

ASSOCIATION OF ALCOHOL INTAKE WITH INCIDENCE OF UTERINE FIBROIDS

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Objective: We examined the effect of alcohol consumption on incidence and progression of uterine fibroids.

Methods: The study population consisted of 1,324 black or white women from the NIEHS Uterine Fibroid Study. Participants were randomly selected 35-49 year-old members of an urban health plan. Assessment of uterine fibroids was primarily through transvaginal ultrasounds while accounting for prior diagnosis. The Bayesian method involves use of a stochastic model to represent tumor incidence, followed by growth. Each woman's contribution to the likelihood function depends on age at any prior diagnosis, size of largest fibroid, and age at study enrollment, with postmenopausal women censored at age of menopause. Self-report of alcohol intake at age 30 and at time of study interview provided exposure data. Specification of the prior assumed no alcohol association. A Markov chain Monte Carlo algorithm was used for posterior computation separately by race. Estimated effects of alcohol are reported separately for tumor incidence and tumor growth, adjusting for vigorous exercise, age at menarche, parity, and BMI.

Results: Among white women, decisive evidence supported a relationship of increasing number of drinks weekly with increasing incidence of uterine fibroids (Bayes factor=95.1) while minimal evidence existed for an increase in tumor growth (Bayes factor=1.4). An increase in incidence occurred for those reporting even 0.5-2 drinks/wk. For black women, there was also strong evidence of increasing number of drinks weekly with increasing incidence of uterine fibroids (Bayes factor=74.8) and little evidence for an increase in tumor growth (Bayes factor=2.9). However, unlike for white women, incidence increased primarily among those reporting 7 or more drinks/wk, rather than for low intake.

Conclusions: This study suggests the involvement of alcohol intake in the onset rather than progression of uterine fibroids.