRCA) at Tufts University by center director Simin Meydani, colleague Dayong Wu, and others.

The results suggest that white button mushrooms may promote [immune function](#) by increasing production of antiviral and other proteins that are released by cells while seeking to protect and repair tissue.

Wu and co-investigators are with the HNRCA Nutritional Immunology Laboratory in Boston, Mass. The study's cell-culture phase showed that white button mushrooms enhanced the maturity of [immune system cells](#) called "dendritic cells," from bone marrow.

Dendritic cells can make T cells—important [white blood cells](#) that can recognize and eventually deactivate or destroy antigens on invading [microbes](#).

When immune system cells are exposed to disease-causing pathogens, such as bacteria, the body begins to increase the number and function of immune system cells, according to Meydani. People need an adequate supply of nutrients to produce an adequate defense against the pathogen. The key is to prevent deficiencies that can compromise the immune system.

**More information:** The study appears in a 2008 issue of *Journal of Nutrition*.

Provided by United States Department of Agriculture

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