Lawn Mower-Related Injuries to Children

**ABSTRACT.** Lawn mower-related injuries to children are relatively common and can result in severe injury or death. Many amputations during childhood are caused by power mowers. Pediatricians have an important role as advocates and educators to promote the prevention of these injuries.

**BACKGROUND**

Each year in the United States, approximately 9400 children younger than 18 years receive emergency care for lawn mower-related injuries. Although most of these injuries occur to older children and adolescents, about one fourth are to children younger than 5 years. Males account for approximately three fourths of these injuries. Ride-on mowers and other power mowers account for 21% and 23% of pediatric mower-related injuries, respectively.1 More than 7% of pediatric mower-related injuries require hospitalization, which is approximately twice the hospitalization rate for consumer product-related injuries overall. Amputations and avulsions account for 7% of pediatric mower-related injuries.1 Power lawn mowers caused 22% of the amputation injuries among children admitted to one regional level 1 trauma center.2 Additional details regarding pediatric lawn mower-related injuries are available in the technical report available online.3

**PREVENTION OF INJURY**

Prevention of lawn mower-related injuries can be achieved by 1) design changes of lawn mowers to enhance safety, 2) appropriate age and maturity guidelines for mower operation, and 3) education of parents, other child caregivers, and children regarding the hazards associated with lawn mowers. Details are included in the technical report available online.3

**Age and Maturity Guidelines for Lawn Mower Operation**

No age-specific criteria for use of lawn mowers have been established by the industry or government. However, children should not operate lawn mowers until they have displayed appropriate levels of judgment, strength, coordination, and maturity necessary for their safe operation. They should also receive a period of operational training, safety instruction, and supervision by an adult before they are allowed to operate a mower by themselves. Because of the complexities involved in safe operation, a prudent guideline for the minimum age for operation of lawn mowers by children is at least 16 years for ride-on mowers and at least 12 years for walk-behind power mowers and hand mowers.

A patient safety sheet for distribution to families is available online.

**RECOMMENDATIONS**

1. Young children must not be allowed to play in or be adjacent to areas where lawn mowers are being used. Children younger than 6 years should be kept indoors during mowing.
2. Children must not be allowed to ride as passengers on mowers or to be towed behind mowers in carts or trailers. They should not be permitted to play on or around the mower when it is in use or in storage.
3. Children should not operate lawn mowers until they have displayed the necessary levels of judgment, strength, coordination, and maturity. They should also be educated in mower operation and safety and be supervised by an adult before they are allowed to operate a mower by themselves. Most children will not be ready to operate a walk-behind power mower or hand mower until at least 12 years of age or a ride-on mower until at least 16 years of age.
4. Additional research regarding the circumstances and contributing factors of lawn mower-related injuries is needed, especially injuries involving mower instability or situations in which a person has been run over or backed over.
5. Strengthening of the voluntary standard of the American National Standards Institute and Outdoor Power Equipment Institute (ANSI/OPEI B71.1) is needed, for example, by requiring manufacturers to design ride-on lawn mowers that will not mow in reverse, with a manual override option. If adequate levels of safety cannot be achieved voluntarily, a mandatory federal safety standard may be necessary.
6. Designs for mower controls should continue to be improved for ease of operation and to minimize inadvertent control contact and unintended operation.

The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

Online version of this article contains a PDF of "Parent Pages," which can be used as a handout for patient education.

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7. Evaluation is needed of the effectiveness of education programs and curricula for lawn mower operators, as well as the effectiveness of public awareness and education initiatives regarding lawn mower safety.

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