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Our March 2010 Newsletter for Healthy Living

Exercise Aids Memory

Moderate physical activity performed in midlife or later appears to be associated with a reduced risk of mild cognitive impairment, whereas a six-month high-intensity aerobic exercise program may improve cognitive function in individuals who already have the condition, according to two reports in the January issue of *Archives of Neurology*, a JAMA/Archives journal.

Mild cognitive impairment is an intermediate state between the normal thinking, learning and memory changes that occur with age and dementia, according to background information in one of the articles. Each year, 10 percent to 15 percent of individuals with mild cognitive impairment will develop dementia, as compared with 1 percent to 2 percent of the general population. Previous studies in animals and humans have suggested that exercise may improve cognitive function.



In one report, Yonas E. Geda, M.D., M.Sc., and colleagues at Mayo Clinic, Rochester, Minn., studied 1,324 individuals without dementia who were part of the Mayo Clinic Study of Aging. Participants completed a physical exercise questionnaire between 2006 and 2008. They were then assessed by an expert consensus panel, who classified each as having normal cognition or mild cognitive impairment. A total of 198 participants (median or midpoint age, 83 years) were determined to have mild cognitive

impairment and 1,126 (median age 80) had normal cognition.

Those who reported performing moderate exercise—such as brisk walking, aerobics, yoga, strength training or swimming—during midlife or late life were less likely to have mild cognitive impairment. Midlife moderate exercise was associated with 39 percent reduction in the odds of developing the condition,

and moderate exercise in late life was associated with a 32 percent reduction. The findings were consistent among men and women. Light exercise (such as bowling, slow dancing or golfing with a cart) or vigorous exercise (including jogging, skiing and racquetball) were not independently associated with reduced risk for mild cognitive impairment.

Physical exercise may protect against mild cognitive impairment via the production of nerve-protecting compounds, greater blood flow to the brain, improved development and survival of neurons and the decreased risk of heart and blood vessel diseases, the authors note. "A second possibility is that physical exercise may be a marker for a healthy lifestyle," they write. "A subject who engages in regular physical exercise may also show the same type of discipline in dietary habits, accident prevention, adherence to preventive intervention, compliance with medical care and similar health-promoting behaviors."

In another report, Laura D. Baker, Ph.D., of the University of Washington School of Medicine and Veterans Affairs Puget Sound Health Care System, Seattle, and colleagues report the results of a randomized, controlled clinical trial involving 33 adults with mild cognitive impairment (17 women, average age 70). A group of 23 were randomly assigned to an aerobic exercise group and

“Midlife moderate exercise resulted in a 39 per cent reduction in cognitive impairment.”

exercised at high intensity levels under the supervision of a trainer for 45 to 60 minutes per day, four days per week. The control group of 10 individuals performed supervised stretching exercises according to the same schedule but kept their heart rate low. Fitness testing, body fat analysis, blood tests of metabolic markers and cognitive functions were assessed before, during and after the six-month trial.

A total of 29 participants completed the study. Overall, the patients in the high-intensity aerobic exercise group experienced improved cognitive function compared with those in the control group. These effects were more pronounced in women than in men, despite similar increases in fitness. The sex differences may be related to the metabolic effects of exercise, as changes to the body's use and production of insulin, glucose and the stress hormone cortisol differed in men and women.

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Your Waistline Is Saying Something

Almost nine in 10 people are not aware of the risks of carrying extra fat around their waistline. A survey of 12,000 Europeans found most had no idea that a thick waist was a sign of a build-up of a dangerous type of fat around the internal organs. The report from GlaxoSmithKline, who make weight loss drug Alli, said this "visceral

of diseases associated with being overweight, such as type 2 diabetes. The report pointed out that when weight is lost, visceral fat is more easily broken down for energy than the fat immediately under the skin; even a small amount of weight loss can cause a difference. Diabetes UK advises that the following waist measurements put peo-

mones that impact your brain, liver, immune system and your fertility. Research indicates that the subcutaneous fat found just under your skin is different from visceral fat in a number of ways. It has been discovered subcutaneous fat can actually improve glucose metabolism and communicate with your organs to elicit beneficial effects.

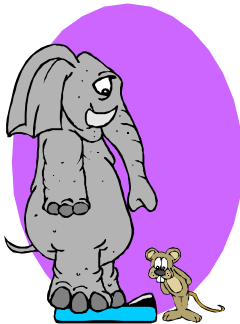
"Visceral fat is strongly linked with Type-2 diabetes and heart disease."

fat" is strongly linked with type 2 diabetes and heart disease. Most people would lose weight once they found out the risk, the survey found.

Report author Dr Terry Maguire, honorary senior lecturer at Queen's University in Belfast, said people did not know that visceral fat, which you cannot see or feel and which

sits around the organs in the abdomen, is there or that it poses a problem. It is thought that the danger of visceral fat is related to the release of proteins and hormones that can cause inflammation, which in turn can damage arteries and enter the liver, and affect how the body breaks down sugars and fats. Only a quarter of those questioned in the Europe-wide study thought being overweight was a risk to long-term health at all.

"Most overweight people still see themselves as having a body image issue not a health problem and they need to understand the health benefits of weight loss as well as the cosmetic results," he said. Research has shown that waist circumference is a good indicator of visceral fat and therefore of a person's risk



ple at risk: women, 31.5 inches; white men and black men, 37 inches; and SE Asian men, 36 inches. But the report's co-author Professor David Haslam, chair of the UK National Obesity Forum, cautioned that steady sustainable weight loss is important and that crash diets were likely to be unsuccessful. "They can actually do more harm than good," he said. "Invariably weight is put back on, with some of the weight regained accumulating as visceral fat."

Subcutaneous fat is found just under your skin and is noticeable. It's the type of fat that jiggles, dimples, and causes cellulite. Visceral fat is fat on the inside of your body, under your abdominal muscle. It is more dangerous than subcutaneous fat because it can surround vital organs like your liver and heart. Visceral fat is linked to heart disease, Type 2 diabetes, strokes and other chronic diseases. Belly fat is also dangerous because it produces inflammatory molecules that enter your bloodstream. High inflammation levels in your body can trigger a wide range of systemic diseases linked with metabolic syndrome. While it's often referred to as "belly fat" because it can cause a "beer belly" or an apple-shaped body, you can have visceral fat even if you're thin.

You may think all body fat is the enemy, but fat cells are an active and intelligent part of your body, producing hor-

Leptin also plays an enormous role in the development of obesity; leptin is a hormone your body produces which is just as important as insulin in determining your risk for Type 2 diabetes and other serious diseases. The hormones your fat cells produce impact how much you eat and how much fat you burn. Leptin resistance causes an increase in the visceral fat your body produces. You become leptin-resistant by eating a diet that contains too many sugars and grains. The sugar metabolizes to fat and is stored in your fat cells. This activity in turn causes a surge in leptin; your body then becomes leptin-resistant.

When you're leptin-resistant, your body no longer hears its own signals to stop eating, burn fat, or pass up sugary foods. The result? You stay hungry, you crave sweets, and your body stores ever more fat. When your body routinely stores this much excess visceral fat, you increase your risk for high blood pressure, high cholesterol, vascular disease, atherosclerosis (hardening of your arteries) and an increased thickness in the walls of your heart. You probably have the most powerful tool available to determine your risk of diabetes right at your fingertips – a simple tape measure. Your total body fat and overall level of fitness are not the best indicators of insulin sensitivity, your waist size is. Studies clearly show that measuring your waist size is one of the most powerful ways to predict your risk for diabetes.

Reference: BBC News January 4 2010, *American Journal of Hypertension* September 15, 2002:780-6, *American Journal of Clinical Nutrition* October 2002: 76:743-9, *Cell Metabolism* May 2008: 7(5):410-20, *Metabolism* July 2003:52(7)

March Event Schedule

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Gluten-free is Good for Everyone!

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Admission is \$10; call 734 996-8111

Pain-Free Living:

Reversing the Cycle of Knee Pain
Find out how everything fits together!

Instructor: Ann-Margaret Giovino
Postural Alignment Specialist - Egoscue

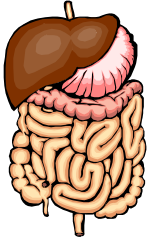
Wednesday, March 24 @

10:30-11:30AM or 7-8PM

Admission is Free; call 734 996-8111

Vitamin D and Your Colon

A new study has found that Vitamin D can counter the effects of Crohn's disease. Researchers found that Vitamin D acts directly on the beta defensin 2 gene, which encodes an antimicrobial peptide, and the NOD2 gene that alerts cells to the presence of invading microbes. Both beta defensin and NOD2 have been linked to Crohn's disease. If NOD2 is deficient or defective, it cannot combat invaders in the intestinal tract.



Crohn's disease is a chronic condition that causes inflammation of your gastrointestinal (GI) tract. Any area of your digestive tract can be affected, from your mouth to your anus, but Crohn's most commonly affects the lower part of your small intestine known as the ileum. Swelling from the inflammation can be painful and often results in diarrhea.

Crohn's is found in men and women in equal numbers and seems to have a genetic component. About 20 percent of Crohn's sufferers also have a relative – usually a parent or sibling -- with some form of inflammatory bowel disease. The cause of Crohn's is thought to be impairment in the way your immune system handles intestinal bacteria. This improper immune system response leads to an inflammatory condition that can result in an autoimmune disorder. If you have an autoimmune disorder, it means your immune system is attacking and destroying healthy body tissue.

One of the reasons that vitamin D may

work is that it helps your body produce over 200 anti-microbial peptides that help fight all sorts of infections. There are many experts that believe inflammatory bowel disease has an infectious trigger.

From an August, 2009 Oregon State University press release: *A new study has concluded that one key part of the immune system, the ability of vitamin D to regulate anti-bactericidal proteins, is so important that it has been conserved through almost 60 million years of evolution and is shared only by primates, including humans – but no other known animal species.*

The fact that this vitamin-D mediated immune response has been retained through millions of years of evolutionary selection, and is still found in species ranging from squirrel monkeys to baboons and humans, suggests that it must be critical to their survival, researchers say.

Even though the "cathelicidin antimicrobial peptide" has several different biological activities in addition to killing pathogens, it's not clear which one, or combination of them, makes vitamin D so essential to its regulation.

The research also provides further evidence of the biological importance of adequate levels of vitamin D in humans and other primates, even as some studies and experts suggest that more than 50 percent of the children and adults in the U.S. are deficient in "the sunshine vitamin."

"The existence and importance of this

Reference: *Eurekalert* January 27 2010, *Journal of Biological Chemistry* January 2010

part of our immune response makes it clear that humans and other primates need to maintain sufficient levels of vitamin D," said Adrian Gombart, an associate professor of biochemistry and a principal investigator with the Linus Pauling Institute at Oregon State University.

In simple terms, if you're vitamin D

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deficient, your immune system will not activate to do its job. Since vitamin D also modulates (balances) your immune response, it prevents an overreaction in the form of inflammation, which can lead to autoimmune disorders like Crohn's disease. Your best source of vitamin D is sunshine. When taking oral vitamin D, it is important to have your health practitioner assess your levels.

"Aerobic exercise is a cost-effective practice that is associated with numerous physical benefits. The results of this study suggest that exercise also provides a cognitive benefit for some adults with mild cognitive impairment," the authors concluded. "Six months of a behavioral intervention involving regular intervals of increased heart rate was sufficient to improve cognitive performance for an at-risk group without the cost and adverse effects associated with most pharmaceutical therapies." The researchers also stated that further study is needed to provide



Exercise Aids Memory *continued from page one*

additional information on cause and effect relationships.

Nonetheless, these are impressive results, considering that mild cognitive

regular exercise program is critical to achieving and maintaining optimal health. As you age, there is the potential for your brain function to steadily

"Aerobic exercise is a cost-effective practice."

impairment affects about 20 percent of people over 70, according to the American College of Physicians. This condition often causes memory problems and blips in language, reasoning, judgment, and even reading and writing.

There is an old proverb that says: *"Those who do not find time for exercise will have to find time for illness."* A

decline, leaving you confused and unable to care for yourself. However, your lifestyle, and specifically your dedication to regular exercise, can do wonders to keep your brain in top form, even later in life.

Reference: *Eurekalert* January 11 2010, *Archives of Neurology* January 2010; 67(1): 71-9, *Archives of Neurology* January 2010; 67(1): 80-6



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Citra Suds Laundry Detergent, Ultra 50 oz liquid....	\$ 6.99
Goats Do Roam Wines, Red, White, Rose' 750 ml.....	\$ 6.99
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