

# Truck Drivers

NIOSH Motor Vehicle Safety Impact Story

Truck transportation is essential to the U.S. economy. Long-haul truck drivers work long hours and drive long distances, increasing their risk for crashes.



More than 1 in 3 long-haul truck drivers have experienced a serious truck crash during their career.<sup>1</sup>

## Key Actions:



- Collect body measurement data from more than 1,900 truck drivers across 15 states.
- Share data with 8 major truck manufacturers, parts suppliers, and software developers.



Partner with Virginia Tech Transportation Institute to study sleep patterns of 96 commercial truck drivers during non-work periods, and evaluate the influence on subsequent driving performance.



- Conduct a survey of 1,265 long-haul truck drivers from 32 truck stops across 48 states.
- Evaluate healthy food options, site safety, and exercise facilities at 16 of the 32 stops.

## Key Findings:

- Truck drivers are heavier—13.5 kg (29.8 lbs) for males and 15.4 kg (34 lbs) for females—than the general U.S. population, demonstrating the need for updated cab designs to improve trucker safety.
- Truck drivers with less sleep overall, sleep starting near the middle of a non-work period, and less sleep 1-5 a.m. had the highest rates of high-risk road events.
- 37% of long-haul truck drivers reported being noncompliant with hours-of-service rules at least some of the time.
- 67% of truck drivers reported having 2 or more health risk factors (e.g., hypertension, obesity, smoking, high cholesterol, no physical activity, 6 or fewer hours of sleep per 24-hour period).
- Most truck stops did not provide healthy food options, a safe walking area, or exercise facilities.



<sup>1</sup>CDC Vital Signs [Trucker Safety](#)



## Key Outputs:



- Anthropometric dataset of body dimensions of 1,900 truck drivers (See [Chapter IV](#))
- Multivariate anthropometric models to aid in the design of next generation commercial truck cabs (See [Chapter V](#))



- *Accident Analysis & Prevention* [article](#): The influence of daily sleep patterns of commercial truck drivers on driving performance
- *American Journal of Industrial Medicine* [article](#): Obesity and other risk factors: The national survey of U.S. long haul truck driver health and injury



*CDC Vital Signs* [report](#) based on survey results



## Key Impacts:

- NIOSH data helped project partners design the next generation of truck cabs to better accommodate the body dimensions of today's truck drivers.
- A software developer used NIOSH data to make a 3D digital driver model for truck-cab design software.
- One major trucking company and several insurance carriers used the results from the survey of long-haul truck drivers to justify the need for health and wellness programs.
- The Federal Motor Carrier Safety Administration cited NIOSH survey results in 2 commercial vehicle operator rules: *Minimum Training Requirements for Entry-level Commercial Motor Vehicle Operators* and *Driving of Commercial Vehicles: Use of Seatbelts*.