

LETTERS TO THE EDITOR

Health advisory: melatonin use in children

Muhammad Adeel Rishi, MD¹; Seema Khosla, MD²; Shannon S. Sullivan, MD³; for the Public Safety and the Public Awareness Advisory Committees of the American Academy of Sleep Medicine

¹Indiana University School of Medicine, Indianapolis, Indiana; ²North Dakota Center for Sleep, Fargo, North Dakota; ³Division of Pulmonary, Asthma, and Sleep Medicine, Department of Pediatrics, Stanford University School of Medicine, Palo Alto, California

Among US adults and children, melatonin supplement consumption significantly increased from 1999 to 2020.^{1,2} The growing use of melatonin in children has occurred despite incomplete safety and efficacy data, reports demonstrating inconsistent dose labeling, and an increase in accidental pediatric melatonin ingestions.^{2,3}

While the perception may be that melatonin is natural and therefore safe, a recent analysis published in *Morbidity and Mortality Weekly Report* indicates that the annual pediatric ingestions of melatonin have risen from 8,000 in 2012 to more than 52,000 in 2021, and 15% of children with overdoses were hospitalized.²

Adding to the misperception of safety, melatonin is marketed as a dietary supplement, with reduced regulatory oversight compared with pharmaceuticals.⁴ Variation in melatonin content is reported to be –83% to +478% of labeled content,⁵ with the most variability found in chewable tablets, such as those in pediatric formulations. Additionally, these supplements may be candy-like and colorful, appealing to children in particular. Melatonin is also relatively inexpensive and widely available, from grocery stores to warehouse stores where it may be sold in large quantities.

With this background, the Public Safety Committee and Public Awareness Advisory Committee of the American Academy of Sleep Medicine developed a health advisory addressing the use of melatonin in children.⁶ The Academy advises that melatonin should be handled as any other medication and kept out of reach of children, and importantly, before starting melatonin or any supplement for their children, that parents discuss this with a pediatric health care professional to assess whether behavioral strategies may be more appropriate. Finally, if melatonin is used, a practical suggestion is to look for products with the US Pharmacopeia verified (USP verified) mark, which indicates that product was produced in a facility following Good Manufacturing Practice (GMP) standards.

As the use and misuse of melatonin increases, it is important to emphasize that nonpharmacologic management techniques have been well studied and are considered safe and effective for pediatric insomnia.⁷ We also call for ongoing public and provider education about the appropriate role for melatonin use, and we encourage health care providers to engage with their patients about usage of melatonin.

CITATION

Rishi MA, Khosla S, Sullivan SS; Public Safety and the Public Awareness Advisory Committees of the American Academy of Sleep Medicine. Health advisory: melatonin use in children. *J Clin Sleep Med*. 2023;19(2):415.

REFERENCES

1. Li J, Somers VK, Xu H, Lopez-Jimenez F, Covassin N. Trends in use of melatonin supplements among US adults, 1999–2018. *JAMA*. 2022;327(5):483–485.
2. Lelak K, Vohra V, Neuman MI, Toce MS, Sethuraman U. Pediatric melatonin ingestions—United States, 2012–2021. *MMWR Morb Mortal Wkly Rep*. 2022; 71(22):725–729.
3. Lelak KA, Vohra V, Neuman MI, Farooqi A, Toce MS, Sethuraman U. COVID-19 and pediatric ingestions. *Pediatrics*. 2021;148(1):e2021051001.
4. Grigg-Damberger MM, Ianakieva D. Poor quality control of over-the-counter melatonin: what they say is often not what you get. *J Clin Sleep Med*. 2017;13(2): 163–165.
5. Erland LA, Saxena PK. Melatonin natural health products and supplements: presence of serotonin and significant variability of melatonin content. *J Clin Sleep Med*. 2017;13(2):275–281.
6. American Academy of Sleep Medicine. Health Advisory: Melatonin Use in Children and Adolescents. Adopted September 9, 2022. <https://aasm.org/advocacy/position-statements/melatonin-use-in-children-and-adolescents-health-advisory/>. Accessed September 20, 2022.
7. Mindell JA, Emslie G, Blumer J, et al. Pharmacologic management of insomnia in children and adolescents: consensus statement. *Pediatrics*. 2006;117(6):e1223–e1232.

SUBMISSION & CORRESPONDENCE INFORMATION

Submitted for publication September 22, 2022

Submitted in final revised form September 30, 2022

Accepted for publication October 3, 2022

Address correspondence to: Muhammad Adeel Rishi, MD, Indiana University School of Medicine, 340 W. 10th St, Indianapolis, IN 46077; Email: mrishi@iu.edu

DISCLOSURE STATEMENT

All authors have seen and approved this manuscript. The authors report no conflicts of interest.