

Lion's Mane Mushrooms

By Ann Gerhardt MD

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Lion's Mane mushroom (*Hericium erinaceus*) is one of the many foods with complex chemical components that affect our function and brains, such as chocolate, coffee, psilocybin mushrooms and various teas. Lion's mane 'shrooms' are large, white and shaggy like a mane. Companies selling them and supplements of their extracts claim that they benefit memory, focus, immune function, energy, anxiety and inflammation.

Rodent studies suggest that complex sugar components of the caps and stems of these mushrooms called beta-glucans may boost brain-derived neurotrophic growth factor, a protein which contributes to brain cell survival and repair. In one study, the hippocampus (a part of the brain important for memory and navigation) of mice fed Lion's Mane extracts containing N-diphenylethyl isohericerin (NDPIH) grew larger, and the spatial memory (ability to navigate a maze) of the mice improved. A small study of this chemical in healthy adults suggested a trend toward improved speed on cognitive testing in some subjects, but some individuals experienced no effect. I cannot find data supporting assertions of improved immune function, energy, anxiety or inflammation. It will be interesting to learn results of ongoing research exploring effects of other chemicals isolated from Lion's Mane mushrooms.

Few grocers sell intact mushrooms. Most Lion's Mane supplements and teas contain no mushrooms, just extracts. Side effects of large doses have caused digestive problems or allergy symptoms. The Food and Drug Administration (FDA) has issued warnings to two companies selling Lion's Mane supplements, Brilliant Enterprises LLC and Synaptent LLC, for marketing them using misleading claims. The FDA prohibits companies from making specific claims for disease treatment

or prevention without first submitting scientific data justifying benefit and safety for the FDA's approval.

So far, there is insufficient information to strongly recommend for or against Lion's Mane mushrooms and their extracts. Regardless, cooked whole mushrooms or extracts in modest quantities probably won't hurt.