

First Brain Health Index Ranks America's "Brain Smarts" Based on 21 Indicators: D.C. Ranks No. 1

life'sDHA Index of Brain HealthSM Asks and Answers: Does Your State Have the Healthiest Brains?

COLUMBIA, Md., June 23, 2009 – The first comprehensive state-by-state measure of the nation's brain health provides new insights into just how "brain smart" Americans are and points to simple actions they can take to boost brain health and lead healthier lives. The *life'sDHA* Index of Brain HealthSM (www.AmericasBrainHealth.com) evaluated the 50 U.S. states and the District of Columbia based on 21 brain health indicators in the areas of diet, physical health, mental health and social well-being.

According to the *life'sDHA* Index of Brain Health, the top 10 geographies in the nation with the highest brain health ranking, listed from No. 1, are the District of Columbia, Maryland, Washington state, Vermont, Connecticut, Colorado, Massachusetts, New Jersey, Maine and New Hampshire. The two states to receive the lowest brain health ranking are Alabama and Louisiana.

"Americans can pay more attention to their mental muscles and really support long term brain health," according to Dr. Michael Roizen, leading medical expert, author and advisor to the Index. "While many understand what to do to be heart-healthy, they are not as familiar with the steps to keep their brains smart, such as feeding it good fats like DHA omega-3, and staying physically, socially and mentally active."

The Index indicates that residents of the top 10 brain-healthy states tend to enjoy fish, consume a good amount of DHA omega-3 foods or supplements, eat lots of fruits and vegetables, watch their waistlines, avoid smoking, read for personal interest and put a high priority on education.

"The results show that the majority of the top 10 ranked states border or are near the Atlantic or Pacific oceans and appear to have an advantage when it comes to brain health: One hypothesis is the accessibility of fish with its healthy fats and protein," said Dr. Roizen.

Maintaining Better Brain Health

Actions people can take to maintain better brain health include:

- Eating brain-enhancing nutrients, such as DHA omega-3 in fish or foods, beverages and supplements, as well as fruits and vegetables.

"Fruits and vegetables—especially colorful ones like red grapes, cranberries and tomatoes—contain powerful polyphenols that decrease the inflammation that is the enemy of brain health by handcuffing free radicals and eliminating them from your system," says Dr. Roizen.

Visit the FDA Web site for more tips on choosing fish wisely. "You can find DHA omega-3 in salmon or trout. These are among the only fish sold in America that consistently have 'fish fat' nowadays. And you can get an algal source of DHA omega-3 in fortified foods and supplements," says Dr. Roizen.

A workshop sponsored by the National Institutes of Health and the International Society for the Study of Fatty Acids and Lipids recommends an intake of 220 milligrams (mg) of DHA omega-3 per day for healthy adults, but research shows that the average U.S. consumer takes in less than 100 mg of DHA omega-3 per day. "I take—and recommend my patients take—600 mg of algal-based DHA a day and think others may choose more when they review the data on dementia risk reduction—900 mg may be in my future," says Dr. Roizen.

- Staying physically active for at least 30 minutes a day and making wise lifestyle decisions such as getting enough sleep and not smoking.
- Continuing to use the brain and teaching it new things. Playing games, learning a new language, and working a hobby job after retirement.
- Engaging in social activities. Socializing with friends keeps you connected, relieves stress and boosts brain health. Volunteering, participating in clubs and attending religious services fit the bill as well.

Measuring the State of the Nation's Brain Health

The 21 brain health indicators, as part of the four categories mentioned before, include factors that have been shown to be key indicators of brain health: consumption of DHA omega-3 fats, breastfeeding rates, smoking rates, Alzheimer's disease prevalence, time spent sleeping, time spent on religious/spiritual activities, and level of community involvement, among many others.

Top 10 “Brain Smart” States

No. 1: The District of Columbia. In addition to consuming high amounts of fish and DHA omega-3 fortified foods and supplements, residents of the nation’s capital are bookworms, ranking top in the nation (tying with Alaska) in reading for personal interest.

No. 2: Maryland. Maryland residents keep their brains healthy by eating well. This state is one of the three top-ranked states when it comes to consumption of DHA omega-3-fortified foods and supplements.

No. 3: Washington state. Washington is tied for first place along with the Northern New England states for eating the most fish per capita.

No. 4: Vermont. A pat on the back for Vermont residents for using their brainpower to do good deeds. Vermont is the highest-ranking state in the area of community involvement, including volunteerism.

No. 5: Connecticut. Connecticut gets an A in education. Making quality education a priority gives this state a brain boost.

No. 6: Colorado. Coloradans are paying attention to their brain health. Colorado is the highest-ranking, noncoastal state to consume fish.

No. 7: Massachusetts. Highly insured, this state is tied with Hawaii for being No. 1 in the nation for health insurance coverage.

No. 8: New Jersey. New Jersey has the secret to better mental health. It has one of the lowest rates of serious psychological distress in the nation.

No. 9: Maine. Never bet a native Mainer in a game of cards. The state ranks among the top two states that boost brain health through game playing.

No. 10: New Hampshire. While the state has managed to maintain its brain health through high consumption of fish, it is one of three states with the lowest involvement in religious/spiritual activities.

States That Could Use a Brain Boost

No. 50: Alabama. Are residents allergic to fish? Alabama is the second-lowest ranking state in the nation when it comes to consumption of fish.

No. 51: Louisiana. While Louisiana ranks high for involvement in religious and spiritual activities, it has the lowest breastfeeding rate nationwide. Breastfeeding naturally provides DHA omega-3, important for brain development of infants, setting them on the right path for brain health.

Other Key Index Findings

No. 17: New York. New Yorkers could improve in the area of community involvement, including volunteerism.

No. 20: California. Californians must be making frequent trips to the farmers’ markets—the state ranks the third highest in the nation for eating fruits and vegetables five or more times per day.

No. 23: Nevada. Residents of Nevada need to stop gambling with brain health and pick up a book! Nevada ranks among the lowest in the nation for education and reading for personal interest.

No. 26: Texas. Make a visit to the local library on your list of things to do this weekend, Texans. Texas ranks last when it comes to reading for personal interest.

No. 28: Minnesota. The Land of 10,000 Lakes is the most physically active state and has the lowest incidence of cardiovascular disease-related deaths in the nation.

No. 42: North Dakota. Time to take a nap. North Dakotans receive the least amount of sleep nationwide.

For more information on the specific brain health strengths and challenges of each state and a full listing of the 21 brain health indicators used to develop the Index, visit www.AmericasBrainHealth.com. While there, spend a few minutes taking the *life’sDHA* Brain Health Quiz and challenge your friends and family to test their brain health, too.

About Dr. Roizen

As cofounder and chair of the RealAge Inc. Scientific Advisory Board, Dr. Roizen is the force behind RealAge®, a patented measurement standard for health care that compares biological versus calendar age. Dr. Roizen is the author of eight *New York Times* best-sellers, including four No. 1 best-sellers, three of which are in the “YOU” series written with Dr. Mehmet Oz.

As medical advisor to the Index and chair of the Martek Biosciences Scientific Advisory Board, Dr. Roizen helped design the Index metrics, providing medical expertise and shaping the direction of the Index.

Why Martek Supported the Index

Martek, a company committed to brain health research, worked with a group of health experts and researchers to develop the Index. While science is unlocking many of the brain's mysteries, many questions remain unanswered. Yet Americans have an opportunity to influence their brain health now. The Index seeks to increase awareness among Americans about the state of the nation's brain health and encourages people to take action toward achieving better brain health.

The Index is another way to educate people in addition to existing studies, which show DHA omega-3 is beneficial for brain health including:

- A long-term infant study found that infants who were provided with a good supply of DHA omega-3 in their first year had higher verbal IQ scores at age four when compared to infants who were not provided with DHA omega-3.¹
- Epidemiological studies have shown that a high intake of fish, a good source of DHA omega-3, is associated with a reduced risk for developing Alzheimer's dementia and a slowing of normal age-related cognitive decline.²
- The Framingham Heart Study found that participants who had the highest levels of DHA omega-3 in their blood had a 47 percent (significant) reduction in the risk of developing dementia.³

About Martek Biosciences

Martek Biosciences Corporation (NASDAQ: MATK) is a leader in the innovation and development of DHA omega-3 products that promote health and wellness through every stage of life. The company produces *life'sDHA*[™], a sustainable and vegetarian source of the omega-3 fatty acid DHA (docosahexaenoic acid), for use in foods, beverages and supplements. The company also produces *life'sARA*[™] (arachidonic acid), an omega-6 fatty acid, from a sustainable, vegetarian source. For more information on Martek Biosciences Corporation, visit www.martek.com. For a complete list of products containing *life'sDHA*, visit www.lifesdha.com.

Methodology

The Index evaluated the 50 U.S. states and the District of Columbia based on 21 brain health indicators in the areas of diet, physical health, mental health and social well-being. For each brain health indicator, data for all 51 geographies was compared to the national average which was set at 100. Data points that were better than the national average indexed higher than 100, and data points that were poorer than the national average indexed lower than 100. After weighting the relative importance of each indicator to brain health, an overall index score was calculated for each geography. Geographies were then ranked from first to 51st.

Sources

To develop the Index, Martek worked with a group of health experts and researchers to determine the key indicators of brain health—as recognized by the overall medical community—to build the Index with data aggregated from highly credible secondary sources. Major data sources included the Centers for Disease Control (Behavioral Risk Factor Surveillance System), the Alzheimer's Association (2009 Alzheimer's Disease Facts and Figures), the Corporation for National and Community Service (Civic Life Index), and the Bureau of Labor Statistics (American Time Use Survey).

¹ Birch EE, et al. Visual acuity and cognitive outcomes at 4 years of age in a double-blind, randomized trial of long-chain polyunsaturated fatty acid-supplemented infant formula. *Early Hum Dev* 2007 (Epub).

² Morris MC, et al. Fish consumption and cognitive decline with age in a large community study. *Arch Neurol*, 2005. 62:1849-53.

³ Schaefer E, et al. Plasma phosphatidylcholine docosahexaenoic acid content and risk of dementia and Alzheimer disease: the Framingham Heart Study. *Arch Neurol*, 2006. 63:1545-50.

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