

## Department of Surgery - 2026 Research Day

### Title:

How Quickly Things Turn: Two Decades of Pediatric Emergency Department Encounters with Blender-Associated Injuries (2005-2024)

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### Background:

Blenders are ubiquitous household appliances, ~~but yet~~ their exposed, high-speed blades pose a ~~significant serious~~-hazard to children. ~~Resulting injuries frequently involve deep lacerations, tendon damage, or amputations with long-term consequences.~~ This study ~~characterizes aims to~~ characterize pediatric blender-related injuries in the United States using ~~the National Electronic Injury Surveillance System (NEISS)-a national database.~~

### Methods:

~~NEISS-The National Electronic Injury Surveillance System (NEISS)~~ is a stratified probability sample of U.S. hospitals with emergency departments, ~~with including~~ a dedicated pediatric stratum. ~~Reported product-associated cases injury reports~~ are used to generate weighted national estimates. We queried the NEISS ~~from 2005 to -2024 for patients aged 0-17 years with injuries associated with(2005-2024) for patients aged 0-17 years with injuries linked to~~ blenders (~~code product code~~ 215) or food processors (~~product code~~ 275). Exclusion criteria included patients  $\geq 18$  years ~~of age~~, unrelated product codes, and incomplete records.

### Results:

From 2005 to 2024, there were 1,104 reported ~~pediatric cases of-involving~~ blender (n=838) and food processor (n=266) ~~injuries~~. Lacerations accounted for ~~the majority of injuries~~ (85.2%\_(n = 941). Other ~~common~~-diagnoses included fractures (n = 27), amputations (n = 26), contusions/abrasions (n = 25), internal organ injuries (n = 20), and scald burns (n = 15). Most patients were treated and released (n = 1,066). Twenty were admitted, ~~six-six~~ transferred, ~~14~~ ~~eleven~~ left against medical advice, and ~~one-one~~ was observed. Scald burns accounted for 50% of transfers, while among admissions, lacerations represented 45% and amputations 30%. Injuries occurred more ~~commonly~~ in males, with sex distribution varying by age and diagnosis. Children ages 0–4 years sustained the highest proportion ~~of injuries~~ (67.9% male). Age distribution was bimodal, ~~peaking with peaks~~ at 0–24 months and again at 12–13 years.

### Conclusions:

Pediatric blender-related injuries are frequent and ~~often severe can be severe~~. ~~Lacerations-While~~ lacerations are ~~the most common injury, but~~ amputations and burns disproportionately contribute to admissions and ~~interfacility~~ transfers. Young children ~~are at greatest risk~~ represent

Commented [GKW1]: I didn't notice this issue previously - is it the heat build up?

| the highest-risk group, with a secondary peak in early adolescence. ~~Public~~Increased public awareness, improved supervision, and enhanced device safety features may help reduce these preventable injuries.