

Use it or Lose it:

New Reason to Exercise Your Body and Brain

By Richard Hansen

Now, more than ever, science is demonstrating that there are simple lifestyle choices people can make to help sustain memory and slow its decline.

As a result, many are beginning to acknowledge that the connection between mind and body may be stronger than ever imagined.

For years we have known that exercise is good for the heart and lungs, but who knew it could also benefit the brain?

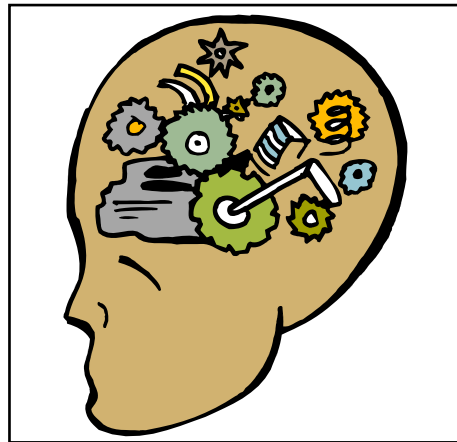
Recently, however, Australian researchers found evidence that moderate physical activity may represent an effective treatment for memory loss.

The scientists examined a group of adults at increased risk of dementia, some of whom were randomly assigned to participate in a 24-week, home-based physical activity program.

Those not assigned to the physical activity group received educational material and the usual care associated with cognitive decline.

Participants in the exercise group were asked to perform 150 minutes

of moderate intensity activity a week, which they were suggested to complete in three 50-minute sessions. Walking was the most common activity participants engaged in as part of the program.



In addition to monitoring physical activity, researchers assessed the participants' level of cognitive function and impairment using the Alzheimer Disease Assessment Scale-Cognitive Subscale (ADAS-Cog).

After 18 months, the data revealed that the physical activity group had

higher ADAS-Cog scores and lower Clinical Dementia Rating scores than those in the usual care group. It was also ascertained that, while the condition of those in the usual care group deteriorated, individuals who exercised regularly showed a small, but significant, improvement in cognitive function.

These results were published in the September 3rd edition of the *Journal of the American Medical Association*.

The researchers emphasized the value of their findings saying, "To our knowledge this trial is the first to demonstrate that exercise improves cognitive function in older adults with subjective and objective mild cognitive impairment. The benefits of physical activity were apparent after six-months and persisted for at least another 12 months after the intervention had been discontinued."

They also noted that "unlike medication, which was found to have no significant effect on mild cognitive impairment at 36 months, physical activity has the advantage of health benefits that are not confined to cognitive function."

If you want to reduce your chances of developing dementia though, it is not enough to just take a walk in the park. You also need to exercise your mental muscles. One of the best ways to do this is through leisure activities such as reading, crossword puzzles and board games like chess.

The brain-boosting power of leisure has been highlighted by a hand

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Low Vitamin B-12 Levels Tied to Brain Atrophy

It is well known that Vitamin B-12 is crucial for proper brain function. A new study has indicated that low levels of this important vitamin could lead to brain shrinkage in the elderly, and place them at greater risk of developing a cognitive impairment.

The results of this 5-year study, which included 107 individuals between the ages of 61 and 87 years of age, appeared this month in the journal *Neurology*.

They found that those with the lowest Vitamin B-12 levels experienced a significant degree of brain atrophy even after controlling for initial brain

size, age, sex, education, cognitive test scores and various measures of blood chemistry. Those in the lowest third lost almost twice as much brain volume as those with the the highest Vitamin B-12 levels.

In addition to measuring Vitamin B-12 blood levels, the researchers carried out clinical exams, MRI scans and cognitive tests. Homocysteine levels were also taken.

The harmful amino acid, homocysteine, has been linked to dementia, stroke, heart problems and depression. In this study, high homocysteine

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Dr. Carl's Corner



When people think of chemistry, all too often the image of an alchemist is what comes to mind.

Long ago, alchemists attempted and failed to change one element into another.

Sir Isaac Newton, for example, tried to turn mercury into gold. This faulted endeavor cost him his health, and maybe his sanity. No doubt this same fate was experienced by others

experimenting with toxic substances in the past.

Chemistry has deep ties to the Salters in England. In London, the Salters were responsible for ensuring that the city had an adequate supply of salt. They also played a major role in city governance.

In the past, salt, like grain, was more valuable, and certainly more useful than gold. London was fortunate to have valuable salt deposits nearby.

Salt helps preserve and flavor food. It is also used to make the chemicals needed for paper and other materials required by the trade of a vibrant merchant community.

One of my ancestors was a Salt-er who came to America in the late 1600's. The stories my grandmother told me as a boy allowed me to discover my ties to the traditions of the industrious Salters.

It is no wonder then, that grand-

mother was an amazing cook and an expert gardener. Looking back, she was really a food chemist, herbalist and horticulturist.

She often cooked meals for as many as twenty people, which demanded safe and efficient ways to satisfy many hearty appetites.

She understood food ingredients so well that she could come up with replacements when she ran out of a particular ingredient. She knew many recipes by heart and rarely needed to use measuring cups. She also knew food preparation tricks that helped eliminate the risk of food-borne illness.

On fall days, I would hike up the hill to her house to assist with chores. Often, I would discover that she had filled the kitchen with homemade breads, buns and rolls for her kids and grand-kids.

I also helped plant her garden. She taught the grand-kids about the various edible and medicinal plants in the neighborhood, woods and wetlands.

My grandmother made a point of sharing this wisdom with anyone who possessed an open mind and desire to learn.

With all this in mind, it makes me think that what we do at MEND is "in our blood" and built on hundreds of years of tradition.

Exercise Your Brain - Cont.

ful of scientific studies. One such study carried out in China followed 5437 individuals over the age of 55 and looked at how they spent their free time.

Each individual in the study was interviewed about their participation in different cognitive, physical and social activities, as well as the amount of time they spent watching television. Leisure activities that fell in one of the above mentioned categories was rated according to how cognitively demanding it was. The higher a person's score, the more time they spent breaking a "mental sweat."

In the end, the researchers discovered that a 1 point increase in a participant's score was associated with a 5% decrease in the risk of developing a cognitive impairment.

Interestingly, watching TV was associated with a 20% *increased* risk of experiencing mental decline with age.

Although studies on activity and brain health like this one have led people to recognize that games and puzzles can bolster the brain against the onslaught of age, scientists are

still not sure why this is the case.

What they do know is that the brain's structure is not set in stone, but rather ever-changing as a person goes through life.

For decades, scientists believed the number of neurons and synapses in the brain remained static once it has fully developed.

Today it is known that a person can strengthen and even increase the number of these neurons as an adult.

Some have suggested activities that stimulate the brain could facilitate this process and create what has been referred to as a "neural reserve." The "neural reserve" theory suggests that a brain with more neurons and synapses can sustain greater loss before manifesting as a cognitive impairment.

This may be speculation, but what is certain is that incorporating more exercise and leisure into your routine will not hurt. So, if you have been having trouble remembering where you left your wallet or parked at the grocery store, you might consider going for a jog or doing a crossword during your daily lunch break.

B12 and the Brain - Cont.

was not associated with greater brain atrophy.

The scientists have noted that, while those with the lowest Vitamin B-12 levels experienced the most brain shrinkage, none of those individuals had an actual Vitamin B-12 deficiency.

This study has raised questions about whether or not the current recommendations for Vitamin B-12 intake and serum levels are adequate to promote brain health.

It has also been suggested that a test for Vitamin B-12 levels be included in regular medical check ups.

Scientists are now in the process of researching whether Vitamin B-12 can be used to actively prevent brain atrophy.

Laurie's Corner

Fall is here. School has started. Most of us are back on a schedule, making life more predictable. There seems to be something very comforting about that.

Thinking about comfort always makes me think of food. And what could be more comforting than apple crisp right out of the oven?

In our November 2007 MENDWise issue I mentioned that Grandma Lund made the best apple crisp known to man. But, instead of giving you that recipe, I gave you one for pear crisp!

So, this year here is the apple crisp recipe. Grandma's was like none I'd ever had before (or since). The topping was like a thick, soft shortbread and tasted like heaven (and there was nothing CRISP about it). She always made it in the same dark green, oval baking dish. You can't even imagine how comforting it was to beat out all of my siblings and get to eat the cold left-over apple "crisp" hiding on the back stairway with that green dish in my lap.

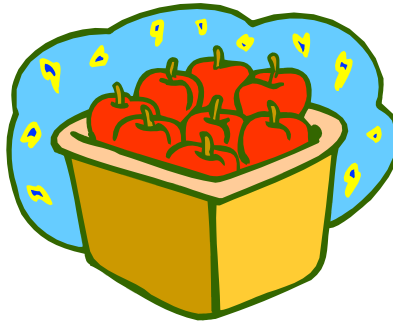
Grandma and Grandpa had several apple trees on their property (in Stillwater, MN) and not one apple was ever wasted; in fact, they all went to several of our waists! Carl and Richard planted two apple and two cherry trees the year Richard left for college (now five years ago). Of the four trees, only one cherry and one apple (the Haralson tree) bore fruit this year (interestingly, they were both the southernmost ones – but only by about six feet).

The Haralson apple was developed by the University of Minnesota in 1922 and was designed to weather over our harsh Minnesota winters. Haralson's are juicy, crisp and tart and are divine right off the tree. They have also been called the very best apple for baking.

The cherries were very small and tart and we didn't get enough for even one pie. We did get 12 really nice, big Haralson apples, and some of them didn't even have worms.

It has been thrilling to actually grow our own apples to make Grandma's famous apple crisp!

Grandma's Apple Crisp



Topping:

- 3/4 cup Butter, softened
- 1 cup Flour (organic, unbleached)
- 1 cup Brown Sugar

Filling:

- 6 large, firm Apples (Haralson's work great!), peeled
- 1 Tbsp. Lemon Juice
- 1 Tbsp. Sugar
- 1 Tbsp. Cinnamon
- 1 Tbsp. Flour

1. Cream butter and sugar for topping in a bowl, then mix in flour.
2. Wash, peel and thinly slice apples and put in buttered 8" or 9" oven-safe glass baking pan (with a height of at least 3").
3. Sprinkle apples with lemon juice, sugar, cinnamon and flour and stir.
4. Place topping over apples, pressing down evenly.
5. Bake uncovered at 350 degrees for 35 minutes.
6. Let rest for at least 30 minutes before serving.

In The News...

The chemical bisphenol A, or BPA, which is in everything from plastic baby bottles to CDs, has been in the news a lot lately.

In the last few years concerns have been raised that the chemical may harm fetal development and possibly damage the endocrine system.

The FDA maintains that BPA represents no major threat to consumers exposed to the chemical.

Laura Tarantino, a lead scientist for the agency, told a panel addressing BPA's safety asserted, "A margin of safety exists that is adequate to protect consumers, including infants and children, at the current levels of exposure."

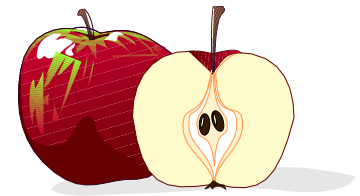
Here is another way we've been enjoying our apples. It is a new twist on an old favorite and makes a lovely luncheon salad.

Sweet and Sassy Chicken Salad

Serves 3 - 4

- Lettuce or Baby Spinach
- 2 Apples, washed and diced
- 2 stalks Celery, washed and diced
- ½ - ¾ cup Raisins
- ½ cup Smoked Gouda cheese, diced
- 1 cup cooked Chicken or Turkey, diced
- 1 - 2 Tbsp. Mayonnaise
- 1 - 2 Tbsp. Honey Mustard (or to taste)
- ½ cup Walnut pieces, toasted
- ¼ cup Bacon, cooked and crumbled (optional – in place of walnuts)

1. Wash and pat or "spin" dry lettuce or spinach. Place on individual salad plates.
2. Mix remaining ingredients together except walnuts and bacon (if using).
3. If using walnuts, toast walnuts in toaster oven (approximately 5 minutes at 350 – stirring occasionally) and place on top of salad.
4. If using bacon, place on top of salad.



The panel coincided with the release of a study associating BPA with diabetes and heart disease.

Researchers conducting the study examined health survey results from 1455 adults and found that those with a higher concentration of BPA in their urine were more likely to also suffer from diabetes or cardiovascular problems.

Many scientists familiar with the study's findings are quick to note that, while it raises some interesting questions about BPA's impact on human health, it does not establish a causal link between BPA and these two health problems.

Many agree that more research is needed before a definitive conclusion can be made about its safety.

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Scientifically Sensible



Healthy Brains, Healthy Lives

Better Mood, Memory, Energy, Focus

Overcoming depression is a journey that requires the right “roadmaps” and “tools” leading to recovery.

Many people are forced to grapple with depression for years because they are unaware of the simple, practical and scientifically sensible solutions that exist to help them.

If you are ready to start on the path to resilience and recovery, send an email to info@mend.net with “roadmap” in the Subject line for information on “Roadmaps for Resilience.”



Roadmaps for Resilience