Newer Poxvirus Vaccine Is Recommended

As monkeypox cases increased in the US and abroad, a report from the CDC’s Advisory Committee on Immunization Practices (ACIP) outlined data supporting the November 2021 decision to recommend JYNNEOS, a newer vaccine against monkeypox and smallpox, for individuals at risk of occupational exposure.

The World Health Organization declared smallpox eradicated in 1980 and ended routine smallpox vaccinations globally. But the ACIP continued to recommend vaccination and regular boosters for researchers working with poxviruses in the laboratory, individuals administering smallpox vaccinations, clinicians treating infected individuals, and first responders in the event of a smallpox outbreak.

Last November, the ACIP recommended a new vaccinia virus vaccine called JYNNEOS as an alternative to the smallpox vaccine ACAM2000 for primary vaccination and 2-year boosters among individuals at risk of occupational exposure to orthopoxviruses. The virus used in the JYNNEOS vaccine can’t replicate or spread to others, according to the new report. The vaccine also has fewer contraindications and, unlike the percutaneous ACAM2000, is administered subcutaneously.

The ACIP had recommended the ACAM2000 vaccine with 3-year boosters for occupational preexposure prophylaxis since 2015. However, the vaccine contains live vaccinia virus that can replicate and cause infections in vaccinated individuals or transmit to others, and it requires precautions to prevent such spread. It’s contraindicated in people with certain exfoliative skin conditions such as eczema, immunocompromised individuals, and pregnant and breastfeeding individuals. It’s also not recommended for people with heart disease because of a risk of myocarditis.

Young Children Increasingly Ingest Melatonin, With Serious Outcomes

Growing melatonin use may have contributed to a 530% increase in annual pediatric melatonin ingestions—from 8337 in 2012 to 52,563 in 2021—reported to the American Association of Poison Control Centers’ National Poison Data System, according to a CDC report.

About 1.6%, or 4555, pediatric ingestions over the past decade had serious outcomes. Two children younger than 2 years died at home and 5 required mechanical ventilation. Of 27,795 children who were treated at a health care facility, 4097 required hospitalization and 287 were admitted to intensive care units.

A nearly 40% increase in pediatric melatonin exposures occurred between 2019 and 2020, and in 2021 melatonin was the most frequently reported substance involved in pediatric substance ingestions. The authors attributed this spike to more children and adolescents at home during school closures and stay-at-home orders or greater use of melatonin because of increased sleep disturbance during the pandemic. Adult melatonin use increased well before then, researchers reported this past February in JAMA.

Variable melatonin dosages in over-the-counter (OTC) products may contribute to serious outcomes, the CDC report authors noted. For example, a study of OTC melatonin supplements sold in Ontario, Canada, found that the melatonin content was as much as 478% higher than the label indicated in some products and could fluctuate substantially among lots. Eight of 31 products tested also contained serotonin, a product of melatonin breakdown, at potentially clinically significant doses.

Melatonin supplements are available as tablets, capsules, liquid formulations, and gummies. “Health care providers should advise parents regarding the safe storage and appropriate use of melatonin,” the CDC authors wrote. — Bridget M. Kuehn, MSJ

Note: Source references are available through embedded hyperlinks in the article text online.