



Prevention of Musculoskeletal Disorders in the Transportation Sector:

Things to Consider when Purchasing a Truck

Cab Design

Occupational drivers have also been shown to increase risk for developing musculoskeletal disorders, particularly, for low back pain (LBP). Research has shown that prolonged driving leads to higher cumulative spine loading and higher LBP occurrence. The design of the vehicle is important to reduce risk of injury. Vehicles with adjustable driving packages (seats, pedals, tilt and telescoping steering wheels) have been reported to result in fewer musculoskeletal problems. Consider the following cab interior items when purchasing or designing trucks:

- Steering wheel tilt and telescoping adjustments so it's at a comfortable height and reach.
- Ensure seats have adjustment for seat cushion vertical adjustment range, lumbar support, seat cushion front & back will tilt, back recline, armrest height and angle. Suspension in seats to minimize effects of vibration.
- Seatbelt shoulder strap height adjustable to enhance comfort for small and larger drivers.
- Pedal adjustability.
- Ensure the pedals and the steering wheel are aligned with centerline of the seat.
- Accessibility of cup holders, gear shifter, air horn, and main controls so drivers do not have extended reach.
- Angle dashboards so controls closer to driver.
- Visibility of main displays on dashboard.
- Easy adjustment of mirrors to ensure visibility.

Cab Egress and Ingress

Truck drivers are at increased risk of slip-and-fall injuries when entering and exiting tractor cabs. The prevalence of injuries due to slips and falls during ingress and egress in the transportation sector are significant. These risks are exacerbated when environmental conditions are poor, including rain, snow, and uneven ground. Good design of ingress/egress system, including the design of the steps and handholds, can help prevent these injuries. Consider the following when purchasing or designing trucks:

- Design tractors with long grab handles located on both side of the doors and inside the cab.
- Design tractors with smaller distance between steps and adequate grating on step, especially the front edge of step to reduce risk of slipping.
- Design tractors with a pass-through compartment for drivers to load belongings into so they can have their hands free in order to use 3-point contact. Design tractor with cup holders and pockets on inside lower portion of door to free up hands.

Circle Checks and Maintenance

Drivers are required to perform regular circle checks and maintenance on their trucks. There are risks of slip-and-fall injuries as well as overexertion injuries from some of these tasks. Consider the following when purchasing or designing trucks:

- Accessibility of oil dip stick and fluid check point in engine compartment so drivers do not have to climb on wheel to access them.
- Hood design so it's easy to open.
- Steps and grab handles to improve accessibility to clean windshield.

