

# ALCOHOL CONSUMPTION AND THE RISK OF NEW-ONSET UTERINE LEIOMYOMA: A NATIONWIDE POPULATION BASED STUDY IN 2.5 MILLION 20-40 YEARS OLD WOMEN

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## Abstract Body

**Importance:** Uterine leiomyomas (UL) are the most common benign tumors in women of childbearing age. Studies on the effect of drinking on the incidence of this tumor are lacking.

**Objective:** We investigated the effects of alcohol consumption on the risk of new onset UL in reproductive age Korean women.

**Design, Setting, and Participants:** This retrospective nationwide population-based cohort study used data from Korean National Health Insurance Service database. Participants comprised 2,512,384 asymptomatic Korean women aged 20-40 years who underwent a national health check-up during 2009–2012. The follow-up period was from the date of first national health check-up to the date of diagnosis of new-onset UL or December 2018 if no UL was detected. Patients were excluded if they had already been diagnosed with UL during the screening period (January 2002 to December 2008) or diagnosed with UL within 1 year of the baseline examination

**Exposure:** Alcohol drinking during the past year of the examination: (i) number of days per week in a given person drinks and (ii) amount of standard drinks (cups) per each drinking session.

**Main Outcome and Measures:**

The influence of alcohol consumption habit, drinking amount per drinking session and the persistence of the drinking habit overtime on the risk of new-onset UL were studied.

**Results:** About 6.1 % of women aged 20-40 years were diagnosed with UL after an average of 7.1 years. Alcohol consumption increases the incidence of new onset UL by 12.3%–16.1%. Drinking more than just one day per week was associated with increased risk of UL and the risk increases in proportion to the amount of alcohol consumed at one drinking session. When re-evaluated after 2 years, the risk of new-onset UL increased by 19.5% in women who were sustained drinkers compared to women who were sustained non-drinkers. In women who changed to non-drinkers, the risk was only 3.4%, whereas in women who changed to drinkers, the risk was observed to be 13.5%.

**Conclusion and Relevance:** The drinking habit, the amount of alcohol consumed at each drinking session, and the persistence of the drinking habit were significant risk factors for new-onset UL in reproductive aged women. Avoiding the habit of drinking and abandoning it would contribute to lower the risk of new-onset UL.