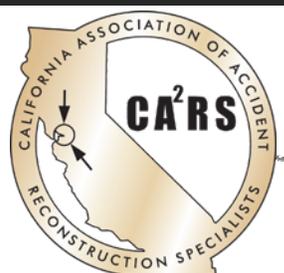


SKIDEMARKS

THE OFFICIAL PUBLICATION OF THE CALIFORNIA ASSOCIATION OF ACCIDENT RECONSTRUCTION SPECIALISTS

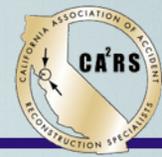


COMMERCIAL VEHICLE DANGERS: ARE TRUCK CRASHES GETTING WORSE?



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CA2RS.COM



Well...here we are post WREX 2016, and Pre CA2RS conference 2016. Let me start by saying how proud I am to be on the CA²RS Board of Directors. Of the over 800 attendees from around the world of WREX 2016, CA²RS had the largest number of members from any one organization. All but one of our Board of Directors was able to attend WREX 2016. Our own Bill Focha was quarterback for the WREX 2016 crash testing, which included motorcycle crash testing, big rig crash testing, intersection collisions, and multiple vehicle rear end collisions. On the crash test day WREX 2016 performed 17 crash tests in one day. This did not include the three days of crash testing prior to the conference. Our chair Chris Kauderer served on the WREX 2016 Organization committee.

I am also proud to say that there were at least three CA²RS members on each of the crash teams. I had the honor of participating four days on the motorcycle crash team, being run by the "Great Lou Peck" CA²RS member and ACTAR representative for CA²RS. We conducted the first public motorcycle crash testing of Harley Davidson motorcycles. Harley Davidson supplied several new motorcycles for the testing. Fellow CA²RS members Jahna Rinaldi, Chad Bluette, Tina Durham, Eric Deyerl, and some new SATAI friends, Joe Manning and Charley Dickerson, were on the team, as well as the famous Wade Bartlett. Chad Bluette has been the motorcycle launch vehicle driver in more motorcycle crash tests than anyone else. In all over the four days, the motorcycle crash team conducted 11 motorcycle crash tests. This also included building a deliver system on site.

WREX 2016 was the largest reconstruction conference in history, with attendees from all around the world (Australia, Austria, Bermuda, Brazil, Canada, Columbia, Czech Republic, England, Germany, Ireland, Italy, Netherlands, New Zealand, Russia, Scotland, Spain, Switzerland, United Kingdom, United States, Uruguay). In all it was a fantastic conference and I hope to be attending one in the future.

Now on to CA²RS business. The organization is doing great and is the second largest in the nation with over 400 members. The CA²RS 2016 conference will be held October 27—29 at the Lake Tahoe Resort Hotel, in South Lake Tahoe. The BOD is finalizing conference speakers, and will update the membership as we get closer. See page 19 for information.

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Trucks are Getting More Dangerous and Drivers are Falling Asleep at the Wheel. Thank Congress. The inside story of how the trucking industry and politicians have conspired to make our highways less safe.

April 16, 2016 / Huffington Post / Michael McAuliff

Jan. 27, 2014 tractor trailer accident killed one man and critically injured Illinois State Trooper Douglas Balder.



WASHINGTON — Illinois State Trooper Douglas Balder sat in his squad car, its red and blue lights strobing into the frozen night of January 27, 2014. He was about to be set on fire. Balder had stopped to assist a Chicago-bound

big rig that had stalled out in the rightmost lane of the Ronald Reagan Memorial Tollway. A heavy-duty tow truck and a bright yellow Tollway assistance vehicle were also pulled over, attending to the stranded semi. Balder, a Navy reservist and father of two, had his heater cranked against minus-30-degree wind chill. He had positioned his 2011 Crown Victoria behind the Tollway vehicle and switched on his flashers. There were also flares sputtering on the pavement, and the Tollway truck was flashing a large blinking arrow and its amber hazard lights. Visibility on that clear, cold night was excellent — around 10 miles.

Renato Velasquez, who was barreling toward the stopped vehicles in a flatbed big rig loaded with three massive rolls of steel, didn't see Balder's flashers. He didn't see the pulsing arrow or the flares. He didn't change lanes or take any evasive action until far too late. Velasquez was falling asleep, a court would find later. His truck rammed into Balder's squad car at 63 miles per hour, according to the [National Transportation Safety Board investigation](#) into the accident. The impact crushed the Crown Vic's trunk, exploding the gas tank and catapulting the patrol car into a roadside ditch. The three 14,580-pound steel coils chained to Velasquez's trailer bed burst their restraints. One of the massive rolls struck the cab of the Tollway vehicle, instantly killing its 39-year-old driver Vincent Petrella and injuring Agron Xhelaj, the driver of the stalled truck who was seated beside him. Balder had lost consciousness when his face hit the steering wheel. "I woke up a short time later on fire," he said. "Literally on fire. Burning alive."

In that moment, Balder didn't know exactly what had happened. His squad car was half collapsed. The detonated gas tank was spraying fuel and flames through his cab. His only clear thoughts were of survival and of his wife of 14 years, Kimberlie. He yelled out her name. "A certain degree of that was emotion at the moment, knowing that I might die, screaming to the last person you might love," he said.

Balder needed to find a way to escape if he was ever going to see his wife and kids again. He tried to start his engine, then tried to radio for help. Fire was spreading from around the partition behind him, burning his back, head and legs. He couldn't open his door or window. He tried the switches on his armrest, and the passenger window miraculously cranked down. "As that cold air came in and swirled that air around, adrenaline set in, and I flew out," he said. "The only other choice was to sit there and die."

He tumbled out on the roadside, rolling in the snow to extinguish the flames that had already scorched more than a third of his body. By the time he stumbled around the back of the wreck and back up to the road, local police were arriving to help. "You got this guy walking up with his skin hanging off his arm," Balder said. "My pants were all burned off to the skin." He spent six weeks in a medically induced coma, three months in the hospital, and needed 10 surgeries and extensive, ongoing rehab to recover. Balder's patrol car was completely burned in the accident.

Trucks are Getting More Dangerous and Drivers are Falling Asleep at the Wheel.

Increasing Carnage On Our Highways

In the two years since the accident, Balder has had plenty of time to think about what happened to him — and why. On the simplest level, it happened because a criminally negligent driver pushed too hard and crashed.

But it is also part of a broader trend of declining safety on the roads after decades of progress — a trend that the United States Congress has aided and abetted by loosening safety rules even as both truck drivers and trucks are being pushed to their limits, just like Renato Velasquez.

Truck-related deaths hit an all-time low during the economic doldrums of 2009, when 2,983 truck accidents killed 3,380 people. But as the economy has recovered, the carnage has been on the rise. In 2013, the most recent year for which [finalized statistics](#) are available, 3,541 wrecks killed 3,964 people — an increase of 17.3 percent in just four years. In 2014, the number of deaths resulting from truck accidents was down slightly, but the total number of crashes and injuries increased.

At the same time, Congress has been caving, very quietly, to lobbying from trucking interests that want to roll back, block or modify at least a half-dozen important safety regulations. Significant parts of the hauling industry have long opposed many of the federal rules governing working hours, rest periods, size and weight limits, and safety standards. When the Great Recession began in 2008, [profit margins for shippers](#) shrank and [bankruptcies rose](#), prompting a desperate industry to step up its lobbying effort.

Perhaps, the trucking companies' lobbyists suggested to Congress, trucks could haul loads heavier than the federal 80,000-pound limit, which would allow them to deliver more goods with each truck. Maybe they could have longer double trailers, increasing the limit from 28 feet for each unit to 33 feet — turning each rig into an 80-foot-long behemoth, as long as an eight-story building is tall. Or they could let truck drivers be more flexible with their rest breaks, which would allow them to work up to 82 hours a week instead of the already-exhausting limit of 70. Maybe trucking firms could reduce labor costs by hiring lower-paid drivers, younger than 21 — as young as 18. Maybe they could stop federal regulators from raising insurance requirements that were set during the Reagan administration. Maybe the federal motor carrier safety ratings for unsafe trucking companies could be kept secret.

Indeed, the trucking industry is trying to do all of those things. If they are successful, these changes would amount to the most significant overhaul of highway safety rules in decades. But most people don't know such sweeping revisions are even being considered.

Asleep At The Wheel

The latest round of congressional wrangling started with a fight over snoring, or, more specifically, the obstructive sleep apnea that causes it. For decades, mounting evidence has shown that [sleep apnea, a common disorder](#), can cause perilous levels of fatigue in drivers, [pilots](#), train engineers and others who need to remain alert at work. The airways of people who suffer from apnea close repeatedly while they sleep, interrupting their breathing dozens of times an hour. They often don't notice the interruptions, but it leaves them exhausted and prone to doze off during the day. Behind the wheel of a large, speeding vehicle, the results are predictably catastrophic.

It's not just a problem for truckers. As investigators sorted through a December 1, 2013, Metro-North commuter train [derailment](#) in New York that killed four people, they found the engineer at the controls, William Rockefeller, had fallen asleep. His shift had recently been changed, which can cause sleep problems in itself, but he also had [undiagnosed sleep apnea](#).

Trucks are Getting More Dangerous and Drivers are Falling Asleep at the Wheel...

Since 2008, experts with the Federal Motor Carrier Safety Administration, which regulates the trucking industry, have recommended that drivers get checked for the condition and treated if necessary. The NTSB lists sleep apnea as a problem across the transportation industry, and often points to the Metro-North wreck as evidence of why the trucking industry in particular needs better regulation – its rules are the weakest of the major transportation sectors.

The risk of apnea rises dramatically with weight gain, and approximately two-thirds of all truck drivers are believed to be obese, according to a recent federal survey. Other studies have also found that truckers are much

Balder's patrol car was completely burned in the collision.



more likely to be overweight than workers in other fields. And extensive research links sleep deprivation to heightened crash risks; even moderate tiredness can impair a driver as much as being legally intoxicated. A recent Harvard study found truck drivers with obstructive sleep apnea are five times more likely to crash than their fellows. To do a better job dealing with the issue, the Federal Motor Carrier Safety Administration floated a proposal in April 2012 that would have required overweight truckers to get checked for sleep apnea. The industry was livid.

Some drivers claimed there was no evidence that sleep apnea raised the risk of crashes, while others alleged the proposal was a scheme to enrich sleep doctors.

Independent truckers are especially loath to admit a problem because treatment can take them off the road for a month or more. And sleep tests and treatment cost thousands of dollars for people with inadequate or no health insurance. Despite acknowledging the problem and the need to deal with it, FMCSA backed off its push to update the apnea rules. Just a week after posting the proposal, the agency withdrew it, claiming it was published in error.

Going After Congress

The trucking industry did not let the matter drop, though. Instead, its lobbyists launched a pre-emptive strike. Normally, when an agency like FMCSA targets a specific issue, it uses its existing authority to propose binding guidance. Taking this route – which the agency started to do with apnea – is easier than embarking on a full federal rulemaking process, which can take years, requires even

more extensive input from the public and industry, and often triggers long legal battles. Rather than taking the chance that FMCSA might resurrect its proposal on apnea screening, industry lobbyists approached allies in Congress to write a law that would require the agency to follow the longer, more cumbersome formal rule-making course.



December 2013, a Metro-North commuter train engineer with undiagnosed sleep apnea fell asleep and caused a derailment that killed four people.



Trucking industry lobbyists sold the bill as a safety enhancement. In their telling, it sounded like truckers were asking regulators to come up with a way to screen for dangerous apnea, not blocking an effort to enhance screenings. Members of Congress bought the spin. "I can only hope that the agency, which has a long docket, in fact gets to this rulemaking," said Del. Eleanor Holmes Norton (D-D.C.) in a brief discussion on the the House floor. "I'm not sure why the agency was going to do guidance instead, but this is a very important issue. There have been accidents attributed to sleep apnea."

Then-House Speaker John Boehner (R-Ohio) allowed the bill's sponsors to bring it to the floor on Sept. 26, 2013, when the country was focused on the prospect of a looming government shutdown in the next four days. Safety advocates had little opportunity to raise objections. The bill passed with no opposition and was sent to the Senate. It passed the upper chamber a week later, in the middle of the shutdown, with no debate or even a roll-call vote. The legislation was slipped into a string of unanimous consent requests, lost among resolutions supporting democracy in Venezuela and recognizing Danish Holocaust survivors. President Barack Obama signed the law on Oct. 15, [without comment](#), just before the government shutdown ended.

Less than two months later, the Metro-North engineer took a curve along the Hudson River in the Bronx at 82 miles per hour – 52 mph over the limit – while he dozed at the controls. Seven cars derailed. Three of the four people killed were ejected from the train. No one noticed that Congress had just made it more difficult to screen truckers for similar sleep disorders.

Congress Waters Down Safety Rules

Horrifying crashes have a way of focusing Congress' attention on safety – at least while the headlines are bold and the corpses are fresh. The rest of the time, lawmakers tend to listen to industry groups, which warn of job losses and higher costs if their demands aren't met. These conversations happen inside the cloister of legislative process, shielded from scrutiny. If what business wants doesn't put health or safety first – and it often doesn't – politicians try to meet the demand by adding provisions to much larger legislative vehicles, where they may be impossible to dislodge, if they are even discovered at all.

Consider this example: In July 2013, the FMCSA enacted a regulation modifying an existing rule that says drivers must take 34 hours off after they hit certain maximum time limits working and driving. The new restriction mandated that truckers include two nights in that break, with no driving between 1 a.m. and 5 a.m. The new rule effectively cut the maximum hours drivers could work from 82 per week to 70. Studies show that humans get the best, most restorative rest while [slumbering at night](#), and truckers face especially [tough schedules](#), so the restriction forced drivers to have two restful, overnight periods in their break, which is known as a "restart."

But trucking lobbyists argued that making drivers sleep at night was more dangerous because it would put more trucks on the road in the morning hours, with commuters and school buses. The industry pointed to data that shows more accidents occur when there are more vehicles on the roads during the day. The lobbyists neglected to mention data showing that the rate of fatal accidents actually [more than doubles](#) during the overnight hours, even with vastly fewer automobiles on the roads.

As soon as the updated regulation went into effect, trucking groups demanded changes, but FMCSA, which had spent [years working on the rule](#), wasn't listening. That left the industry with the choice of pursuing an uncertain challenge in the courts, or appealing to Congress for relief.

By law, Congress can vote to disapprove a new executive agency regulation, such as the sleep rule, within 60 work days of the rule's publication. If Congress doesn't pass a disapproval resolution, lawmakers can propose specific legislation undoing the new rule, and hold hearings on the proposal in the relevant committee – in this case, the Senate Committee on Commerce, Science and Transportation.

Going through either of those processes is the transparent, above-board approach. But that path does not often get the trucking industry what it wants. For years, the late New Jersey Senator Frank Lautenberg (D), a member of the commerce committee, blocked anything that he thought eroded highway safety, as did other safety-conscious members on the committee. Lautenberg's successor, Sen. Cory Booker (D), has sought to take up that mantle.

The trucking industry needed a detour. It looked for an alternate route through the Senate Appropriations Committee, and found Republican Sen. Susan Collins, who represents the trucking-friendly state of Maine. Collins added a provision temporarily barring FMCSA from spending any money to enforce its new rule and requiring additional study of the issue to a \$54 billion [transportation bill](#) during an [untelevised legislative markup](#) in June 2014.

The under-the-radar move might have been the end of the new rule. But unlike with the apnea bill a year before, a headline-grabbing tragedy caught the nation's attention shortly before the appropriations bill made it to the full Senate. Two days after Collins got her amendment included, an [exhausted](#) Walmart truck driver speeding along the New Jersey Turnpike [slammed into comedian Tracy Morgan's limo](#). The wreck killed Morgan's friend James McNair and left Morgan and four others severely injured (truck pictured in background).

The crash generated headlines around the world, and once again focused the nation's attention on the dangers of sleep-deprived drivers behind the wheels of 80,000-pound vehicles.

When the transportation spending bill came to the Senate floor on June 19, Booker was waiting with his own amendment to block that of Collins. He took up his microphone and delivered a blistering speech against the provision, forcing Collins to defend the measure. But before the bill went to a vote, Senate leaders pulled the measure from consideration, in part because of the sudden controversy.

Collins didn't give up, though. When the nation was again facing a government shutdown in the winter, she managed to slip her sleep-rule provision into the so-called CROmnibus, a huge, unwieldy spending measure that needed to pass by Dec. 13 to keep the government open. No one outside of Congress knew that the trucking provision had been attached to the bill until lawmakers shoved their shambling creation into the light on Dec. 9, four days before it needed to pass. At that point, the measure could not be blocked, as it had been in the aftermath of Tracy Morgan's crash. Like the sleep apnea rule a year before, it passed under the cover of a funding battle, much to the disappointment of safety advocates, including Morgan's lawyer, Benedict Morelli.

"I don't understand how in good conscience anybody could be pushing to relax the federal rules," Morelli said. "The reason that they've been put in place is to make sure this doesn't happen — and it happens a lot."

Shocking Headlines, Shockingly Often

Morelli is right: Accidents like those that nearly killed Balder and Morgan happen with startling regularity. For instance, last spring while Congress was again quietly targeting trucking regulations, a string of crashes showed vividly the consequences of overtired truckers pushing past their limits.

On **April 22, 2015**, a truck driven by John Wayne Johnson barreled through a line of cars backed up by an earlier truck crash on Interstate 16 in Georgia. Johnson killed five nursing students from Georgia Southern University headed to their last training shift of the year. Lawsuits filed over the wreck say he had sleep apnea and a history of falling asleep at the wheel. He also may have been looking at pornographic pictures.

On **May 19, 2015**, witnesses saw a tractor-trailer drifting between lanes as it neared a construction zone on that same Georgia interstate, near I-95. The driver, David Gibbons, 61, smashed his rig into the stopped cars and also killed five people.

On **June 25, 2015**, Benjamin Brewer, 39, spent 50 hours at work and was allegedly high on meth when he approached construction traffic on I-75 in Chattanooga, Tennessee. He was going so fast, his truck careened on for 453 feet after impacting the first car, according to [the NTSB](#). He killed six people.

On **July 23, 2015**, trucker Ruslan Pankiv failed to notice traffic backed up at a construction zone on I-65 near Lafayette, Indiana. He plowed through the stopped vehicles, killing five people, including a mother, her two young sons and himself. Police suspected fatigue.

Those are just cases for which drowsiness was explicitly stated as a possible cause.

Most independent experts believe fatigue-related wrecks are significantly undercounted since there is no roadside exam or blood test for drowsiness, and drivers are often reluctant to admit they were nodding off. In the case of Renato Velasquez, he insisted he hadn't dozed off, but he could come up with no other explanation his wreck. By the time the scientifically careful NTSB released its final report on Velasquez's accident, on February 9, 2016, he'd already been convicted and sentenced to three years in prison for driving while fatigued, ignoring federal rest rules, driving too fast and failing to yield.

What's beyond debate is that hauling loads across America's highways is a draining, exhausting existence. And it's only gotten tougher since President Jimmy Carter and Congress [deregulated](#) the complex rules governing the economic side of the industry in 1980, making it much easier for new companies to get into the business and setting off a surge in competition.

The change was good for consumers, who saw shipping prices drop as lower-cost carriers pushed out unionized firms. And safety did not immediately suffer, because technology improved and both the government and carriers grew more conscious of the practices that reduce the risk of crashes. But as unions vanished and the need for productivity and efficiency rose, pay for truck drivers plummeted.



You're getting sleepy.

Very sleepy.

At the count of three,

you will not wake up.

one...

two...

three

They now make less than they did in the late 1970s when wages are adjusted for inflation. And there are now tens of thousands of small, poorly financed new trucking companies that have great incentive to push drivers as hard as they can.

Those drivers, who are often independent and own their own rigs, have to cope with managers' demands and all the safety rules that still exist, even as the close-to-the-bone industry leaves little [room for error](#). Unpredictable hours, uncertain traffic, long stretches spent sitting alone behind a wheel, and meals that depend on roadside greasy spoons take a toll on driver's health. All that adds up to a circumstance that encourages drivers — especially the growing number who have strict drop-off and pick-up times set in their contracts — to take chances. And they do, [frequently ignoring rest rules](#) to make their schedules. Drivers for smaller outfits are especially [likely to break the rules](#).

Renato Velasquez is a case in point. His daughter Yesenia told NTSB investigators that her father had dreamed of driving big rigs. He had been a bus driver in rural Mexico, transporting workers to farms back in the '80s. He immigrated to the United States, and in 2007 earned his commercial driver's license in Illinois. His first job driving flatbeds was at a company called M&A, where his brother worked, and where he learned the federal safety rules. Velasquez told the NTSB he took a job with another firm, DND International, in 2011, after meeting the company's manager, Dimitar Dimitrievsky. The company, one of thousands of small-time shipping operations that have proliferated since deregulation, employed 49 drivers. Those drivers logged 5.4 million miles in 2013, the year before Velasquez's crash.

Velasquez seldom saw the boss, or any other workers, and was dispatched remotely, according to his interview with federal investigators. He and another driver said they would drop off their logbooks and other records at a box outside Dimitrievsky's house once a week. There appeared to be little oversight or enforcement at the company, the NTSB concluded. Although Velasquez said he never got safety training from his employer, records say that he received at least a little, and the company did possess some of the required safety training materials. But DND also possessed a terrible, albeit remarkably common, safety record.

In the two years before the crash, DND drivers had been subjected to 289 inspections, according to federal records. Its drivers had been ordered off the roads 27 times, most often for hours-of-service violations — driving more than the legal limit. The vehicles themselves were found to be in violation 26 times in 131 inspections, a failure rate of 20 percent. The company racked up seven crashes between March 2012 and January 2014, causing one fatality and four injuries. Those stats meant that DND had alerts in two [Behavior Analysis and Safety Improvement Categories \(BASICs\)](#) that the FMCSA uses to rate companies and identify dangerous carriers. BASIC serves as the foundation for the agency's Safety Measurement System — a system that the trucking industry despises. DND had poor scores in the BASIC standards for safe driving and driver fatigue. The chances of a firm being involved in a fatal crash jump by 93 percent when it has an alert on unsafe driving and by 83 percent when it has received a warning for excessive hours-of-service violations, according to agency data. And firms with two alerts have crash rates that are [double](#) the average among companies with no alerts.

Velasquez couldn't just pull in for some extra rest after the long night. A requirement of the delivery contract with the Omaha Public Power District was a punctual drop-off at 8:30 in morning. The driver logged in at the drop-off at 8:45 a.m. Records showed Velasquez departing at 9:20 for a 300-mile run to Cedar Rapids, where his pickup window for the three steel coils began at 4 p.m. He left at 5:15 with another 200-plus miles and four hours left to reach home.

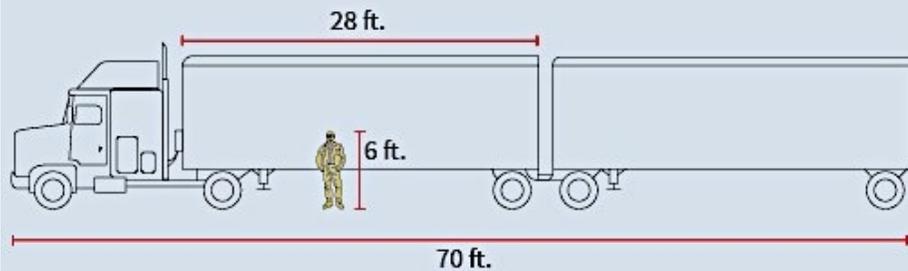
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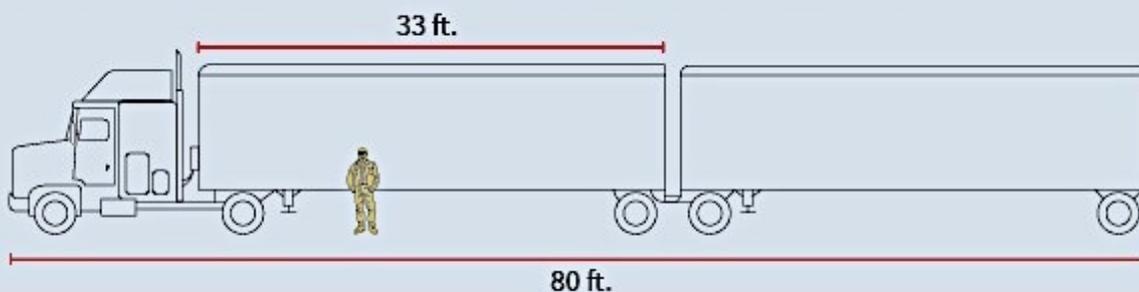
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Independent drivers like Velasquez and his colleagues are paid by the load, not by the number of hours they work. A decent living requires good loads.

CURRENT LIMIT FOR DOUBLE TRAILERS: 28 FEET FOR EACH TRAILER



PROPOSED LIMIT FOR DOUBLE TRAILERS: 33 FEET FOR EACH TRAILER



“A decent living requires good loads.”

To get good loads, a trucker needs a strong relationship with his trucking company's dispatchers, who take orders from shipping brokers and route them to available tractors. Trips that are longer, more time-consuming or force the driver to return empty – hauling “flying canaries” or “dispatcher brains” – who take orders from shipping brokers and route them to can even cost a driver money. A DND driver named Stanford Dean told NTSB investigators that his loads weren't even dispatched in the United States. They came from someone based in Macedonia.

“Do you know how difficult it is to make money?” Dean asked investigators who confronted him over discrepancies in his logbooks. “I'm a safe guy, but there's issues sometimes,” Dean added. “There's so many obstacles. If anybody tells you they roll 100 percent by the book, they're lying to you.”

On Velasquez's fateful run, he had a decent assignment from the dispatchers, hauling power cables approximately 450 miles from Illinois to Nebraska, for a \$1,600 fee. On the way back he would stop in Cedar Rapids, Iowa, to pick up three steel coils that he would haul a little more

than 200 miles back toward home, for a fee of \$550. After gas, tolls and DND's 20 percent cut, he would pocket about \$1,000 for the out-and-back.

According to Velasquez's logbook for the trip that killed Vincent Petrella, he followed safety rules. It says Velasquez left Hanover Park at 11:45 a.m. on Sunday, January 26, carrying a 6,707-pound load of cable to the Omaha Public Power District in Elkhorn, Nebraska. The entries say he reached Des Moines, Iowa, at about 5:30 p.m., took a 45-minute break, then motored on to Elkhorn by 9 p.m., keeping his driving time well inside the 11-hour limit and his on-duty hours within the 14 permitted in a day.

But Velasquez's logbook was a work of fiction.

Investigators would later learn how badly things went wrong for Velasquez, and how severely he broke the rules, leading to his deadly exhaustion.

Velasquez's cell phone and toll records showed he didn't set out on the trip until nearly six hours after the time he recorded in his logbook, and he kept driving well past the time that he claimed he had settled in for a

night's rest. The problem was that this was a trip across the Midwest in the dead of winter, with a brutal deep freeze, snow, fog and whipping winds along the way.

Ahead of Velasquez on I-88, two other trucks crashed at 9:43 p.m. in whiteout conditions, shutting down the highway for four hours. Velasquez wasn't even out of Illinois at that point, and that traffic jam may have been his only rest in 37 hours.

According to the truck's engine records retrieved by the NTSB, the longest it was idle that Sunday night and early Monday morning was for less than three hours.

Velasquez couldn't just pull in for some extra rest after the long night. A requirement of the delivery contract with the Omaha Public Power District was a punctual drop-off at 8:30 in morning. The driver logged in at the drop-off at 8:45 a.m. Records showed Velasquez departing at 9:20 for a 300-mile run to Cedar Rapids, where his pickup window for the three steel coils began at 4 p.m. He left at 5:15 with another 200-plus miles and four hours left to reach home.

But about an hour before he got that far, a truck that hauled containers from railways broke down ahead of him in Aurora, Illinois, just shy of Velasquez's destination. It was owned by a firm called Michael's Cartage that had alerts in four of the FMCSA's troubling categories, including maintenance. Its drivers falsified work logs more than half of the time, according to an NTSB review.

Just like with DND International, the numbers suggested the carrier was more than twice as likely to wind up in a crash. In this case, the Cartage truck became the hazard that Velasquez failed to avoid. He never wrote down his final stop, at 9:20 p.m. — when he dozed off at the wheel and forever changed Doug Balder's life.

Paying For Influence

The leader of the trucking industry's campaign to tilt federal regulations in its favor is an alliance of the nation's largest shippers called the [Coalition for Efficient and Responsible Trucking](#), or CERT. Its most prominent members are FedEx and UPS. Members of CERT have donated more than \$13 million to federal election campaigns since 2012, and spent \$80 million on well-connected lobbyists, according to [a Public Citizen study](#) from 2015 using data from the Center for Responsive Politics, as well HuffPost's analysis of more recent congressional lobbying reports through the rest of the year. The American Trucking Associations, which advocates on behalf of the industry, spent another [\\$8 million](#) on lobbying and \$2.4 million on elections. The Owner-Operator Independent Drivers Association, another industry group, has chipped in [\\$3.5 million for lobbying](#) and \$790,000 on campaigns. It amounts to more than \$20 million spent each year, solely to influence Congress.

Trucking industry lobbyists have the kind of access to decision-makers that safety advocates can only imagine. Among FedEx lobbyists alone, 37 of 51 previously worked in government, according to CRP. Those influence brokers have been exceptionally busy

and effective, securing victories on apnea screening in 2013 and the roll-back of sleep rules in 2014. In 2015, they aimed for much more.

In the House, industry-friendly lawmakers were persuaded to add several policy riders to the annual transportation funding bill for 2016 in May, again bypassing committees and hearings, as Sen. Collins did with sleep rules.

Bigger and More Dangerous

Perhaps the most controversial of those measures was a scheme to take away the ability of states to set their own standards for the maximum lengths of double trailers. A federal law passed in 1982 required all states to allow doubles, with each of those trailers up to 28 feet long. Many states, particularly in the West, allow longer trailers. The new measure would have raised the federal limit to 33 feet for each trailer, and forced all states to accept them.

"Larger, heavier trucks also mean more wear and tear on highways and bridges that are already poorly maintained."

Companies such as FedEx and UPS have long sought to extend the length of trailers, because they often fill the 28-foot model with packages before hitting the 80,000-pound weight limit. Carrying more with each rig means greater efficiency, lower cost and more profit. But larger, heavier trucks also mean more wear and tear on highways and bridges that are already poorly maintained. Weigh stations and other facilities handling trucks would also need to be renovated and expanded, often at taxpayers' expense. Law enforcement and safety advocates also warn that double trailers are already more dangerous than regular semis, with an 11% higher crash fatality rate.



“From a safety perspective, double 33-foot trailers are basically a disaster,” said Robert Mills, a Fort Worth, Texas, police officer who spent 13 years as a roadside safety inspector and is a member of the Motor Carrier Safety Advisory Committee, which recommends rules to the federal government. **Many truckers are not so pleased with the giant double trailers either, dubbing them “wiggle wagons” and “widow makers.”**

Some haulers, including the smaller conglomerates Swift and Knight, joined with the Coalition Against Bigger Trucks to oppose their larger brethren’s push to extend trailer lengths. Even crashes of doubles where there are no injuries in the initial impact leave dangerous scenes for other drivers when they’re sprawled out across multiple lanes of traffic, said Balder, who is now working with the coalition.

But CERT, the coalition of shippers, is determined to get approval for larger trucks, and was behind a push in 2012 requiring the Department of Transportation to study the impacts of size and weight increases. The industry coalition believed, or at least argued, that those impacts would be negligible; research proving that would help their case. But before that study was even completed, the coalition got its provision allowing longer trucks added to the House’s version of the [2016 transportation spending bill](#). The DOT study, [released](#) in June 2015 two weeks after the House released the transportation bill, recommended against allowing larger trucks, saying the safety issues remained unresolved. There were several other industry requests in that funding bill for 2016, including a measure that aimed to extend the suspension of sleep rules that Collins had

won just six months earlier. Her suspension lasted a year and required regulators to look into the effectiveness of requiring two nights of sleep and whether there was any case for the trucking industry’s position. But rather than see that process through, the new provision changed the study mid-stream and called for gathering even more data — including the regulation’s impact on the longevity of drivers.



Lisa Shrum lost her parents in a collision with a double trailer blocking the road.

Studying workers’ lifespans, of course, takes entire lifespans. That provision was signed into law with the 2016 spending bill that ultimately passed. “They just basically want to stall this forever,” said Rep. David Price (N.C.), the top Democrat on the appropriations subcommittee that deals with transportation. Another measure the industry pushed last year aimed to short-circuit federal regulators’ efforts to evaluate raising insurance requirements for trucking companies. Currently, carriers have to maintain the same \$750,000 policies they did in the ‘80s.

The industry's argument is that independent operators would not be able to afford higher premiums — and indeed, DND's margins were so close it shut down when its insurance company raised rates after the Balder crash. The industry argues that 99 percent of truck accidents do not generate such high damages. But \$750,000 doesn't begin to cover the costs a serious semi wreck incurs. For instance, a widower whose wife was killed and children severely injured by a dozing driver in 2010 won [\\$41 million](#) in damages.

The family of James McNair, the comedian who died in the Tracy Morgan crash, settled for \$10 million in March last year. A somewhat weakened version of the measure did pass, requiring regulators to evaluate a number of different factors before they adjust the insurance requirements.

Another industry-backed provision aimed to hide the BASIC safety measurements for trucking companies from public view, and bar their use in lawsuits. The lawsuit provision was dropped from the spending bill during negotiations, but the BASIC scores were in fact

[hidden](#) and removed from the agency's website. The industry used a Government Accountability Office study that found the safety system could do better in some respects to justify its position, but the two firms involved in the Velasquez crash had exactly the sort of poor safety scores that the BASIC system predicts make them more likely to be involved in accidents.

Despite the fact that these provisions will likely have an impact on the safety of nearly 11 million large trucks registered in America, they were all buried in legislation that Congress had to pass to avoid a government shutdown, with little to no debate about whether they were a good idea.

"The advocates of relaxing the rules or eliminating the rules, they see that and think this is their train to catch...not just wait on the normal process, or count on something as pedestrian as actual hearings or discussion, but to make a summary judgement and latch it on to an appropriations bill" Price said.



5/7/16 - FedEx driver causes major injuries to CHP officer in Sacramento



4/27/16 - Truck driver fails to stop and causes fatal wreck in Dublin, CA

There's something else all the industry-backed measures have in common: They are deeply unpopular. The Huffington Post and YouGov surveyed Americans on four of the proposals the industry has been pursuing through the backdoor: teen drivers, longer trucks, heavier trucks, and the relaxed hours-of-service rules. In every case, respondents to the survey opposed the moves — by large margins. Indeed, when proposals to weaken trucking safety do get a up-or-down vote on their own, they generally fail. When the Senate's version of the transportation funding bill came up for debate in November and October, an attempt to include the House's requirement for states to accept 33-foot trailers across the nation was voted down each time. Similarly, an attempt in the House last November to amend the highway construction bill to hike truck weight limits failed convincingly, 187 to 236.

The trucking industry is certainly still trying, though. The backdoor approach is the easiest way for the industry to get around the safety restrictions that most Americans support. One initiative that it backed down on in 2015 was a bid to block states from enforcing regulations on rest and pay that are tougher than the federal government's. Large haulers got the preemption added to the House's highway construction bill, but couldn't get senators to consent.

The trucking industry is back at it this year, adding a provision that would override state rest and overtime pay rules to a House bill reauthorizing the Federal Aviation Administration, which is currently operating on a stopgap measure that expires in mid-July. The Senate is working on a dramatically different version of that bill, which almost guarantees a situation where trucking lobbyists have thrived – a rush to finish a must-pass bill behind closed doors with a looming deadline and little ability to alter deeply buried provisions.

A Problem He Can't Forget

For Douglas Balder, crashes are not just a byproduct of business and politics. His own near-fatal encounter is burned into his flesh and his memory. While he can't forget it, he also doesn't want to. He's read most of the 5,000-page NTSB investigation of his crash, and he still looks at the pictures of his destroyed squad car every couple of weeks. He said he doesn't know why he wants to keep replaying that night.

"I've been asked that question before, and I can't answer it," he said. But he does have an answer, really. Balder joined the Navy reserves right after graduating high school in 1994 and has served tours overseas, including in Iraq and North Africa.

He is the sort of person who walks in the St. Jude's parade and donates blood. And he now has another reason to keep trying – a third child who was conceived and born after he was nearly killed on the side of that highway.

"We all take an oath to make things better in the long run," he said. "And it's got to be our focus now. I could easily have shriveled up in a ball and stayed at home and wasted away, but that's not my mindset. That's the military in me: You gotta move on – pick up and move on – and try to make a difference for the future. And I have to remind myself of what happened."

—SM



4/10/2014 – FedEx driver causes fatal collision in Orland, CA



4/20/2016 – Truck causes major injuries near South San Francisco, CA

Photogrammetry

Presented by Lou Peck



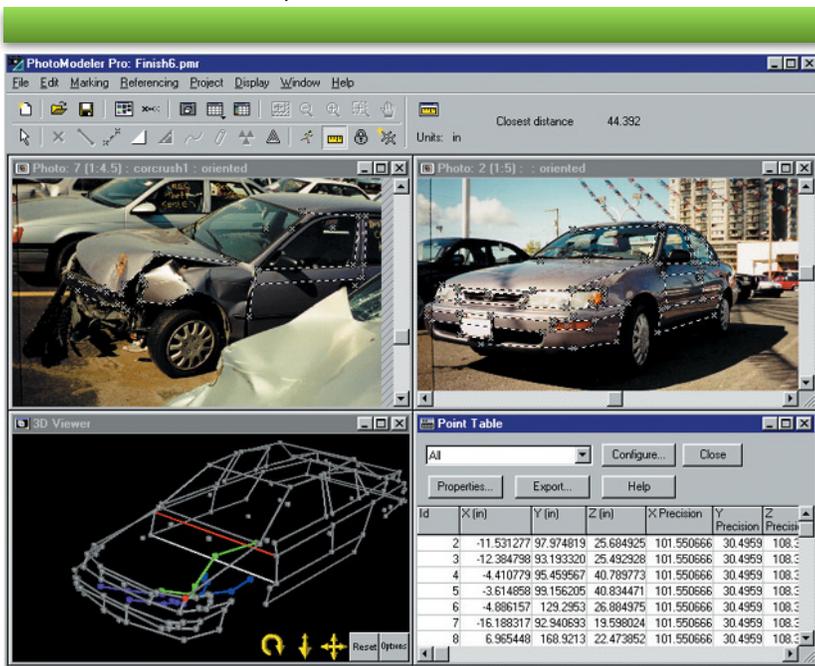
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Back-to-back days in Northern and Southern California, not to mention navigating around the brush fires near Glendora, our two presenters (and board members) had their work cut out for them. Well over 100 members attended the two training sessions. Glendora Police Department once again provided us an excellent training location, with plenty of room and much-needed air conditioning. Lou Peck of Dial Engineering and Lightpoint Scientific discussed many of the practical uses of photogrammetry, with an eye on using Photomodeler and iWitness.

Photogrammetry is the science of obtaining measurements from photographs, and has practical applications for both scene and vehicle documentation. At a crash scene, first responders can use photogrammetry to preserve and measure “fresh” evidence; and when the evidence is no longer visible, photogrammetry can be used to establish control points (and allow measurements) in first-responder’s photographs. Sometimes only one photograph is necessary, especially when all the evidence is on a single plane. With vehicles, photogrammetry can be used to document crush when you have access to the subject vehicle, and when you have access to an exemplar vehicle only, photogrammetry can be used to merge damage visible in photographs with known control points. Lou showed case studies of a damaged Dodge Dart and a Honda CRV, where the vehicles were no longer available, but damage profiles could be measured using an exemplar vehicle and photographs. Sometimes vehicle damage photographs are available from other sources, such as CoPart and EpicVin.com.

Lou discussed four methods of photogrammetry, including eyeball, projection, graphical, and computational methods. Lou recommends using a fixed lens, because it has fewer optical elements than a zoom lens; however, point-and-shoot cameras and iPhones work as well as a Nikon D3100; the accuracy

with digital photos is approximately 1 to 2mm. Lou further discussed the computational method, and explained his recent SAE paper on measuring vehicles, where he determined that Photomodeler produces results comparable to a total station and the Faro Arm, with 95% of the residuals below 3.1 and 2.1mm, respectively. Always with an eye on Daubert and Frye, Lou provided a list of trial acceptances for Photomodeler, which he keeps on his Lightpoint website. Lou gave many case studies to show many uses of Photomodeler.



One case involved a single photograph of a motorcycle and associated gouge marks on a single plane, which he was able to measure because many pavement markings were still present, despite the physical evidence being long gone. Another case study involved a Ford Ranger and Ford Explorer at Long Beach port, where several photographs of the vehicles at final rest were the only evidence he had to work with. The presentation was lively and engaging, resulting in many questions and thoughts by the audience.

Intersection Collision Investigation

Presented by Chris Kauderer



In the afternoon, Chris Kauderer of Kauderer & Associates discussed intersection collisions, with an emphasis on using proper nomenclature and analyzing phasing and timing diagrams. He discussed the three main types of traffic signals: Pre-timed, semi-actuated, and fully-actuated. Chris emphasized the importance of obtaining timing and maintenance documents for traffic signal controllers. After discussing the "seven come eleven" concept, four types of left turn phases were presented, including lead-lead, lead-lag, lag-lag, and split/sequential.



Chris provided great examples and case studies to illustrate the differences among these types of phases. After discussing the many factors involved in setting traffic signal timing, Chris discussed how traffic engineers reduce problems with the Dilemma Zone, even relaying his own personal experience with short yellow lights.

After discussing pre-emptions and detectors, Chris provided insight into some human factors issues, including response times and acceleration rates. The audience found Chris' presentation informative and entertaining also, resulting in another successful training session for the membership.

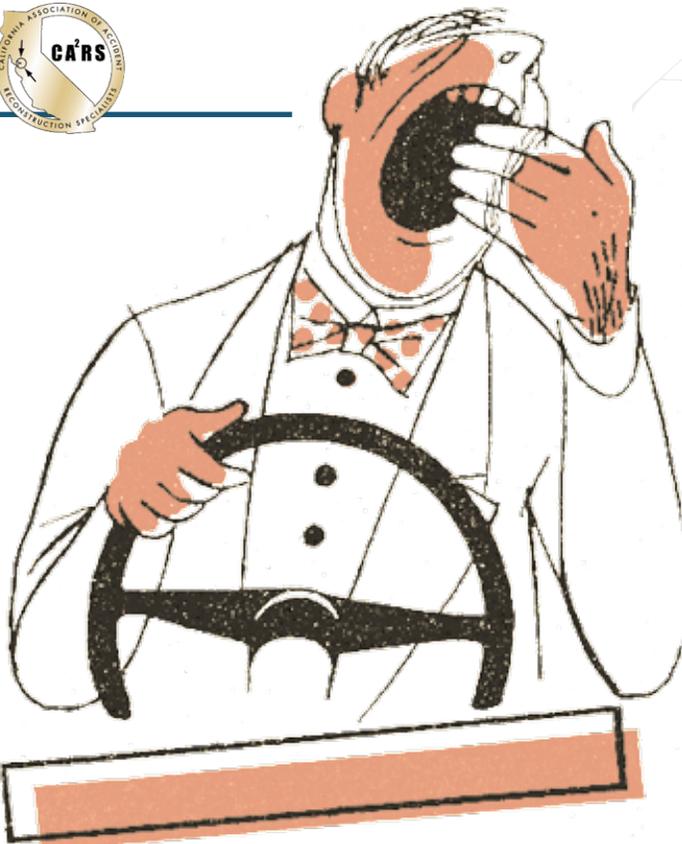
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Asleep at the Wheel

AAMVA IS ACTIVE IN THE FIGHT AGAINST DRIVING UNDER THE INFLUENCE OF FATIGUE

BY BRITTANY MAGEE

Drowsy driving, the hazardous combination of fatigue and operating a motor vehicle, is creating dangerous, and at times deadly, conditions on U.S. roadways, becoming a major threat to public safety. National transportation safety agencies and sleep medicine experts are working together to not only spread awareness and education about this important issue, but to diminish the number of drowsy driving related incidents from our roads altogether.

“Drowsy driving is every bit of a problem as drunk driving,” says Nathaniel Watson, M.D., 2015–2016 president of the American Academy of Sleep Medicine (AASM) and professor of neurology at the University of Washington in Seattle. We

need to get the public to appreciate the fact that it’s a preventable cause of motor vehicle accidents.” According to the National Highway Traffic Safety Administration (NHTSA), from 2009 to 2013, annually on average, there were more than 72,000 drowsy driving related crashes, as measured by NHTSA’s Fatality Analysis Reporting System (FARS). NHTSA also estimates more than 7,000 people have been killed in such accidents over the last decade.

AAMVA has been participating in numerous national-level forums to discuss the issue with federal policymakers, including NHTSA, according to Cian Cashin, senior manager of government affairs at AAMVA. “We are also working with the AASM and the National Sleep Foundation,” he says.

AT THE JURISDICTION LEVEL

Dr. Watson and the AASM created the Sleep and Transportation Safety Awareness Task Force. One of its main initiatives is to provide comprehensive educational material about drowsy driving for inclusion in states’ driver programs, including questions for the driver’s license exam. The goal is to “provide quality information that is consistent nationwide,” says Dr. Watson.

States have responded positively, according to AASM. Some states, such as New York, already have sufficient education material and support the initiative. Other states, including Delaware, Nebraska, Kansas, Pennsylvania, California and Alaska, are interested in either adopting the language recommended by AASM or working with AASM to tailor its recommendations to their specific needs. According to AASM, outreach to the other states is ongoing, and the academy is hopeful it will continue to secure interest from additional states.

Nearly ONE IN THREE drivers report they have driven within the past 30 days when they were so tired that had a hard time keeping their eyes open.

AAA Foundation for Traffic Safety survey

Utah and Montana have been very proactive about drowsy driving awareness, says Dr. Watson. Utah established a Teen Driving Safety Task Force that launched the “Don’t Drive Stupid” campaign, addressing drowsy driving as one of the “5 deadly behaviors.” Montana has an extensive drowsy driving module, including a lesson plan, presentations and fact sheets as part of its driver’s education curriculum.



AN ISSUE OF NATIONAL CONCERN

This past November, NHTSA, led by its administrator, Mark Rosekind, Ph.D., a renowned expert on human fatigue, launched a national forum to address drowsy driving. Called "Asleep at the Wheel: A Nation of Drowsy Drivers," the program involves many in the traffic safety and sleep communities. NHTSA also recently released its "Drowsy Driving Research and Program Plan," which includes a total of 10 projects that will begin by late 2016.

One major challenge of eliminating drowsy driving related incidents for both safety and sleep experts is there's no way to accurately measure drowsiness and fatigue; therefore, civil or criminal penalties against it are hard to enforce. "While many policymakers are willing to admit that drowsy driving is an issue, they find it more difficult to hold someone accountable for something that cannot be definitively proven," says Cashin.

While there is currently no biomarker for measuring the impact of drowsy driving, certain forms of technology that both combat and detect drowsy driving have been in the works. "There are corrective technologies that may play a role in mitigating dangerous driving behaviors, such as lane departure warning systems and fatigue detection systems," explains Cashin. "As these technologies continue to evolve, the ability to minimize human error and dangerous behaviors on the roadways becomes more tangible."

There are countermeasures to drowsy driving, such as caffeine or pulling over for a short nap, but those are just quick fixes. The ultimate goal is to make people not even get to that point in the first place. "There's typically no middle ground in drowsy driving," says Dr. Watson. "It's often not a problem until it's catastrophic."

Article originally posted in MOVEmag

PRIORITIZING SLEEP

As national traffic safety and sleep organizations continue to bring the issue of drowsy driving into the national spotlight and help jurisdictions further educate their citizens about the issue, they also want to stress the importance of personal responsibility. "There's no substitute for sleep," says Nathaniel Watson, M.D., 2015-2016 president of the American Academy of Sleep Medicine (AASM). "We encourage people to prioritize sleep, which means **aiming for at least seven hours per night as an adult.**"




You Snooze You Lose
Don't Drive Drowsy



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Confronting Drowsy Driving: The American Academy of Sleep Medicine Perspective

An American Academy of Sleep Medicine Position Statement

Drowsy driving is a serious public health concern which is often difficult for individual drivers to identify. While it is important for drivers to understand the causes of drowsy driving, there is still insufficient scientific knowledge and public education to prevent drowsy driving. As a result, the AASM is calling upon institutions and policy makers to increase public awareness and improve education on the issue, so our society can better recognize and prevent drowsy driving. The AASM has adopted a position statement to educate both healthcare.

American Academy of Sleep Medicine (AASM) is a leading professional society dedicated exclusively to the medical subspecialty of sleep medicine. As the leading voice in the sleep field, the AASM sets standards and promotes excellence in health care, education, and research. The AASM has a combined membership of 10,000 accredited member sleep centers and individual members, including physicians, scientists and other health care professionals. The AASM is dedicated to advancing sleep health policy to improve the health and well-being of the general public.

Drowsy driving is defined as the operation of a motor vehicle while impaired by a lack of adequate sleep. This impairment can be due to a chronic condition (e.g., an undiagnosed sleep disorder or chronic partial sleep deprivation), or an acute effect (e.g., staying awake for 18+ hours). Driving while drowsy can have the same consequences as driving while under the influence of drugs and alcohol: drowsiness is similar to alcohol in how it compromises driving ability by reducing alertness and attentiveness, delaying reaction times, and hindering decision-making skills. Unfortunately, drowsy driving can be difficult for individual drivers to identify; some drivers aren't aware that they have fallen asleep at the wheel even after being asleep for a few minutes. Drowsiness can impair the ability to drive safely, even if the driver does not fall asleep. Drowsy driving usually occurs at providers and the general public about drowsy driving risks and countermeasures.

A recent AAA Foundation for Traffic Safety study showed that an estimated 6% of all crashes in which a vehicle was towed from the scene, 7% of crashes in which a person received treatment for injuries sustained in the crash, 13% of crashes in which a person was hospitalized, and 21% of crashes in which a person was killed involved a drowsy driver. Drowsy driving is a serious public health concern, and the AASM has adopted the following position statements to educate the public and healthcare providers on drowsy driving risks and countermeasures. AASM:

- Believes that an awake and alert driver makes the roadways safer.
- Believes that every driver has a responsibility to be awake and alert when operating a motor vehicle.
- Supports the collaboration of sleep physicians, state departments of motor vehicles and licensing, highway patrol, the insurance industry, and legislative and regulatory bodies in the development and implementation of policies and procedures that reduce drowsy driving.
- Supports the inclusion of drowsy driving educational material and content in state's drivers manuals, drivers education curricula, and drivers licensing examinations.
- Supports the automobile insurance industry in the development of drowsy driving educational discount programs.
- Supports automobile manufacturing industry in development of technology to mitigate effects of drowsy driving.
- Supports the US Department of Transportation in building infrastructure to reduce and mitigate drowsy driving.
- Believes that any individual who has difficulty staying awake while driving, despite adequate sleep, should be evaluated and, when appropriate, treated by a physician for a sleep disorder.



To avoid drowsy driving, it is important to understand what causes it. Healthy sleep requires adequate duration and quality, appropriate timing and regularity, and the absence of sleep disturbance or disorders. Both long-term and short-term sleep deprivation can cause drowsy driving. The average adult needs seven or more hours of sleep per night, and failing to get enough sleep on a regular basis can result in excessive sleepiness behind the wheel. Even if you are sleeping for at least seven hours per night, an undiagnosed sleep disorder will result in poor sleep quality and can cause drowsy driving. Non-traditional work schedules (e.g., shift-work) can disrupt and shorten sleep time because it is difficult for many shift workers to sleep in the daytime instead of the night. Using sleeping pills or other sedatives prior to sleep can result in residual sleepiness the following day and cause drowsy driving. Driving for long distances, extended periods of time, or driving late at night can increase the chances of become drowsy while driving. All of these factors have a cumulative effect on drowsy driving; the more risk factors you have, the worse your driving performance likely will be due to drowsiness.

Regardless of the cause of drowsy driving, everyone should be aware of the symptoms which include:

- Frequent yawning or difficulty keeping your eyes open
- Nodding off or having trouble keeping your head up
- Inability to remember driving the last few miles
- Missing road signs or turns
- Difficulty maintaining your speed
- Drifting out of your lane



If you find yourself becoming drowsy while driving, you should pull off the road and rest until you no longer feel sleepy. Consumption of caffeinated beverages can temporarily increase alertness while driving but are not a substitute for adequate sleep. Turning up the radio, opening the window, and turning up the air conditioner are not effective techniques for staying awake while driving. Get plenty of sleep before driving long distances. If you are planning a long trip and know that you might be tired, use a designated driver or alternate drivers, rather than risk driving while drowsy.

Preventing drowsy driving starts with individual drivers, but must be a priority for both public and private institutions. The AASM encourages more research that better defines indicators of drowsy driving, identifies the threshold at which sleepiness while driving becomes dangerous, and provides the public with simple methods to determine when they might be too tired to drive safely. Young men aged 16–24 are most at risk of getting into an accident while driving drowsy; therefore, educational efforts to reduce drowsy driving should include this age group. Private companies should educate their employees on the dangers of driving while drowsy, especially within the transportation industry or when long work hours or shift work is prevalent to the industry. These companies should work to prevent excessive sleepiness in their employees and employ fatigue management strategies to reduce drowsy driving risk.

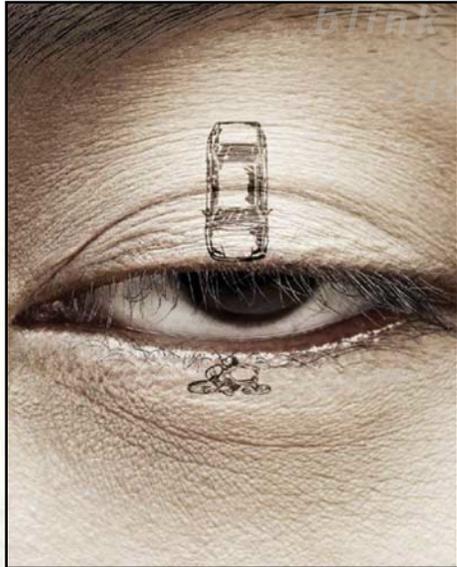
Drowsy driving has gained attention over the last few years in the eyes of the public and the government; however, there is still a lack of scientific knowledge and public education necessary to prevent drowsy driving. The American Academy of Sleep Medicine calls on institutions and policy makers to raise public awareness and improve education in order to better recognize and prevent drowsy driving.

<http://dx.doi.org/10.5664/jcsm.5200> / Submitted for publication September, 2015 / Accepted for publication September, 2015 // This was not an industry supported study. Dr. Chervin is on the advisory board of the not-for-profit SweetDreamzzz. Dr. Weaver has received research support from Tera, Inc., and Jazz. The other authors have indicated no financial conflicts of interest.

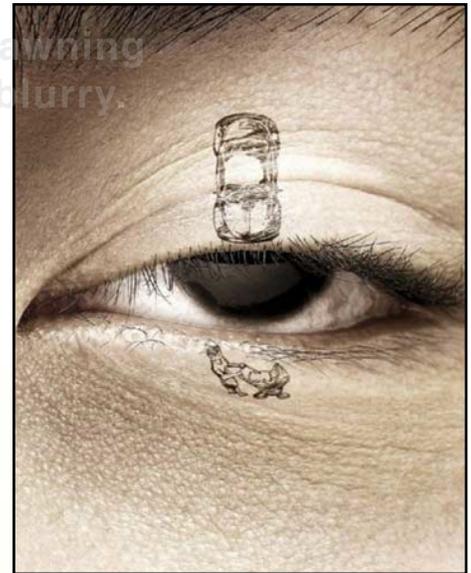


Drifting to Sleep While Driving

Your eyelids droop and your head starts to nod. Yawning becomes almost constant and your vision seems blurry.



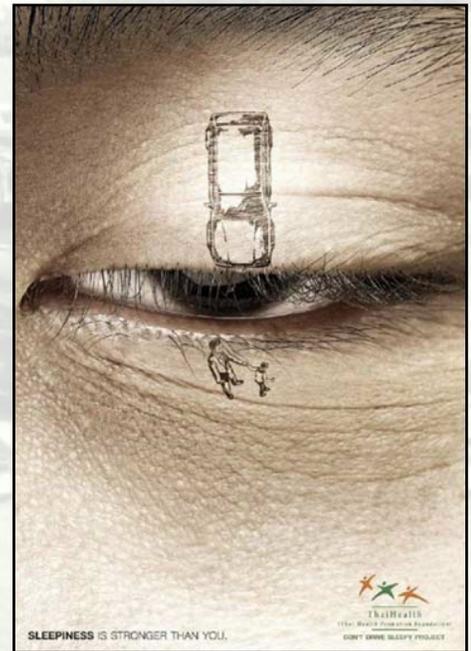
You blink hard, focus your eyes and suddenly realize that you've veered onto the shoulder or into oncoming traffic for a moment and quickly straighten the wheel.



latest victim

the latest victim

This time you were lucky; next time you could become the latest victim of the tragedy of drowsy driving.



SLEEPINESS IS STRONGER THAN YOU.



Lest you think it is a problem limited to the US, consider the photo in the background:

July 7, 2016

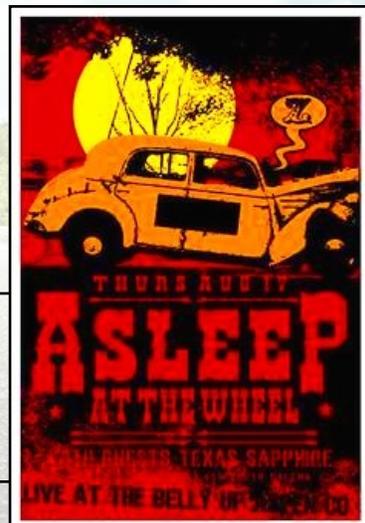
Sleepy driver causes four-car crash, killing married couple

Kota Tinggi district police chief Rahmat Othman said the driver of the Grand Livina, who was heading to Sungai Rengit, is believed to have nodded off and swerved into the opposite lane.

Read More : <http://www.nst.com.my/news/2016/07/157080/sleepy-driver-causes-four-car-crash-killing-married-couple>

According to the National Sleep Foundation's *Sleep in America* poll, 60% of Americans have driven while feeling sleepy and 37% admit to actually having fallen asleep at the wheel in the past year. However, many people cannot tell if or when they are about to fall asleep. And if sleepiness comes on while driving, many say to themselves, "I can handle this, I'll be fine." Yet they're putting themselves and others in danger. *What they really need is a nap or a good night's sleep.*

Asleep at the Wheel, an American country music group based in Austin, Texas, have won nine Grammy Awards since their 1970 inception. In their career, they have released more than twenty studio albums and have charted more than twenty singles on the *Billboard* country charts. Hopefully this is the only type of being asleep at the wheel that continues to gain popularity. A brief internet search of collisions caused by sleepy drivers begs to differ, unfortunately.





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related reading: **"Cell Phone Distraction, Human Factors, and Litigation"**

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Cell phones, straightforwardly, represent one of the utmost significant technological and cultural advances since fire. It is difficult for anyone to emerge upon any public location without hearing someone talking on their cell phone or observing someone texting reverently. While cell phones offer easy an entree to communication, the technology likewise compromises psychological, communication, and cognitive realities.

Cell phones represent a cognitive distraction. That is, cell phone represent a reduced ability for individuals to pay attention, process information, and then make decisions. Some ongoing behaviors associated with cell phone users have parallel features of addiction. Individuals have intense feelings of elation and despair concomitant with receiving voice calls and also text messages. Most people are not satisfied with checking messages or missed calls once or even twice an hour, but rather must check their cell phones four, five, or six times hourly, perhaps even more. If a cell phone is lost, feelings of uneasiness, despair, and panic often continue. When a cell phone call or text message is received, individuals have derived physiological symptoms, such as increases in blood pressure and heart rate. People spend prodigious amounts of time adding applications to their cell phones.

Considering the impact of cell phones on culture itself, it may be reasonably assumed that cell phone use and distraction will similarly continue to impact the field of law across many dimensions. As the general public and attorneys begin to contemplate upon the research and furthermore evaluate cases in the context of cell phone distraction demands, respectfully, guidance is needed to both prompt further investigation and also critically examine case credibility that may pivot on the understanding of the role of cell phone distraction on case particulars. Without an understanding of the historical and cognitive foundations of cell phone distractions, attorneys are little more than guessing or estimating how this medium may affect their case. This book and applicable arguments will help attorneys understand the potential impact of cell phone distraction on plaintiff and defendant behavior. For the general reader, this book will furthermore offer a historical framework and then serve as an impetus for further exploration.

Topics Include: *Cognition, Driving, Failures of Visual Awareness, Human Factors and Social Interactions, Developmental Aspects, Distracted Walking, Nursing Performance, Litigation, Jury Selection and Education, and Future Directions*

Cell Phone Distraction, Human Factors, and Litigation

T. Scott Smith, Ph.D.



Lawyers & Judges
Publishing Company, Inc.



SEPTEMBER 2016

9/2 Oklahoma City, OK Sponsored by UCMO. Application submission by July 4. Exam registration by August 3.

9/14 Great Falls, MT Sponsored by ACTAR. Held at the Montana Highway Patrol District II Office, 812 14th Street N. Applications submission by July 16. Exam registration by August 15.

9/19 Hillsboro, OR Sponsored by FARO. Application submission by July 21. Exam registration by August 20.

9/20 East Peoria, IL Sponsored by MwATAI. Application submission by July 22. Exam registration by August 21.

9/30 State College, PA Sponsored by PSP. Application submission by August 1. Exam registration by August 31.

OCTOBER 2016

10/14 Golden, CO Sponsored by CSP, held at CSP Academy, 15055 S. Golden Road. Application submission due by August 15. Exam registration by September 14.

10/14 Edmonton, AB Sponsored by CATAIR, held at Renneberg-Walker Engineering Associates, 9320-49 St, Edmonton. Application submission by August 15. Exam registration by September 14.

10/26 South Lake Tahoe, CA Sponsored by CAARS, held at Lake Tahoe Resort Hotel, 4130 Lake Tahoe Blvd. Application submission by August 27. Exam registration by September 26.

10/27 Orilla, ON Sponsored by OPP. Application submission by August 28. Exam registration by September 27.

No examinations will be held from November 2016 through January 2017

FEBRUARY 2017

2/1 Orilla, ON Sponsored by OPP. Application submission by December 3, '16. Exam registration by January 2, '17.

ACTAR.org lists calculators approved for use during the examination



NHTSA calls on news media and public to assist in finding unrepaired high-risk vehicles

NHTSA 16-16 / Thursday, June 30, 2016 / Contact: Bryan Thomas, 202-366-9550, Public.Affairs@dot.gov

WASHINGTON - New test data on a particular subset of defective Takata air bag inflators in certain model-year 2001-2003 Honda and Acura vehicles show a far higher risk of ruptures during air bag deployment, prompting an urgent call from the National Highway Traffic Safety Administration to ensure that unrepaired vehicles in this population are found and fixed before they cause further injuries or fatalities. "With as high as a 50 percent chance of a dangerous air bag inflator rupture in a crash, these vehicles are unsafe and need to be repaired immediately," said U.S. Transportation Secretary Anthony Foxx. "Folks should not drive these vehicles unless they are going straight to a dealer to have them repaired immediately, free of charge."

The higher-risk inflators are in certain 2001-2003 Honda and Acura vehicles:

- 2001-2002 Honda Civic
- 2001-2002 Honda Accord
- 2002-2003 Acura TL
- 2002 Honda CR-V
- 2002 Honda Odyssey
- 2003 Acura CL
- 2003 Honda Pilot



Examples of 2001-2002 model Honda Civic (above) and Honda Accord (right).

The air bag inflators in these particular vehicles contain a manufacturing defect which greatly increases the potential for dangerous rupture when a crash causes the air bag to deploy. Ruptures are far more likely in inflators in vehicles that have spent significant periods of time in areas of high absolute humidity—particularly Florida, Texas, other parts of the Gulf Coast, and Southern California. Testing of the inflators from these vehicles show rupture rates as high as 50 percent in a laboratory setting. The vehicles in question were recalled between 2008 and 2011. Honda has reported that more than 70 percent of this higher-risk population of vehicles has already been repaired, but approximately 313,000 vehicles with this very dangerous defect remain unrepaired. The risk posed by the airbag inflators in these vehicles is grave, and it is critical they be repaired now to avoid more deaths and serious injuries.

NHTSA and Honda are asking for the news media and public's assistance to find the remaining unrepaired vehicles. Drivers of these vehicles should immediately visit SaferCar.gov to check whether their vehicle has any outstanding safety recalls. Those that do should contact their nearest dealer to schedule a no-cost immediate repair. Replacement parts for these vehicles are available immediately. "The air bag inflators in this particular group of vehicles pose a grave danger to drivers and passengers that must be fixed right away," said NHTSA Administrator Dr. Mark Rosekind. "Drivers should visit SaferCar.gov or contact their local dealer to check whether their vehicle is affected. If it is, they should have the vehicle repaired immediately for free at an authorized dealer. We commend Honda for taking additional actions to get these vehicles repaired."

Though the vehicles are already under recall, NHTSA ordered Takata to perform additional ballistic testing following recent reports of ruptures. Eight of the 10 confirmed U.S. fatalities due to Takata ruptures – including the most recent in Fort Bend County, Texas – were in this population of vehicles. Honda has committed to immediately taking additional actions to enhance their efforts to find and fix recalled vehicles. Honda will provide additional information about their efforts. NHTSA has also directed Honda to report weekly on the progress of vehicle repairs. NHTSA is also expanding its own direct consumer outreach, including a paid media campaign and a series of outreach events in high-risk areas this summer. NHTSA has also engaged the vehicle insurance industry to help locate the unremedied vehicles.

Background on the Takata recalls: Nearly 70 million Takata air bag inflators are or will be under recall by 2019, in the largest and most complex auto safety recall in U.S. history. A combination of time, environmental moisture and fluctuating high temperatures contributes to the degradation of the ammonium nitrate propellant in the inflators. Such degradation can cause the propellant to burn too quickly, rupturing the inflator module and sending shrapnel through the air bag and into the vehicle occupants. [More information can be found here.](#)



NHTSA data shows traffic deaths up 7.7 percent in 2015

NHTSA 15-16 / Friday, July 1, 2016 / Contact: Karen Aldana, 202-366-9550, Public.Affairs@dot.gov

WASHINGTON - [Preliminary data](#) released today by the U.S. Department of Transportation's National Highway Traffic Safety Administration show a 7.7 percent increase in motor vehicle traffic deaths in 2015. An estimated 35,200 people died in 2015, up from the 32,675 reported fatalities in 2014.

"Every American should be able to drive, ride or walk to their destination safely, every time," said U.S. Transportation Secretary Anthony Foxx. "We are analyzing the data to determine what factors contributed to the increase in fatalities and at the same time, we are aggressively testing new safety technologies, new ways to improve driver behavior, and new ways to analyze the data we have, as we work with the entire road safety community to take this challenge head-on." Although the data are preliminary and requires additional analysis, the early NHTSA estimate shows 9 out of 10 regions within the United States had increased traffic deaths in 2015. The most significant increases came for pedestrians and bicyclists. [View the report](#)

"As the economy has improved and gas prices have fallen, more Americans are driving more miles," said NHTSA Administrator Dr. Mark Rosekind. "But that only explains part of the increase. Ninety-four percent of crashes can be tied back to a human choice or error, so we know we need to focus our efforts on improving human behavior while promoting vehicle technology that not only protects people in crashes, but helps prevent crashes in the first place."

In response to early estimates showing fatality increases, the agency [convened a series of six regional safety summits](#) with key stakeholders throughout February and March. As a result of those summits, the agency is working to develop new tools that could improve behavioral challenges including drunk, drugged, distracted and drowsy driving; speeding; failure to use safety features such as seat belts and child seats; and new initiatives to protect vulnerable road users such as pedestrians and cyclists.

In addition, when the final dataset is released later this summer, DOT and NHTSA will issue a call to action to safety partners, state and local elected officials, technologists, data scientists and policy experts to join the Department in searching for more definitive answers and developing creative, open data-driven solutions to improve safety and reduce deaths caused by motor vehicles.

The U.S. Department of Transportation is also pressing forward with new guidance to promote the development of automated safety technologies which could greatly decrease the number of crashes. NHTSA hosted two public meetings on automated safety technologies, in advance of guidance that will be issued later this summer. NHTSA and FHWA are also working closely on the implementation of the new safety performance measures, which require States and metropolitan areas to set targets for reducing deaths among motorized and non-motorized road users.

"The July 4 holiday is historically one of the deadliest days on U.S. roadways, so this weekend Americans should take extra care to ensure they get to their destinations safely," Foxx added. "Every driver should make sure all of their passengers are buckled up every time, and no driver should get behind the wheel when they've been drinking."

In March, the Department of Transportation announced a key safety agreement with automakers requiring more than 99 percent of new vehicles to have automatic emergency braking standard by 2022. This safety technology could prevent thousands of crashes every year. The Department is working to require vehicle-to-vehicle communications systems on new vehicles, a technology which could help drivers avoid or mitigate 70 to 80 percent of vehicle crashes involving unimpaired drivers. DOT is also working with researchers on technologies that could prevent drunk driving, which is responsible for close to one-third of highway deaths.



2016 World Reconstruction Exposition (or "What I Did In Orlando, Florida from May 2-6, 2016")

Benn Karne

You will be hearing about WREX 2016 for years to come, and for good reason. An Accident Reconstruction event of this magnitude, like comets, comes around only once in so many years. Virtually all major national (and a number of international) AR groups were involved. CAARS, with 25 members participating, had the largest group out of a total of about 865 attendees.

The dozens of presentations, which were scheduled all day and into the evening, were made by high-caliber experts, and were consistently engaging. Talks ranged from "Marijuana and Crashes" and "Visual Amodal Perception" to "Heavy Vehicle Reconstruction" and "Pedestrian Collisions". One notable presentation was "Rollover Crashes" by Don Stevens, who couldn't wait to tell us his insights and knowledge about characteristics of rollovers, as well as a number of "rules of thumb" applicable to most rollovers. (Did you know that the average typical "drag factor" for a rolling vehicle that doesn't hit anything is between 0.39 and 0.50?) His mile-a-minute delivery kept you engaged and his "war story" about locating glass evidence from a rollover in Mexico was a fitting finale. Another unique and inspiring speaker-cum-showman was TJ Tenant, the Engineering Manager for Bridgestone/Firestone, who also had a wonderful variety of failed tires with him to expound upon during the Thursday field day. Alas, as a tire company employee, he wasn't going to show us examples of manufacturing defects (sigh).

WREX 2016 was set up so that one had multiple opportunities to see any given presentation. By the end of the week, I actually had seen most of the speakers I'd wanted to. Between sessions, there was of course opportunity to meet folks from all over the world, and I enjoyed chatting up folks from Germany and Bermuda, among others.

The Tuesday "Crash Day" held at an old bunker-dotted portion of the Orlando airport was just fantastic, and we have our own Bill Focha to thank for a good chunk of it. We got to witness everything from a perfect triple-rear-ender (big rig into a car into a big rig), to a beautifully symmetrical offset head-on between two identical Ford sedans. A number of motorcycle into car crashes were also performed; one of those demonstrated quite graphically why it's not a good idea to cross the course while it's "hot."



CONFERENCE REVIEW



The Thursday "Field Day" events had a few dozen booths set up outside the hotel and included demonstration of commercial vehicle brake systems (Bill Focha had tilted a three-axle truck on its side just to make show 'n tell look easy), testing "normal" bicycle acceleration with volunteers, measuring motorcycle rider c.g. locations, showing characteristic clues to causes of tire failure, explaining CDR issues, and many more. Like those presenting indoors, the folks working the Field Day were all recognized authorities in their fields.

The Orlando Police Department provided a super lunch on Crash Day including a variety of BBQ and sides with their extensive field facilities. And speaking of eating, the main venue, Rosen Shingle Springs Resort, was huge, but very nice, with a variety of in-house restaurants to choose from (which was handy during the few downpours). Lunches were provided each day and were quite tasty and filling. For those who could tear themselves away from after-hours guzzling, there were evening presentations as well as test programs in which many volunteers participated. I took part in a visual perception test by Jeff Muttart, held out of town in a suitably dark area. It was, ironically, curtailed by the local gendarmes who had been alerted that something strange was going on. In short, it was a very full week.

Yup, WREX 2016 was a raging success. Of course a huge amount of work was required to make this event a reality, and I am so thankful to those responsible. While I'll be too geezerly to wait another 16 years to attend the next WREX Conference, those of you who missed this one should absolutely make plans for the next one. I guarantee it'll be well worth your while!

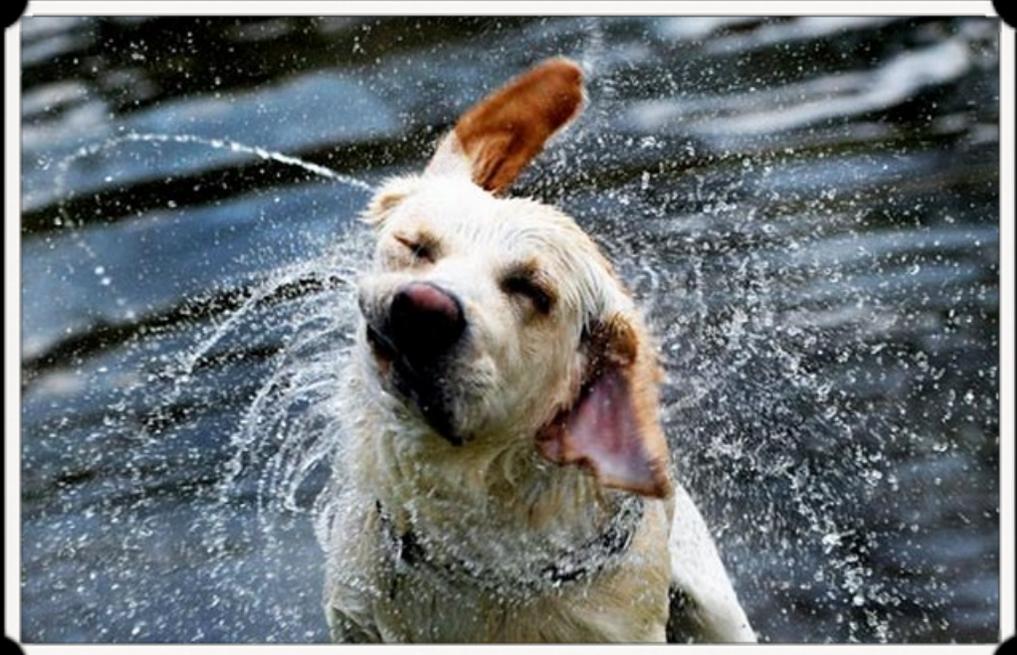
W R E X 2 0 1 6

REVIEW



parting shot
parting thought

This wet dog utilizes this principle of inertia as a substitute for a towel. By rapidly changing the state of motion of its fur, the water's resistance to these changes causes it to be detached from the dog to follow a course of motion of its own. For the dog, this property of inertia becomes another instance of *physics for better living*. After all, who needs a towel when you have inertia?



doggone inertia (sans towel)



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C A 2 R S . c o m

