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LOW VELOCITY INJURY CLAIMS

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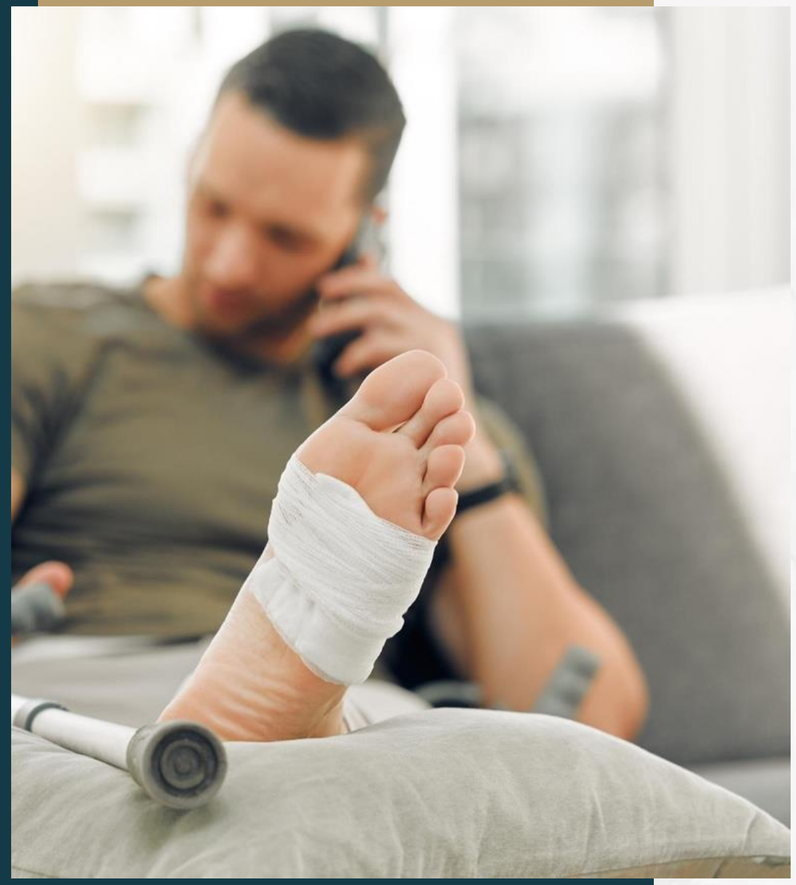

- **Extent of injury = costs of repair**
- Minimum threshold costs of repair to get compensation
- **Vehicle written off = more significant claim**
- Risk of injury relates to external vehicle damage has little scientific basis

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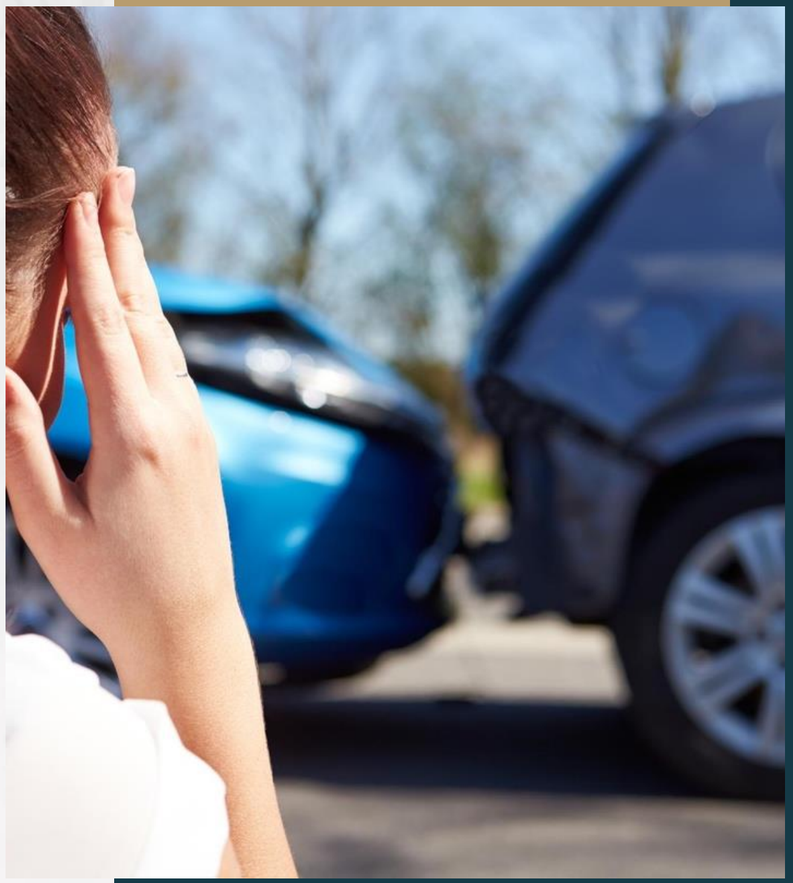
OCCUPANT DYNAMICS IN LOW SPEED REAR END COLLISIONS

- Bumpers striking vehicle hits rear bumper of stationary vehicle
- Striking vehicles kinetic energy transfers to bumper of stationary vehicle
- Striking vehicles kinetic energy transfers to target vehicle
- Target vehicle is accelerated
- Low velocity impacts – no damage depending on vehicles age, angle of collision and structural design characteristics of the bumper



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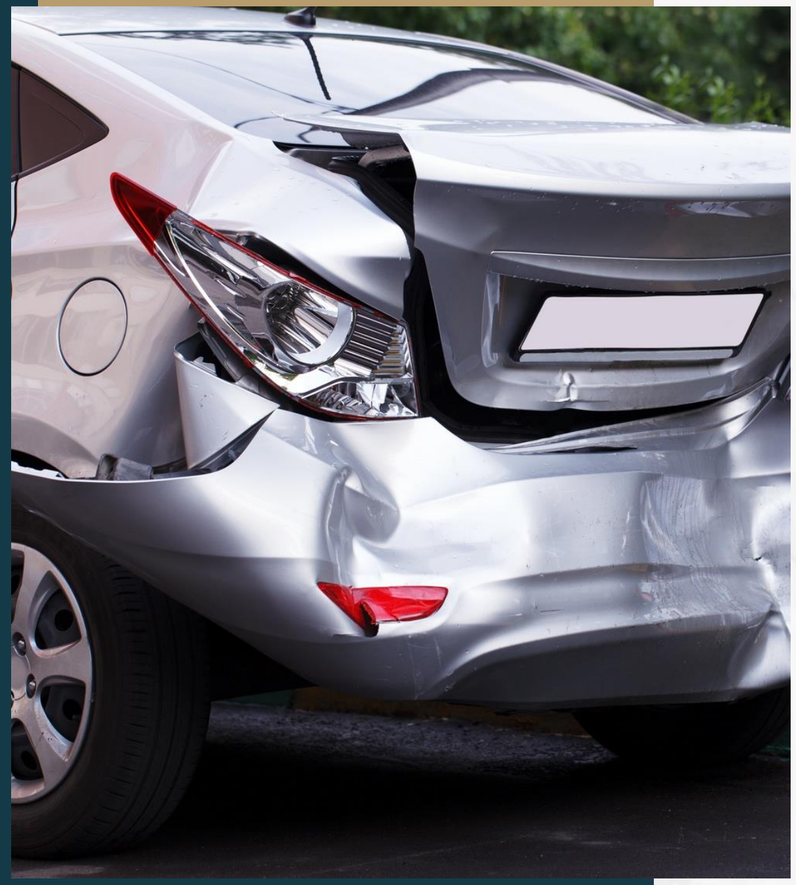
HOW COULD A MORE SERIOUS INJURY HAPPEN?



- If the striking vehicle’s bump is higher the car frame and seats of the struck car are accelerated rapidly forward and downward
- This can cause significant physical injury to occupants of target vehicle

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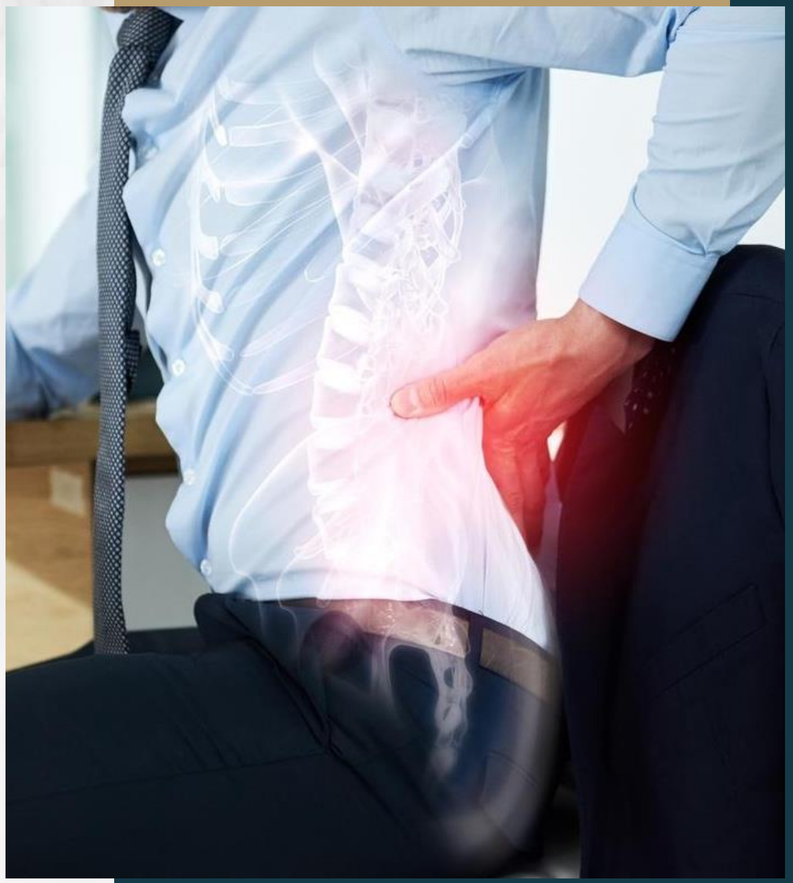
WHAT HAVE STUDIES SHOWN?

- Studies have analyzed test subjects in low velocity rear end crashes
- Low velocity = less than 15km/per hour
- The occupants body pushes forward by the seat back – torso sinks into the cushion
- Lumbar lordosis and the thoracic kyphosis become flattened as the seat back is accelerating against the occupant's body
- Similar affect to an accordion opening and closing



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HOW COULD MORE SERIOUS INJURY HAPPEN?

- Rear end collisions can be complex with elastic bumpers, elastic seat backs and cantilever seat systems
- All work to create a situation resulting in a transfer of striking vehicles kinetic energy
- Can create injury protentional even at low-velocity
- Likely injury mechanism includes extension in compression/tension of the spine
- Rebound reflection of the spine caused by seatbelt restraint system
- Holds the pelvis down in inward as the spine lengthens and wraps up the seat back

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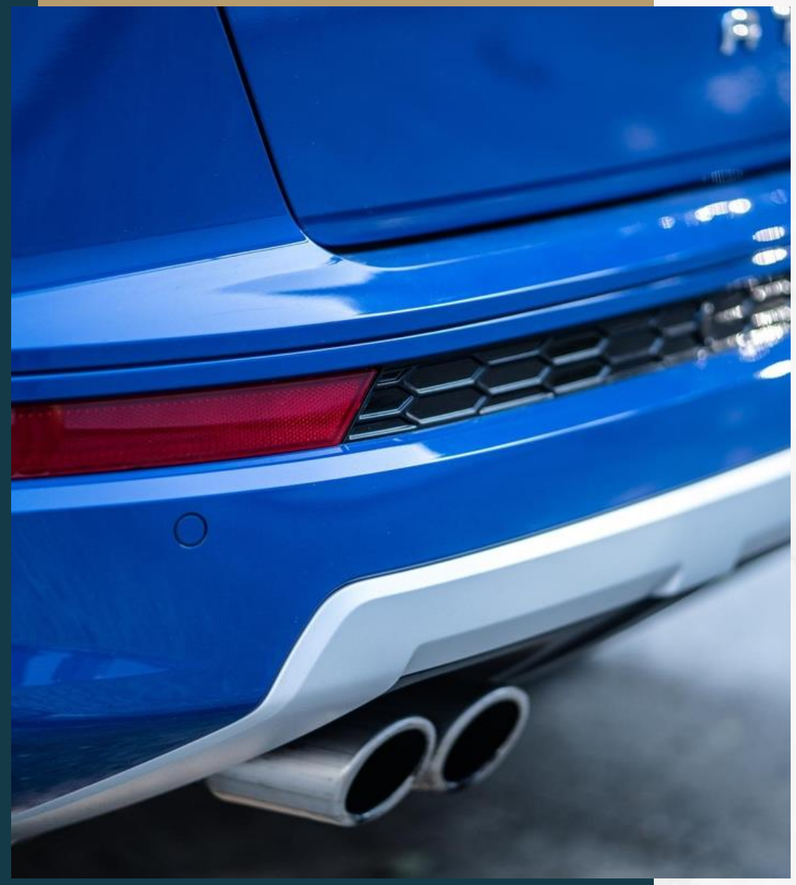
DOES THE BUMPER PREVENT INJURY?



- Most modern cars have delta-Vs of 10-15km/hour
- Little if any physical or observable damage
- When bumper is taken off the vehicle after a crash damage is hidden
- Bumper damage often cannot be seen from external observation

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THERE IS NO TYPICAL HUMAN!

- No typical human in a crash environment
- **Several reasons why:**
  - Different weights of humans
  - Different human anthropometry – some have shorter/longer legs, arms, torso
    Seating locations for occupants
  - Women have lower centres of gravities than males
  - Different seat back angles for different occupants

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WHAT SHOULD PLAINTIFF INJURY LAWYERS DO WHEN THEY GET A MINIMUM IMPACT OFFENCE?

- Never assume one size fits all approach
- Every human being is different
- Get the age of the occupants
- Establish the physical shapes of the occupants
- Have they suffered prior injuries?
- Get occupants position for all body parts
- Instruct an engineer with experience with minimal impact offences
- Get an accessors report for both vehicles
- Seek Discovery if not available

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https://youtube.com/shorts/vottLeJCVSc?si=jhHNMjU1SQ6pgig9