

PUZZLER#

Airbags have saved countless lives by reducing the forces exerted on vehicle occupants during collisions. How can airbags change the force needed to bring a person from a high speed to a complete stop? Why are they usually safer than seat belts alone? (Courtesy of Saab)

chapte

Linear Momentum and Collisions



Chapter Outline

- **9.1** Linear Momentum and Its Conservation
- 9.2 Impulse and Momentum
- 9.3 Collisions
- **9.4** Elastic and Inelastic Collisions in One Dimension
- 9.5 Two-Dimensional Collisions
- 9.6 The Center of Mass
- 9.7 Motion of a System of Particles
- 9.8 (Optional) Rocket Propulsion