

Airbag Safety

# Demonstrates Why Safety Restraints Work

Supplies: 4-6 raw eggs; 1 bed sheet (fitted sheets work best); a parachute for the egg; cotton or bubble wrap; starting the demonstration with a plastic egg to initiate the discussion will help prevent a “big mess”; consider doing this activity outside.

Instructions:

Demonstrate the following.

**Part 1** Have four students hold the corners of the sheet out horizontally to the ground. Take aim, wind up, and pitch the egg onto the sheet. Experiment with different speeds

**Part 2** Ask students to answer the following questions:

* How far away can you throw the egg without breaking it?
* How fast can you throw the egg without breaking it?
* What happens to the egg’s momentum as it approaches the sheet?
* What happens if you dropped the egg on a concrete floor?
* Would a parachute attached to the egg provide enough cushion to keep it from breaking?
* How high could you drop an egg attached to a parachute?
* How could you cushion the egg to prevent injury?

**Part 3** Demonstrate with the parachute, did this prevent injury?

**Part 4** Demonstrate with the egg wrapped in bubble wrap, cotton, etc. Did this prevent injury?

Relate the experiment to occupant protection devices in the vehicle.

# Demonstrates Why Safety Restraints Work

Supplies: Soap box car; 2-3 raw eggs (Eggbert); egg carton section or roll of cardboard; rubberband; cotton balls or bubble wrap; cinder block; ramp. Giving Eggbert a name makes this more fun.

Instructions:

**Part 1**

Attach part of an egg carton to the top of the car. Eggbert’s seat.

 Attach the rubberband to secure Eggbert.

Place cotton ball or bubble wrap over Eggbert’s face

Roll the car into the cinder block and see if Eggbert survives.

**Part 2**

Eggbert now has a car without airbags. Remove the cotton balls or bubble wrap and watch when Eggbert crashes into the cinder block again. He is still seatbelted.

**Part 3**

Eggbert is in a hurry. He forgets his seatbelt and has no airbags in his car. In his rush, he crashes into the cinder block again.

What happens to Eggbert?