Evidence of ginseng-boosted brain power is weak

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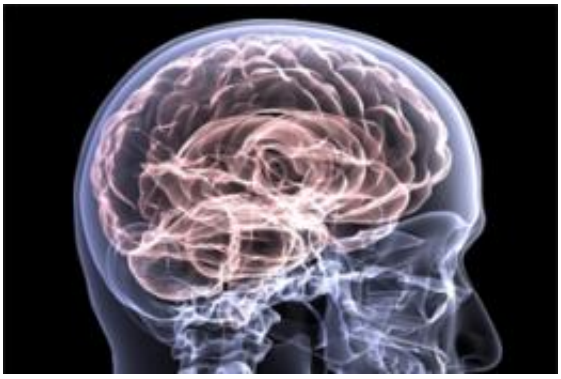

Many people believe that the popular herb ginseng can improve thinking ability and prevent or even treat dementia. However, a comprehensive review of research failed to find convincing evidence of these benefits.

"Ginseng appears to have some beneficial effects on cognition, behavior and quality of life," said JinSong Geng, M.D., lead review author. "But at present, recommendations about [whether to take the herb] cannot be made due to the lack of high-quality evidence."

Geng is a lecturer at the Medical School of Nantong University in China. The review appears in the latest issue of *The Cochrane Library*, a publication of the Cochrane Collaboration, an international organization that evaluates medical research. Systematic reviews draw evidence-based

conclusions about medical practice after considering both the content and quality of existing medical trials on a topic.

Ginseng — actually a number of closely related plant species — is among the most widely used herbs worldwide. It is said to provide a broad array of physical and mental benefits, including cognitive enhancement and protection against age-related decline and dementia.

The authors found five randomized, double blind, placebo-controlled studies that provided sufficient data for the researchers to analyze the herb's effectiveness. These studies comprised 289 patients, each of whom were healthy and without signs of dementia or cognitive decline.

Participants were predominantly young or middle-aged: their average age ranged from 20 to 31 in three of the studies, and in the 50s for the other two. Four studies analyzed the effects of ginseng over an eight-to-12 week period, while one looked at short-term effects after only two days of administration.

Individual studies showed superiority on some measures of cognitive function among participants taking ginseng. One study, which enrolled 16 individuals, found a statistically significant improvement in working memory. The same study associated ginseng with a significant increase in calmness.

Another trial, with 112 participants, found that the group receiving ginseng scored significantly better on some tests of learning and memory, but not on others.

Data on the effects of ginseng on reaction time were also inconsistent, and tests of attention and concentration were generally inconclusive.

Several studies showed improvements in some aspects of quality of life,

including social relationships, general health and physical health among participants taking ginseng.

There were no serious side effects observed in connection with the herb. One of the studies reported adverse effects like headache, dizziness, diarrhea and eczema, but these occurred in both ginseng and placebo groups, and were not severe.

Despite some positive findings, studies included in the systematic review did not add up to a "convincing" case for ginseng's effectiveness as a cognitive enhancer, the authors concluded. In large part, this was because the authors could not combine data from the individual studies for a meta-analysis, due to differences among the studies in design, herbal preparations and tests used to measure cognitive function, Geng said.

The studies used several types and doses of ginseng extracts and, in one study, participants received a preparation that included herbal substances besides ginseng. There were three parallel studies — participants were randomized to receive either ginseng or placebo — and two crossover studies, in which the same individuals were given ginseng and placebo in turn. It is not possible to pool data from these different types of studies.

Because the studies all involved healthy subjects, researchers were unable to draw conclusions about the potential utility of ginseng to prevent or treat dementia, Geng said.

Richard Brown, M.D., suggested that two aspects of cognitive enhancement cited by the review, improvement in reaction time and in working memory, are worth taking seriously.

"It was a very careful review. But as with many Chinese herbs and treatments, while ginseng has been used by millions of people, there aren't a lot of rigorous modern studies," said Brown, an associate

professor of clinical psychiatry at Columbia University.

He said that the mental speed and working memory benefits observed in several studies that the authors included in their review also emerged in studies that they had excluded on methodological grounds.

“I think that when something keeps turning up over and over again, in really good as well as in less-than-perfect studies, you have to say, ‘this is important,’ Brown said.

These findings accorded with his own personal and clinical experience with ginseng: “It enables you to think more quickly, to be more productive in the same time frame,” he said. “My feeling is: There’s a lot of value in this herb.”

More information: Geng J, et al. Ginseng for cognition (Review). *Cochrane Database of Systematic Reviews* 2010, Issue 12.

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