taking the supplement, the participants underwent brain imaging and blood draws; they also performed a working memory test. At the end of the study period, all participants underwent the same assessment procedures. The investigators found that working memory improved dramatically, prompting them to comment: "Before seeing this data, I would have said it was impossible to move young healthy individuals above their cognitive best. … We found that members of this population can enhance their working memory performance even further."

Narendran R, Frankle WG, Mason NS, Muldoon MF, Moghaddam B. Improved working memory but no effect on striatal vesicular monoamine transporter type 2 after omega-3 polyunsaturated fatty acid supplementation. *PLoS One*. 2012;7(10):e46832.

Immune System: Echinacea May Help Prevent Common Cold

The largest study to date of extract of *Echinacea purpurea* suggests its efficacy to ward off the common cold. Ronald Eccles and colleagues from Cardiff University (UK) enrolled 755 healthy men and women in a study in which each participant received either an extract prepared from harvested *E. purpurea* (95% herb and 5% root), or placebo. The investigators collected data relating to safety and efficacy, for a total of 2868 months. They observed that 293 adverse events occurred with echinacea (306 were reported with placebo), and that those participants who took the echinacea fell ill with 149 bouts (as compared with 188 in the placebo group). Writing, "Echinacea showed maximal effects on recurrent infections, and preventive effects increased with therapy compliance and adherence to the protocol," the study authors conclude: "Compliant intake of Echinacea purpurea over a 4-month period appeared to provide a positive risk to benefit ratio."

Jawad M, Schoop R, Suter A, Klein P, Eccles R. Safety and efficacy profile of echinacea purpurea to prevent common cold episodes: a randomized, double-blind, placebo-controlled trial. *Evid Based Complement Alternat Med*. 2012;2012:841315.

Cardiovascular: Resveratrol Supports Vascular Health

Resveratrol, an antioxidant compound found abundantly in red wine and red grapes, exerts beneficial effects on the body's circulatory function. Peter Howe and colleagues from University of South Australia studied a group of 28 obese men and women with mild hypertension (high blood pressure), who were given a daily supplement of 75 mg resveratrol. After 6 weeks, the researchers observed that vasodilator functions, as measured by flow-mediated dilatation (FMD), improved by 23%. The study authors explain that FMD is an accepted parameter for the risk of cardiovascular disease and cognitive decline.

Howe et al. Presented at 24th Scientific Meeting of International Society of Hypertension. 22 Oct. 2012.

Inflammation and Aging: The Zinc Link

Previously, a number of studies have established that zinc is essential to protect against oxidative stress and help repair DNA damage. In zinc deficiency, the risk of which has been shown to increase with age, the body's ability to repair genetic damage may be decreasing even as the amount of damage rises. Emily Ho and colleagues from Oregon State University (US) studied a lab animal model for the cellular zinc transport mechanisms. Finding that zinc transporters were significantly dysregulated in old mice, the team observed that aged animals showed signs of zinc deficiency and displayed an enhanced inflammatory response even though their diet supposedly contained adequate amounts of zinc. However, when researchers gave about 10 times the dietary requirement for zinc, the biomarkers of inflammation were restored to those of young animals. Reporting, "restoring zinc status via dietary supplementation reduced aged-associated inflammation," the study authors submit: "Our data suggested that age-related epigenetic dysregulation in zinc transporter expression may influence cellular zinc levels and contribute to increased susceptibility to inflammation with age."

Wong CP, Magnusson KR, Ho E. Increased inflammatory response in aged mice is associated with age-related zinc deficiency and zinc transporter dysregulation. *J Nutr Biochem*. 2012 Sep 13.

Be mindful that anti-aging medicine is a lifestyle; there are no "magic bullet" pills. As we age, a series of biological changes take place in the body. Anti-aging physicians seek to understand these age-related declines in order to enable a better grasp of the potential for contemporary medical discoveries and applications of biomedical technology to retard or reverse the otherwise inevitable process of senescence.

To learn of the latest natural approaches to prevent aging-related diseases, dysfunctions, and disorders, visit the World Health Network (www.worldhealth.net), the official educational website of the A4M and your one-stop resource for authoritative anti-aging information. Be sure to sign up for the free Longevity Magazine e-journal, your weekly health newsletter featuring wellness, prevention, and biotech advancements in longevity. ◆

The Internet is quickly becoming an important source of health information, and health savvy consumers must keep pace with this rapidly evolving resource.
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