OBJECTIVE: Although low sun exposure, low vitamin D, and smoking are established risk factors of multiple sclerosis (MS), there is less evidence on the role of the other lifestyle factors. We examined the association of sun exposure, physical activity, drug abuse, and alcohol intake with MS.

MATERIALS AND METHODS: This was a population-based incident case-control study in Iran with 547 incident cases and 1057 general population controls (7/8/2013-17/2/2015). Logistic regression was used to analyse the data.

RESULTS: Higher sun exposure during adolescence was associated with a reduced risk of MS, both in summer (test for trend p < 0.001) and winter (P < 0.001), while physical activity was not associated with MS (test for trend p = 0.712). Lifetime drug abuse (OR for ever use 2.93 (1.83-4.70)), with a dose-response association (test for trend p < 0.001), and alcohol intake (OR for ever use 1.49 (1.05-2.12)) was significantly associated with an increased risk of MS.

CONCLUSION: In a middle-eastern setting, we found that sun exposure during adolescence, drug abuse, and alcohol use were all associated with MS. Increasing sun exposure and reducing drug abuse and the use of alcohol through educational programs is likely to reduce the rate of MS.

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KEYWORDS: Alcohol; Case-control; Drug abuse; Lifestyle factors; Multiple Sclerosis; Physical activity; Sun exposure

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