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## RSNA Press Release

### Diagnostic Images Show Go-Carts Cause Serious Injuries to Children

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CHICAGO - Researchers have used diagnostic images to conduct a study of go-cart injuries in children and the results are concerning, according to findings presented today at the annual meeting of the Radiological Society of North America (RSNA).

"We found skull and facial fractures, scalp detachment, brain injury, fractures to the upper and lower extremities and burns," said study co-author Annemarie Relyea-Chew, J.D., M.S., research scientist at the University of Washington in Seattle.

According to a 1998 report released by the Consumer Product Safety Commission, from 1985 through 1996 hospital emergency rooms treated an average of 10,500 go-cart injuries per year in the United States. Children under 15 years old accounted for 65 percent of those injuries. While safety restrictions have tightened on go-cart tracks as a result of lawsuits, privately owned go-carts intended for off-road use remain largely unregulated.

"People need to be aware that go-cart injuries in children can be serious and even life-threatening," said co-author Felix S. Chew, M.D., a professor of radiology at the University of Washington.

The researchers studied the diagnostic images and medical records of 18 boys and girls admitted to Wake Forest Baptist Medical Center in Winston-Salem, N.C., for injuries caused by private-use go-carts. The average age of the children was 10.3 years.

Twenty-two percent of the children were admitted for head injuries, 17 percent had extreme injuries to the face and neck, 28 percent had injuries to the torso, 28 percent had injuries to the upper extremities, and 39 percent had injuries to the lower extremities.

Of the 14 patients whose helmet status was documented, 71 percent were not wearing helmets. Four of the children not wearing helmets sustained closed head injuries.

#### At A Glance

- Go-carts can cause serious injuries, including fractures, brain injuries and burns.
- Children under 15 account for 65 percent of go-cart injuries.
- The primary cause of go-cart injuries among children is loss of vehicle control resulting in collision or ejection from the go-cart.

Half of the children required surgery. Twenty-eight percent required two or more surgeries. Hospital stays averaged approximately five days at an average charge of \$18,882 per patient.

"Go-carts are dangerous when youngsters who lack size, strength, experience or maturity are permitted to use these vehicles without adult supervision and safety equipment," Relyea-Chew said.

The primary cause of go-cart injuries among children is loss of control resulting in collisions with moving or stationary objects or ejection from the vehicle, according to Relyea-Chew. In addition, many of the go-carts don't offer suitable protection, such as seat belts. Some contain parts that can break off in a collision, exposed gears that can ensnare long hair, and oil and gasoline tanks that can cause burns.

"Get the facts about the dangers associated with go-cart use by children," she said. "If you then permit your child to use a go-cart, check for recall notices and follow manufacturers' recommendations for usage, age and size appropriateness. Use safety equipment—particularly full-face helmets, and *never* leave the child unsupervised. Go-carts are not toys."

Other co-authors are David Cline, M.D., and Marta Heilbrun, M.D.

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RSNA is an association of more than 38,000 radiologists, radiation oncologists, medical physicists and related scientists committed to promoting excellence in radiology through education and by fostering research, with the ultimate goal of improving patient care. The Society is based in Oak Brook, Ill.

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**Abstract:**

• [Radiology of Go-Cart Injuries in Children](#)