Clinical Digest

UROLOGY

'Too Much' Fluid Doesn't Lead to Incontinence

Fluid intake has been linked in research to the severity of certain types of urinary incontinence (UI), but many women may think that means they can prevent UI by limiting their intake. They shouldn't be too concerned, however, according to researchers from Brigham and Women's Hospital, Harvard Medical School, Harvard School of Public Health, and Massachusetts General Hospital, all in Boston, Massachusetts, and the University of Pittsburgh School of Medicine in Pennsylvania.

In 1976, the Nurses' Health Study (NHS) was initiated upon receipt of health and lifestyle questionnaires from 121,700 female nurses aged 30 to 55 years. In 1989, the NHS II was initiated when a similar questionnaire was returned by 116,430 female nurses aged 25 to 42 years. Using data from the NHS survey in 2000 and the NHS II survey in 2001, the researchers measured daily fluid intake among 65,167 women aged 37 to 79 years without UI at baseline.

During 4 years of follow-up, women reported the incidence of incontinence on subsequent questionnaires. For this analysis, the researchers examined risks associated with a 240-mL (8-oz) increase in intake of 7 types of fluid: milk, juice, tea and coffee (caffeinated and decaffeinated), soda, punch and lemonade, alcoholic beverages, and water.

Total fluid intake was calculated as liters per day, summing intakes of all beverages. Two NHS cohorts (participants in 2000, aged 54 to 79 years, and NHS II participants, aged 37 to 54 years) were organized into quintiles from lowest to highest intake. The data were analyzed separately and pooled.

The researchers found no association between total fluid intake and the risk of UI, even when they analyzed the data according to the type of UI (incident stress, urgency, or mixed incontinence). The median daily fluid intakes across quintiles were 1.1 L, 1.6 L, 2.0 L, 2.4 L, and 2.9 L. The UI incidence rates in each quintile were, respectively, 6.8, 6.8, 7.0, 7.1, and 7.2 cases per 100 person-years.

Source: *Am J Obstet Gynecol.* 2011;205:73.e1-e6. doi:10.1016/j.ajog.2011.02.054.

ENDOCRINOLOGY

Does Diabetes Put African Americans at Higher Risk of Cognitive Decline?

Since 1992, research teams from Indiana University in Indianapolis and the University of Ibadan in Nigeria have been collaborating to study the rates and risk factors for age-associated dementia and Alzheimer's disease among elderly African Americans and Yoruba. In terms of cognitive decline, African Americans with diabetes experienced accelerated aging in comparison to their counterparts without diabetes. When incident stroke was factored into the equation, African Americans aged at an even more alarming rate.

The researchers screened 1,702 U.S. participants for dementia at 6 different time points over the 15 years. Of the participants, 441 had diabetes at baseline. During the follow-up period, which ranged from 0.9 to 15.2 years, 283 participants (64%) with diabetes died, compared with 646 (51%) of the group without diabetes.

Mean cognitive scores declined from 67.0 at baseline to 66.9 at 15 years. When the researchers controlled for basic demographics and baseline comorbid conditions, such as heart disease, hypertension, stroke, and depression, subjects with diabetes were shown to have significantly more decline in cognitive scores. On average, those with diabetes at baseline declined 0.10 point more per year, compared with people without diabetes. To put it in context, an age increase of 1 year resulted in a decline of only 0.04 points in the same model. Therefore, the researchers say, the effect of diabetes at baseline on cognitive decline is equivalent to being 2.5 years older in age.

The group with diabetes at baseline had a significantly higher rate of stroke identified during follow-up (13.5%, vs 9% among those without diabetes). The rate of hypertension was also higher (55% vs 42%). The rate of post-baseline heart disease did not differ between the 2 groups. However, when incident stroke was incorporated into the model, the risk for participants with diabetes spiked in effect to that of suddenly being 20 years older.

The researchers also commented on the "interactive effects of risk factors" on cognitive decline. Individuals with both diabetes and cerebrovascular disease were at a greater risk for cognitive decline, compared with participants with diabetes alone.

"Survivor bias" (a potentially skewing factor in longitudinal studies) may have led to an underestimation of the degree of cognitive decline and the effect of its determinants over the 15-year follow-up, the researchers say. The participants who finished the study could be the healthier subset or the

ones less susceptible to the adverse effects of present risk factors. The researchers used mixed-effects models to adjust, as best they could, for participants who died with greater disease and cognitive impairment.

Their results, the researchers conclude, emphasize the need for stroke prevention strategies in patients with diabetes.

Source: *Alzheimers Dement.* 2011;7(4):418-424.

WOMEN'S HEALTH

Missing Out on Cervical Cancer Screening

Half of the women with cervical cancer treated at Radboud University Nijmegen Medical Center in The Netherlands between 1991 and 2008 were never screened—despite a nationwide screening program—because they were outside the age range or did not attend screenings to which they were invited.

The screening program was introduced in 1988, and women between the ages of 35 and 53 years were invited for a cervical smear every 3 years. In 1996, the program was reorganized to improve effectiveness and efficiency, extending the age range to 30 to 60 years, and the screening interval from 3 to 5 years.

Between 1990 and 2006, the incidence and mortality rate for cervical cancer in The Netherlands dropped by 28% and 42%, respectively. However, 600 to 700 women are still diagnosed with cervical cancer in The Netherlands every year.

To determine how many women with cervical cancer in the Nijmegen region had been screened according to national guidelines and, if properly screened, why screening did not prevent these cases, researchers at the medical center analyzed the cytological and histological results of 401 women treated for invasive cervical cancer. They reviewed 98 normal smears as well. Women were scored as regularly screened, irregularly screened, or never screened.

Of the 401 women, 269 (67%) had received at least 1 invitation to the national screening program. However, 33% of the women with cancer were outside the target age range of the screening program: 45 (11%) women were too young, and 87 (22%) were too old. Moreover, 17% within the target age range never responded to any of the invitations. Therefore, half of the women were never screened before the diagnosis of cancer. An additional 9% were diagnosed after responding to the invitation of their first screening round. Another 17% were screened at least once, but had had their last smear longer than 5 years before the diagnosis.

Another issue raised in the study was that of smear interpretation errors. Cytological smears have been associated with a significant rate of sampling and/or interpretation errors. These researchers found 21% of the women with cancer had 1 or more smears designated "within normal limits (WNL)" within 5 years preceding the diagnosis. When reviewed for this study, 38% indicated interpretation errors, and another 39% were confirmed WNL but suggestive of sampling error or rapidly progressive cancer. Remarkably, the researchers add, one-fourth of the reviewed smears were unsatisfactory for evaluation.

Underscreening is the most important modifiable risk factor for cervical cancer, the researchers point out. Obviously, broadening the target age range is a possible solution. The researchers note that the age range for the Dutch screening program is limited when compared to those of other countries, which often start screening at 20 years and continue until 65 years.

But, deciding whom to send invitations to isn't the only problem—it's whether the woman will respond to the invitation. Although the screening program had 5-year invitations, 25% of the invited patients never responded to any before cervical cancer was diagnosed. Another 35% responded to at least 1 of the invitations, but not to all of them, or not in time. That means a major factor is nonattendance, which has been reported previously as being due to fear, embarrassment, a male doctor, and a too-busy schedule.

One way to counter these drawbacks, the researchers suggest, is to offer cervicovaginal self-samples, which are reportedly as reliable as physician-taken samples. Self-sampling "performed in the privacy of women's own homes might provide a better attendance than screening by samples taken by a physician or other health care providers," report the researchers.

Source: *Am J Obstet Gynecol.* 2011;205:64.e1-e7. doi:10.1016/j.ajog.2011.02.046.

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