Course ID: SCI101 **Course Name:** General Physics **Test Name:** Newton's Laws in Motion
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Newton's Laws of Motion explain how objects behave when forces act upon them. When a vehicle suddenly stops, several forces influence the passenger inside.

Newton's First Law (Inertia):
This law states that an object in motion stays in motion unless acted upon by an external force. In a moving car, a passenger moves at the same speed as the car. When the car stops suddenly, the passenger continues moving forward unless restrained by a seatbelt.

Newton's Second Law (Force and Acceleration):
This law states that force equals mass times acceleration (F=maF = maF=ma). When the car decelerates rapidly, the force exerted on the passenger depends on their mass and the rate of deceleration.

Newton's Third Law (Action-Reaction):
When the passenger's body moves forward, the seatbelt applies an equal and opposite force, preventing them from being thrown forward.

In conclusion, Newton's Laws explain why wearing seatbelts is crucial. They prevent injuries by counteracting inertia and controlling the forces acting on passengers.