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Healthy Childhood Diet Can Keep Mind Sharp in 70s and Ward Off Dementia

Analysis by Dr. Joseph Mercola | September 02, 2024

STORY AT-A-GLANCE

- A 70-year study found that eating a high-quality diet from childhood through middle age leads to better cognitive function later in life, potentially warding off dementia
- Participants with high-quality diets, rich in whole fruits, vegetables, beans, and whole grains, maintained better cognitive abilities into their 70s compared to those with poor diets
- Gradual introduction of complex carbohydrates is recommended for those with compromised gut health, starting with fruit juices and progressing to whole fruits and cooked starches
- Epigenetics research, including studies on the Dutch Hunger Winter, shows that dietary choices can have multigenerational impacts, affecting the health of future generations
- Improving mitochondrial function by avoiding linoleic acid, endocrine-disrupting chemicals, and EMF exposure can help protect cognitive function and reduce the risk of chronic diseases like dementia

Eating a healthy diet early in life can set the stage for a lifetime of optimal brain function. A study involving 3,059 people, spanning more than seven decades, revealed that eating a high-quality diet as a child and even into middle age leads to better cognitive function later in life, including potentially warding off dementia.[1]

The study, presented at NUTRITION 2024, the American Society for Nutrition's annual meeting, began tracking participants at the young age of 4 and continued until they reached 70.

This comprehensive lifespan perspective allowed researchers to identify potential links between diet and cognitive ability that may begin much earlier in life than previously thought — and reinforces the importance of eating nutritious foods right from the start.

Lifelong Healthy Eating Linked to Better Brain Function in Your 70s

Study participants were members of the 1946 British Birth Cohort, which has provided a wealth of information through questionnaires and tests over more than 75 years, offering researchers a unique opportunity to analyze dietary intakes at five distinct timepoints, comparing them to cognitive ability at seven differing points in time.

One of the most striking findings of the study was the close link between dietary quality and general, or "global," cognitive ability. The researchers observed that only about 8% of individuals with low-quality diets managed to sustain high cognitive ability over time. Meanwhile, among those with high-quality diets, only 7% had sustained low cognitive ability compared to their peers.

"These initial findings generally support current public health guidance that it is important to establish healthy dietary patterns early in life in order to support and maintain health throughout life," study author Kelly Cara, Ph.D., said in a news release.[2] The implications of cognitive ability on quality of life and independence in later years are significant.

At ages 68 to 70, people with the highest cognitive abilities higher had much better retention of working memory, processing speed and general cognitive performance compared to those in the lowest cognitive group.[3] Further, close to one-quarter of those in the lowest cognitive group had signs of dementia, compared to none of those in the highest cognitive group.[4]

As for which foods were healthiest, those who maintained the highest cognitive abilities over time consumed more whole or less processed plant foods, including whole fruits, beans, whole grains and leafy green vegetables, and less highly processed foods with added sugars and refined grains. Even slight dietary differences in early life seemed to influence dietary preferences later in life, underscoring the importance of establishing healthy eating habits from a young age.

"This suggests that early life dietary intakes may influence our dietary decisions later in life, and the cumulative effects of diet over time are linked with the progression of our global cognitive abilities," Cara said.[5] In other words, cognitive health is not solely determined by factors in later life but is influenced by dietary choices made throughout the lifespan.

This perspective shifts the focus of cognitive health interventions from later life to a whole-life approach, emphasizing the importance of establishing healthy dietary habits from childhood and maintaining them throughout adulthood.

That being said, there's hope for those who may not have had the healthiest diets in their youth. "Our findings also provide new evidence suggesting that improvements to dietary patterns up to midlife may influence cognitive performance and help mitigate, or lessen, cognitive decline in later years," Cara added.[6]

How to Ease Into Eating More High-Fiber Foods and Complex Carbs

Complex carbohydrates have traditionally been viewed as beneficial for gut health, while simple sugars are associated with accelerated aging. The featured study also found that foods like whole fruits, beans, whole grains and leafy green vegetables are best for protecting cognitive function as you age.

However, the impact of complex carbs on gut health and overall health isn't straightforward, particularly if your digestive system is already compromised. Research indicates that complex carbohydrates, including plant cell wall polysaccharides like

cellulose, nourish beneficial gut bacteria,[7] especially in the large intestine. These fibers are fermented by gut microbiota, promoting a healthy microbial balance.

This aligns with the childhood diet study, which found that early consumption of fruits, vegetables, and whole grains — all sources of complex carbohydrates — correlated with better cognitive function in later years.

However, if your gut health is suboptimal, complex carbohydrates can inadvertently feed harmful bacteria. These pathogens thrive when your body is exposed to metabolic disruptors like **linoleic acid** and endocrine-disrupting chemicals in plastics, which impair mitochondrial energy production. This energy deficit allows oxygen to penetrate your large intestine, creating an environment conducive to pathogenic bacterial growth.

As these harmful bacteria metabolize complex carbohydrates, they multiply and eventually die off, releasing an endotoxin called lipopolysaccharide. This further compromises cellular energy production, potentially leading to digestive issues and other health problems.

So, if you have a preponderance of pathogenic bacteria, it makes it hard to eat healthy, because eating healthy foods makes you feel worse due to the radical increase in endotoxin.

To address this, it's advisable to gradually introduce complex carbohydrates into your diet. Start with fresh juices from ripe fruits, then progress to whole fruits like oranges, tangerines, mangoes, grapes, melons, watermelons and pineapple (in moderation due to its serotonin content). This approach allows your gut to adapt while still providing the beneficial nutrients highlighted in the childhood diet study.

After acclimating to whole fruits, you can slowly incorporate more complex carbohydrates. Begin with cooked starches like potatoes (boiled to **reduce oxalate content**) and white rice. You can increase the resistant starch content, which doesn't spike blood sugar, by cooking, refrigerating or reheating these foods before consumption.

This gradual approach to incorporating complex carbohydrates allows you to reap their benefits — including potential long-term cognitive protection — while minimizing negative effects on a compromised gut. It underscores the truth in the adage "you are what you eat," emphasizing the profound and lasting impact of dietary choices on overall health and cognitive function throughout life.

Even Your Grandparents' Diet May Influence Your Health

The state of your health is not solely determined by your own lifestyle choices, but is also influenced by the dietary habits of your ancestors. This complex relationship is explained by the field of epigenetics, which studies how gene expression can be modified without altering the underlying DNA sequence. These modifications can be inherited by future generations.

Within this field, nutritional epigenetics focuses on how the eating patterns of one generation can impact the health of their descendants. A prime example of this is the effect a mother's diet during pregnancy can have on her unborn child. The nutritional choices she makes can leave epigenetic marks on her fetus, potentially influencing not only the immediate health of her child but also that of subsequent generations.

This understanding highlights the far-reaching consequences of our dietary choices, extending beyond our own lifespan and potentially shaping the health trajectories of our children and grandchildren. It underscores the importance of nutrition not just for individual well-being, but as a factor in the long-term health of family lineages.

The Dutch Hunger Winter, a severe famine that occurred in the Netherlands from 1944 to 1945 during World War II, provides compelling evidence for the transgenerational effects of diet. This famine resulted from a German blockade and harsh winter conditions, which disrupted food supplies and transportation.[8]

During this period, Dutch citizens' daily caloric intake plummeted to 400 to 800 calories, far below the typically recommended 2,000 calories. People resorted to consuming

unconventional food sources like grass and tulip bulbs to survive. Approximately 4.5 million people experienced severe famine, with 20,000 fatalities.[9]

A study published in Proceedings of the National Academy of Sciences examined whether famine exposure in utero was associated with lasting epigenetic changes in the insulin-like growth factor II (IGF2) gene, which is crucial for human growth and development.[10] The research revealed that individuals exposed to famine before birth during the Dutch Hunger Winter had lower DNA methylation levels in the IGF2 gene compared to their unexposed siblings.

These findings support the notion that prenatal and early-life environmental conditions, including dietary changes such as famine, can induce persistent epigenetic alterations in humans. Additional animal studies corroborate these results, with research demonstrating that paternal diet in sheep influenced the growth and reproduction of three subsequent generations.[11]

This body of evidence underscores the potential long-term and multigenerational impacts of significant dietary changes, highlighting the importance of nutrition not only for immediate health but also for your health later in life — and the health of future generations.

Improving Mitochondrial Function Protects Cognitive Function

No matter your age, you can reduce your risk of chronic disease, including dementia, and help avoid cognitive decline by **improving your mitochondrial function**. In a study published in Neurology,[12] a proinflammatory diet was associated with a higher risk for dementia, a disease rooted in mitochondrial dysfunction.[13]

There are three pernicious poisons that **destroy your mitochondrial function**, by affecting intracellular calcium and your body's overall cellular health. Elevated intracellular calcium can result in increased superoxide and nitric oxide levels, which combine into peroxynitrite, a potent reactive oxygen species that can contribute to poor health. These three poisons include:

- **Excess LA intake —** LA, an omega-6 polyunsaturated fat (PUFA), is found abundantly in seed and vegetable oils as well as ultraprocessed foods, may be the most harmful ingredient in the Western diet. When consumed in excess, it negatively impacts your metabolic rate and gut microbiome, which are the two of the most important factors that impact your health.
- **Endocrine disrupting chemicals (EDCs) —** Exposure to EDCs from sources like microplastics is over activating your estrogen receptors. Microplastics are so pervasive that you may be eating a credit card's worth of plastic every week.[14] That plastic is loaded with phthalates and bisphenol A (BPA), which activate estrogen receptors. Estrogen increases intracellular calcium levels,[15] which can result in the generation of peroxynitrite.
- **Excessive electromagnetic field (EMF) exposure —** People are bombarded with EMFs, such as from cellphones, every day with hidden consequences to public health. EMFs activate voltage-gated calcium channel (VGCC) receptors within the cell, catalyzing the production of peroxynitrite by triggering an influx of calcium.[16]

Daily exposure to these three poisons catalyzes the destruction of your microbiome, setting the stage for chronic disease. So, in addition to eating right at all life stages, including by avoiding excess LA, avoiding EDCs and EMFs will help protect your brain health throughout your life.

Sources and References

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