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IN THE NEWS

Possible treatment for female sexual dysfunction

New findings presented at the recently hosted American Urological Association's annual meeting, Anaheim, CA, suggest that DHEA (dehydroepiandrosterone) might be useful to treat sexual dysfunction in women whose troubles may stem from depleted levels of this hormone. The study involved 32 women with waning sexual desire, as well as arousal and orgasm problems, each of whom were administered 50 milligrams per day of DHEA for about five months. At follow-up, the majority of test subjects reported a significant increase in spontaneity, shorter time to arousal and higher sexual interest. In addition, 80% of the women had their testosterone and DHEA levels return to normal.



Studies have shown that androgen levels in both men and women greatly affect sexual, mental and physical well being. In particular, there has been a growing interest in DHEA, a precursor of estrogen and testosterone. Evidence to date has pointed to DHEA's potential in terms of anti-aging effects and it is being studied in relation to Alzheimer's, arthritis, lupus, depression, cancer and sexual dysfunction. Unfortunately, after DHEA levels peak in one's 20's and 30's, they start to drop thereafter. And in some people, underactive adrenal glands give way to persistently low levels from puberty onwards.

While studies of female sexual dysfunction have lagged behind male-centered research, the knowledge that androgens affect women as well as men has spurred on studies in women. Back in 1994, the Massachusetts Male Aging Study showed that serum levels of DHEA were inversely related to the incidence of erectile dysfunction [Reiter WJ, et al. Urology 1999 Mar; 53(3):590-4; discussion 594-5]. That study had looked at 40 men, 20 of them receiving 50 milligrams of DHEA daily for six months, and the other half taking a placebo. Then a 1999 study showed that what ailed the male libido might help females as well. German researchers found that 50 milligrams DHEA daily for four months decreased symptoms of depression and anxiety in women with "adrenal insufficiency" (specifically DHEA), as well as significantly improving their sexual health and overall well being [Wiebke A, et al. NEJM 1999 Sep 30 341(14):1013-1020]. -Angela Pirisi

Carrots, tomatoes keep lung cancer away

Harvard researchers have published the results of a large study that suggests that adults who consume a variety of carotenoids have a significantly lower risk of developing lung cancer than those who do not consume as much [AJCN 2000;72:990-997]. Carotenoids are antioxidants that block DNA and cellular membrane damage otherwise caused by free radical activity and the oxidative stress that it creates. More specifically, after surveying people's dietary habits and following up with them 10 to 12 years later, the study found that individuals whose diet contained the largest amount of lycopene (a carotenoid found in tomatoes) and alpha-carotene (a compound found in carrots) experienced the greatest preventive benefit. Meanwhile, a 63% reduction in risk was noted in non-smokers who consumed the most alpha-carotene. Smokers, on the other hand, benefitted primarily from lycopene, but not from other carotenoids.

Other researchers have previously pointed out that, because a number of carotenoids exist in different concentrations in different vegetables, it is more advantageous to consume a variety of vegetables. For example, an earlier study by investigators at the University of Hawaii's Cancer Research Center, which compared men and women with lung cancer with healthy controls, found that subjects who had a high median intake of three carotenoids found in vegetables (beta-carotene, alpha-carotene and lutein) had the lowest risk of lung cancer [Cancer Epidemiol Biomarkers Prev 1993 May-Jun; 2(3):183-187]. The researchers commented that, consistent with their previous findings, "This analysis provides further evidence for a protective effect of certain carotenoids against lung cancer and for the greater protection afforded by consuming a variety of vegetables compared to only foods rich in a particular carotenoid."

Earlier research has also demonstrated that a high intake of fruits and vegetables, as well as whole grains, appears to improve lung function in general, when compared to below-average consumption [Thorax 1999;54:1021-1026]. Data was collected from over 3000 men (ages 40 to 59 when the study began), during the 1960s in Finland, Italy and the Netherlands. The results led the researchers to conclude that vitamins C and E and beta-carotene were responsible for fighting damage in the airways.

Meanwhile, much evidence has surfaced to suggest that carotenoids are a means of prevention for different forms of cancer, not exclusively lung cancer. Consider, for example, that a two-year study from Uruguay reported that vitamin A (which is converted from beta-carotene), alpha-carotene and lycopene were associated with a strong inverse relationship to stomach cancer [Eur J Cancer Prev 2000 Oct;9(5):329-334]. The study, which compared 120 cases of confirmed stomach cancer with 360 controls in relation to the role of diet, also found that joint intake of alpha-carotene and vitamin C translated into a sharply reduced risk of gastric cancer.

The Harvard researchers comment, however, that eating more carrots or tomatoes does not compare to not smoking as a means of preventing lung cancer. —AP



Memory vitamins

If you know someone who can't remember, they may need vitamins. Tufts University researchers report that people over the age of 60 who can't remember have less folate in their blood. A link was also found between poor memory and levels of homocysteine. Homocysteine is a potentially toxic by-product of methionine, an amino acid found abundantly in animal protein—which can be lowered with supplemental folate.

The study is the latest in a series on cognitive function, homocysteine and vitamins. The vitamins—B6, B12 and folate—improve memory. It has long been known that vitamin B12 is crucial for psychological health and the ability to think. Vitamin B6 was connected with better memory in a 1996 Tufts study, and folate has consistently been tied to better cognition. The vitamins may work because they enhance methylation, a process necessary for brain function. An alternative scenario is that folate and B12 reduce homocysteine, which not only impedes methylation but is itself toxic to neurons.

In the latest study, the homocysteine level of people who could recall the six elements of a story came in under 10.6 $\mu\text{mol/L}$. People who could not remember any of the story's concepts tested out at 11.3 to 14.8 $\mu\text{mol/L}$. While the difference appears small, when it comes to homocysteine, the tiniest amount can make the biggest difference. In studies on homocysteine and heart disease, one micromole difference in a liter of blood has proven significant.

All of the participants in the study were over 60 years old. A connection between age and not being able to remember also emerged. People closer to the age of 60 did a lot better on remembering words than people closer to 70. Unfortunately, however, it can't all be blamed on homocysteine. People who had the hardest time remembering words and concepts were older, regardless of their homocysteine levels. However, one of the crucial things not addressed in the study was B12 status. Folate and vitamin B12 work together to enhance cognition. How many of the older people who couldn't remember any of the words were B12 deficient is not known. B12 deficiency (whether it is apparent or not upon testing), is a frequent deficiency in older people, and supplemental B12 has been shown to increase language ability. According to an analysis of the Framingham heart study, an older person is likely to be B12 deficient unless they either take supplements or eat fortified cereal. The diet and health of the older participants was not addressed in the study.



Researchers in Ireland have reported something very interesting about homocysteine and age. They found that people over 90 generally had lower homocysteine than people 70 to 89. There was no apparent explanation for this, including genes or vitamins. But these older people with homocysteine around 8 $\mu\text{mol/L}$ (compared to 9.8 for the 70 to 89 year-olds) were doing great.

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