

In Reducing Erectile Dysfunction Risk New Research Highlights Role of Dietary Antioxidants

Study assesses the association between erectile dysfunction (ED) and the [Compound Dietary Antioxidant Index](#) (CDAI) through the use of data obtained from the National Health and Nutrition Examination Survey (NHANES).



Study

Data for the current [study](#) were obtained between 2001 and 2004, as the NHANES data on the erectile function questionnaire only existed during these years. A total of 3,665 men 20 years and older were included in the study cohort.

Individuals with a prostate [cancer diagnosis](#) and those lacking data on dietary antioxidants, body mass index (BMI), smoking or alcohol use, marital status, level of education, cardiovascular disease, recreational activity, and hypertension were excluded from the study.

The primary exposure variable was CDAI. Only food sources of daily intake were considered to estimate dietary [antioxidants](#), whereas medications and dietary supplements were not included. A direct question from the Massachusetts Male Aging Study (MMAS) was used to determine ED, which is the key outcome variable.

Results

The prevalence of ED in the study cohort was about 27%. As compared to individuals without ED, the CDAI was significantly reduced in ED patients. ED patients also reported a lower total [daily energy](#) intake as compared to those without ED.

Men with ED were typically in a marriage or cohabitating, older, had greater BMI values, possessed a higher level of education, engaged in less physical activity, and consumed alcohol. ED patients were also more likely to be diagnosed with hypertension, diabetes, cardiovascular disease (CVD), and [hypercholesterolemia](#).

Weighted multivariate logistic [regression analysis](#) was conducted to assess the relationship between CDAI and ED. To this end, a reduced risk of ED was associated with higher CDAI scores. This statistically significant result was robust across multiple estimated models, even after adjusting for all covariates.

Across all models, individuals in the [highest tertile](#) of CDAI were associated with a significantly lower risk of ED as compared to those in the lowest tertile.

The dose-dependent relationship between CDAI and ED was examined using [restricted cubic splines](#) (RCS). Herein, a non-linear and negative association was observed, in which the risk of ED declined sharply with initial increases in CDAI scores until ultimately reaching a plateau.

Subgroup analyses were conducted to assess heterogeneity across individuals. The association between CDAI score and ED risk was not significantly different across subgroups after controlling for BMI, smoking status, age, race, hypercholesterolemia, [hypertension](#), diabetes, CVD, drinking status, and recreational activity.

A sensitivity analysis was conducted by excluding 320 participants who were prescribed sex hormones, [antipsychotics](#), antidepressants, phosphodiesterase-5 (PDE5) inhibitors, and steroids in the past 30 days. A negative association between ED and CDAI was observed after controlling for these covariates, with the risk of ED remaining significantly reduced in the highest tertile of CDAI as compared to the lowest tertile.

Conclusion

The study findings suggest that high levels of CDAI have the potential to [reduce ED risk](#); however, extensive and prospective cohort studies should be conducted to further validate these observations.

A key limitation of the current study is its cross-sectional design, which precludes causal analysis. The precision of the diagnosis could also be compromised due to the reliance of self-reported data from [a single questionnaire](#).

Additionally, the researchers also did not measure [oxidative stress](#) in the study participants. It is also difficult to ensure that these associations remain relevant for modern ED patients, as data from the current study were obtained between 2001 and 2004.

Source:

<https://www.news-medical.net/news/20240916/New-research-highlights-role-of-dietary-antioxidants-in-reducing-erectile-dysfunction-risk.aspx>