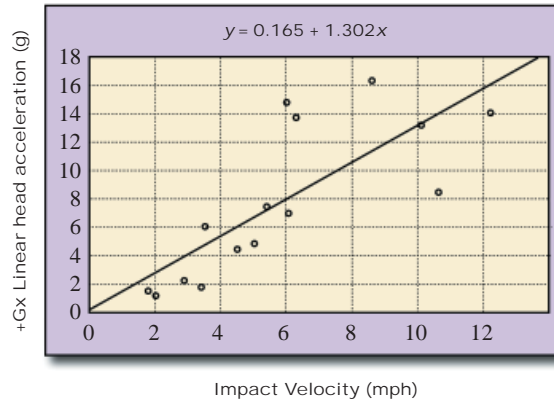


Facts About Whiplash Injuries

Common myths:

- Low speed rear impact crashes (LOSRIIC) don't cause injuries.
- Injuries heal in 6-12 weeks.
- Litigation has an effect on the patient's recovery.
- The patient's pre-injury psychological makeup affects recovery.
- Greater vehicle damage=greater occupant injury.
- Accident reconstructionists can predict injury potential.

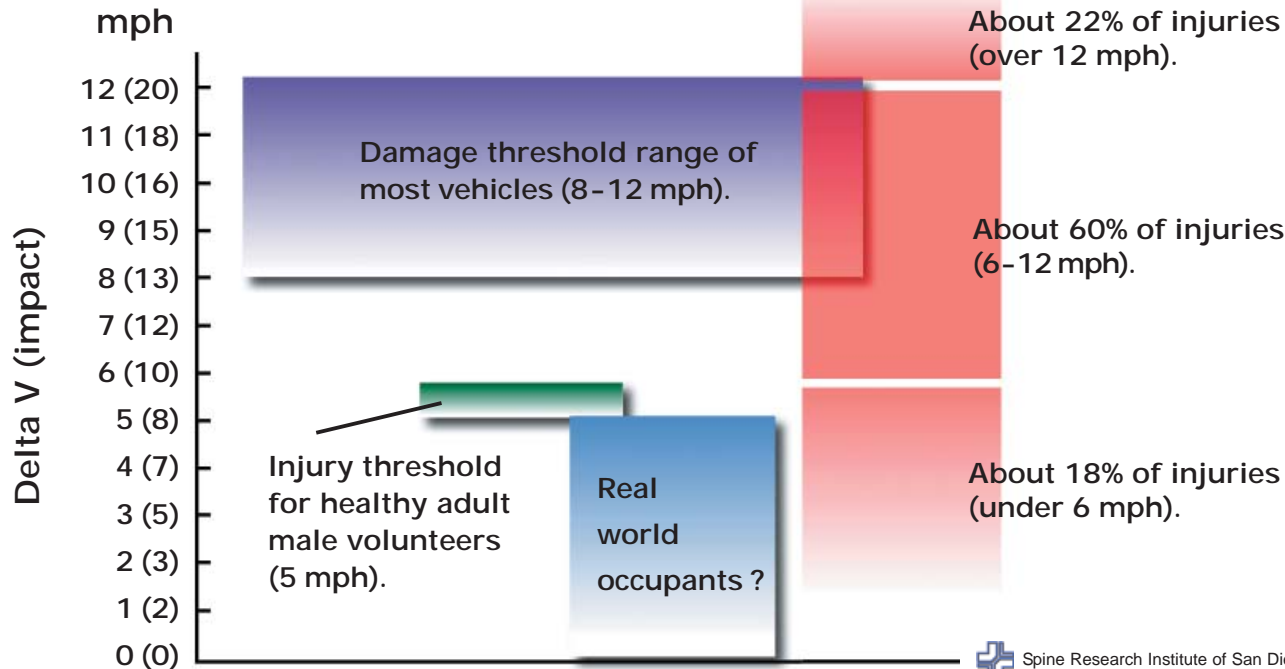
Velocity/Acceleration Curve



Crash facts:

- Most injuries occur at crash speeds below 12 mph.
- Most cars withstand 8-12 mph impacts without structural damage.
- More than half of all LOSRIIC injuries occur without vehicle damage.
- There is no correlation between vehicle damage and outcome.
- The peak acceleration of the head is much greater than the peak acceleration of the vehicle.
- A 5 mph ΔV crash typically produces about 10-12 g of acceleration of the occupant's head.

Relationships between vehicle damage thresholds, occupant injury thresholds, and injury statistics:



Real world occupants ?

The injury threshold for *females*, or those caught *unaware*, or those with:

- Head turned
- Prior injury
- Prior headaches
- Prior neck pain
- Poor head restraints
- Poor position in car
- Arthritis
- Advanced age
- Disc disease
- Shoulder harness
- Rear impact
- Non-failure of seat

will usually drop below 5 mph, particularly with multiples of these risk factors.