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# Research Week 2024

## Ehlers Danlos Syndrome and Sleep Disorder Prevalence

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### Keywords

Sleep disorders, Ehlers Danlos Syndrome, EDS, Beighton score, polysomnography, somnolence, fatigue, sleep, sleep apnea

### Abstract

#### Background

Patients with Ehlers Danlos Syndrome (EDS) report excess daytime somnolence worsening their quality of life<sup>1,3</sup>. Sleep apnea is prevalent in adults with EDS, but other sleep disorder rates have never been characterized<sup>2</sup>. This retrospective case control study examined OHSU patients aged 18-80 seen between 2014-2024 at OHSU to assess the comparative rates of sleep disorders between EDS and age/sex-matched controls.

#### Methods

With the Cohort Discovery tool, ICD-10 diagnostic codes queried EPIC EMR for EDS and for sleep disorders. 5997 patients with EDS and proxy conditions and 5996 controls were used for analysis in three age brackets: 18-30 (N=1432), 31-50 (N=2632), and 50+ (N=1933) years old. When pooled, case and control groups were 83% female and 81% Caucasian. Odds ratios with 95% confidence intervals were calculated in Excel.

#### Results

Across groups, EDS patients displayed similar rates of sleep apnea compared to controls (OR=0.98; 95% CI 0.87-1.11). The odds of having diagnoses of hypersomnia (OR=2.88; 95% CI 2.22, 3.73), narcolepsy (OR=3.49; 95% CI 1.96, 6.2), a circadian rhythm disorder (OR=1.69; 95% CI 1.23, 2.34), and a general sleep disorder (OR=1.73; 95% CI 1.43, 2.08) were significantly increased in the pooled-age EDS group compared to the pooled-age control group. Similar trends were seen across age groups, with other results most significant from ages 31-50.

## Discussion

EDS patients seen at OHSU in the past ten years demonstrated increased odds of having co-occurring sleep diagnoses compared to matched controls. This pattern does not hold for sleep apnea, unlike in previous literature, which may reflect a difference between the OHSU population and that seen in studies with a specialty-restricted practice or with a less female-heavy demographic. This newly characterized sleep disorder burden in adults with EDS likely impacts quality of life. EDS patients suffering daytime fatigue could therefore benefit from early screening for sleep disorders.

## References

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