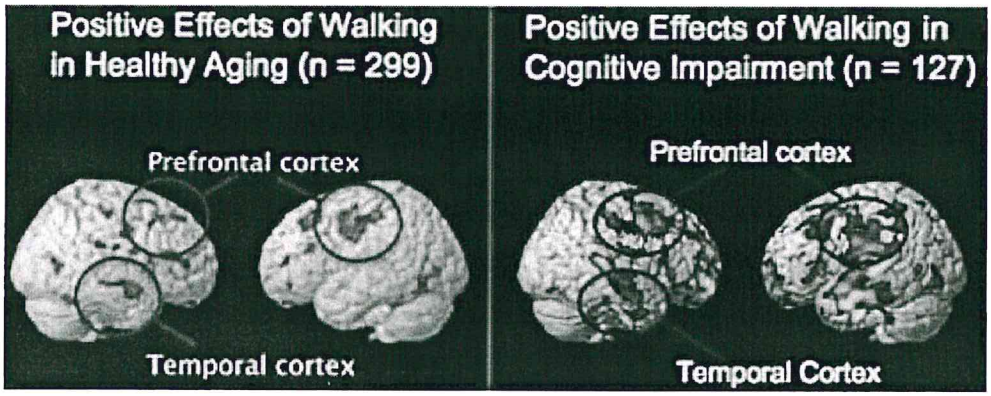
Walking, light exercise may prevent Alzheimer's & osteoarthritis 11/ 29/10,By Sara J. Martinez

Walking may slow the progression of Alzheimer's disease and mild cognitive impairment in healthy and cognitively impaired adults, according to a study presented Monday at the RSNA annual meeting. A separate study found walking and other light physical activity delays the onset or altogether prevents osteoarthritis.

"Physical activity really has the power to preserve brain volume with normal aging and reduce the risk for future cognitive impairment," said Cyrus Raji, Ph.D., from the radiology department at the University of Pittsburgh and lead author of the Alzheimer's



These 3D renderings of the brain show the effects of physical activity on healthy aging individuals as well as the relationship between exercise and brain structure in cognitively impaired individuals. (Provided by RSNA)

study.

Engaging in light exercise had positive results in preventing osteoarthritis in a study by Dr. Thomas Link, a professor of radiology and chief of musculoskeletal imaging at the University of California, San Francisco.

In the Alzheimer's study, Raji and his colleagues focused on a sampling of 426 people from a 20-year ongoing cardiovascular health study that began with about 1500 subjects in Pittsburgh in 1989.

The study used high-resolution 3D volumetric MRI scans of the brain to analyze the relationship between physical activity and brain structure in 299 healthy adults and 127 cognitively impaired adults, 83 with mild cognitive impairment and 44 with Alzheimer's disease.

The study found that healthy adults walking six miles per week preserved brain volume over 10 years and reduced the risk of Alzheimer's disease by 50%.

The results were similar for the cognitively impaired group, but they didn't have to walk as much.

"Walking a slightly smaller amount, five miles per week, reduces brain atrophy and neurodegeneration over time and reduces cognitive decline and memory loss by more than 50% over 10 years," Raji said.

There is no cure for Alzheimer's disease, but the study supports the idea that physical activity may be an effective way to reduce the risk and preserve brain volume by strengthening brain structure.

The osteoarthritis study also found physical activity is beneficial, though too much physical activity appears to be associated with more degenerated cartilage and a higher risk for developing osteoarthritis, Link said.

"Weight-bearing activity is essential for normal cartilage development, but excessive loading may lead to degeneration over time," said Keegan Hovis, a research associate in the radiology department at UCSF.

In both the risk-factor group and the normal group, the study found frequent knee-bending activities were associated with more degenerated cartilage at the molecular level, Hovis said.

Researchers studied 132 asymptomatic subjects at risk for knee osteoarthritis and grouped them according to exercise levels: sedentary, light exercisers, and moderate to strenuous exercisers. They also grouped them into strength-training levels: none, minimal, and frequent.

Women who participated in moderate-to-strenuous physical activity had greater cartilage degeneration at the molecular level than the men who were studied.

Link said it is important for patients to keep their joints active but not to overdo it.

"We have to advise patients that they should perform light exercise, which is important to keep the joints moving," he said.

The safest choice for maintaining healthy cartilage is light exercise, particularly frequent walking, according to Hovis.

- See more at: http://www.physicianspractice.com/walking-light-exercise-may-prevent-alzheimer%E2%80%99s-osteoarthritis#sthash.71OTvTXq.dpuf