Impact Stress



Injuries resulting from exiting trucks, tractors, and vans represent a substantial cost to businesses. Although many of these vehicles have aids such as steps and grab rails, drivers and other workers fail to make use of them.

The impact stress or forces on the lower body are a result of jumping from the cab or a lower step rather than maintaining contact with the steps and grab rails throughout the entire exiting process. These forces can be as high as 10 to 12 times the weight of the individual. Keep in mind that the higher the distance, the greater the impact forces on the body. Uneven exit surfaces; wet, muddy, or icy conditions; and haste to get the job done increase the risk of injury.

Workers may feel that they are saving time by ignoring these recommendations, but in the long run they will cost themselves and their employer money and lost time due to injury. Addressing design issues, such as size and location, of assist devices to make them easily accessible is the best way to address this feeling.

In order to obtain the most impact from the devices and methods mentioned above, training must be emphasized in order to achieve the least amount of impact on the individual’s lower body.

The same results can be experienced jumping down from a truck trailer or bed, a loading dock, drilling equipment, or other elevated surfaces. The ankles, knees, and lower back can all be affected by this high-impact stress. In order to minimize these risk factors, consider the following:

- Rails should run vertically along the exit path so there is continuous access to grab hold.
- Maintain three points of contact at all times. This refers to the use of two hands and one foot, or two feet and one hand. This is not always possible when there is only one grab rail or the driver is carrying an object.
- When exiting, the driver should face the cab or vehicle, allowing the optimum opportunity to maintain the three points of contact.
- Make sure that the surfaces of the steps are free of mud, grease, and ice that increase the risk of falling. The ground surface, uneven terrain, and discarded objects can also contribute to the risk of falling.
- Make use of stairs, stepladders, or other devices that allow you to climb down rather than jump from other elevated surfaces.