

# Fiber Intake and Sleep Duration Among College Students

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## Introduction

- Fiber positively impacts numerous areas of our health and sleep patterns.<sup>1</sup>
- It is recommended for young adults to sleep between 7-9 hours per day for optimal health.<sup>2</sup>
- College students not getting enough sleep or fiber are at greater risk for mental health problems and chronic disease both now and in the future.<sup>1</sup>

## Objective

How does consuming recommended amounts of fiber affect sleep duration in college students?

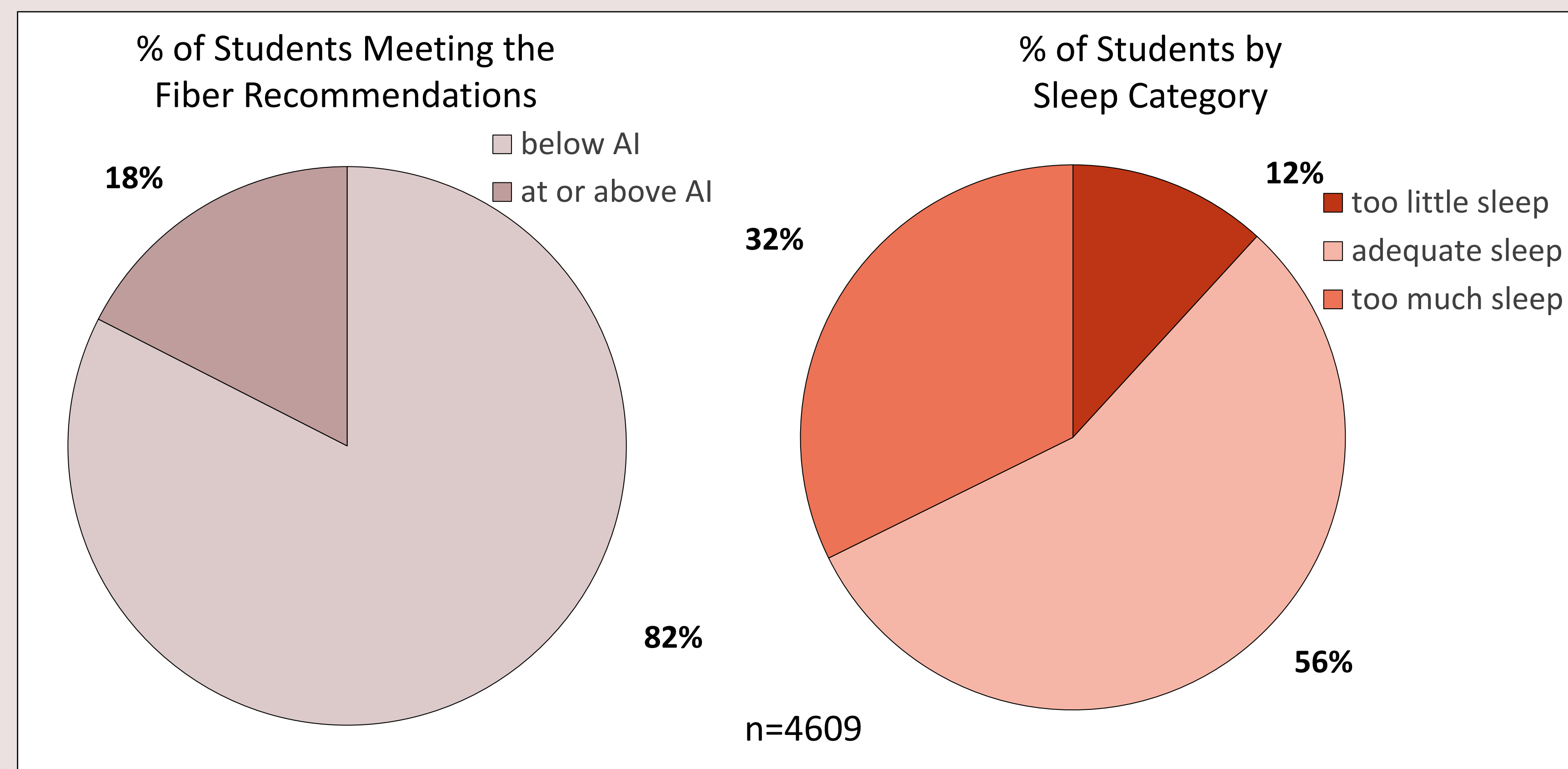
## Participants and Methods

- Students enrolled in a large, introductory nutrition course were recruited between 2005-2022 and provided consent for this ongoing cross-sectional study (n=4609) (UNH IRB #5524).<sup>3</sup>
- Fiber intake was measured using 3-day food logs and analyzed via a diet analysis software (Diet & Wellness Plus+).<sup>4</sup> Participants were divided into groups on whether they met the adequate intake (AI) of fiber (>38g for men, >25g for women).
- An online survey (Qualtrics) collected participants' bed and wake times which were used to calculate duration of sleep (hrs/day) and categorized into 3 groups (< 7 hrs,  $\geq$  7 hrs and  $\leq$  9 hrs, and > 9 hrs/day).
- Differences in sleep duration were compared with the fiber groups via chi-square (SPSS, version 28).

## Key Findings

- Most (82%) of participants that did not meet the recommendation for fiber.
- About 12% reported sleeping <7 hrs/day, 56% slept between 7-9 hrs/day, and 32% slept > 9 hrs/day.

## Results



## Participant Characteristics

Characteristic	Description	n(%)	Characteristic	Description	Mean $\pm$ SD	
Gender	Male	1541(33.3)	Age	Years	18.8 $\pm$ 1.1	
	Female	3068(66.6)				
Class Ranking	First Year	2456(53.3)	Fiber	Total (g)	20.4 $\pm$ 9.5	
	Sophomore	1474(31.9)		Fiber Rich Foods	Grains (oz)	6.3 $\pm$ 3.0
	Junior	432(9.4)			Fruit (c)	1.2 $\pm$ 1.0
	Senior	219(4.8)			Vegetables (c)	1.8 $\pm$ 1.25
	Other	31(0.7)		Sleep Duration	hr:min/day	8:10 $\pm$ 1:15

## Conclusion

Students sleeping 7-9 hrs/day had a similar percentage (18.6%) of total fiber consumption compared to students to their peers sleeping <7 hr/day (15.5%) and >9 hr/day (16.1%). More research is needed to find an association between fiber intake and duration of sleep.

## Relevance

- Most (82%) of participants were not eating enough fiber to reach the recommendation for fiber.
- Less than half (44%) the participants failed to get sufficient amounts sleep.
- Data suggest many students could improve dietary and sleep habits to support long-term health.

## Acknowledgements

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## References

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