Preparing to Drive

Becoming a Driver
You are beginning one of the most exciting yet dangerous milestones of your life: learning how to drive and getting your driver’s license! Nothing is more freeing, fun, and useful, or as deadly to teens as driving. Being aware of the risks and making wise choices will keep you and your passengers safe.

The entire Highway Transportation System relies on all three of its elements to work together: the people, vehicles, and roadways. You will be entering the system and your abilities, both physical and mental, will affect thousands of others over time. Think about how different people are as drivers: attentive, inattentive, drunk, stressed, tired, excited, angry, etc. All these types of drivers – and more – are out there on the roads right now! And think about how different all the vehicles are: motorcycles, trucks, small under-powered cars, fast sports cars, semi-trucks, trucks pulling boats and RVs, etc. Then think about how different the roadways are: dirt, gravel, paved, smooth, potholes, bumpy, curvy, wet, icy, steep, etc. Throw in different weather and lighting conditions and the situation gets even more complex.

“Responsibility”. The word might make you cringe but it’s something that is earned over time and usually opens up additional rewards and opportunities if taken seriously. Driving may or may not be your first big responsibility but the driving task does require smart decision-making and is a privilege not a right in Idaho. That means it can be taken from you if certain rules are not followed. You must always have your driver’s license with you when driving. You must not drink or use drugs and drive. You must not allow an unlicensed driver to drive your vehicle. You must also take care of the vehicle you are driving - keeping it in a working and safe condition. Keep the windshield clean and free of distracting stickers and decals. Don’t hang objects from the rearview mirror. Make sure lights, blinkers, and your speedometer are working correctly. Check your tires for damage, tread depth, and air pressure regularly. Protect the engine by keeping oil and coolant at appropriate levels.

The Thrill of the Open Road
Most new drivers can’t wait to get their driver’s license and hit the open road. And most parents can’t wait to be free from having to haul their teenager around town in the station wagon. Oftentimes the family just wants to speed up the process. But wait. Don’t be so anxious.

Take the time in driver education to learn everything you can. Don’t have the attitude that you already know everything. Listen to your instructors and other drivers – even teens – for their advice and experiences.

Be as wide awake and alert as possible when you are behind the wheel. If you need to wear glasses or contacts to see better, wear them! When learning to drive you might have tunnel vision – the ability to only see what’s directly in front of you. Relax. Wiggle your fingers. Drop your elbows. Breath. Slow down. Communicate with your driving instructor on how you are feeling. It might help to talk out loud while driving – something called “commentary driving” – to help you process what you are seeing, thinking, and planning to do. Remember that you are in a vehicle with a trained instructor who knows how to use the steering wheel and dual brake if necessary. Ask a lot of questions. Don’t take criticism personally. Welcome to driver education!
Graduated Driver Licensing Program (GDL)

Because good driving takes time and practice (experience), most states, including Idaho, have a GDL program. This program exposes teen drivers to new conditions and situations gradually.

Idaho requires teens to drive for 6 hours during driver education and another 50 hours during the 6-month supervised instruction period. 10 of those hours must be at night. After completing the six months of supervised driving, the new driver must take both a written and driving test before being given a driver’s license. Then, during the first 6 months of having a driver’s license there can be only one non-relative in the vehicle while the new driver is behind the wheel.

If under the age of 16 the new driver cannot drive at night unless a licensed driver age 21 or older is in the vehicle.

2010 Idaho Crash Statistics
- 22,555 crashes
- 185 fatal crashes
- 209 fatalities
- 61% of crashes occurred in the city
- 77% of fatalities occurred in the country
- 46% of fatalities resulted from impaired driving
- 78% of Idaho drivers wore a seatbelt
- Only 47% of those killed in a crash were wearing a seatbelt
- Aggressive driving was a factor in 52% of all crashes
- Distracted driving was a factor in 26% of all crashes and caused 60 fatalities
- While every crash and fatality is one too many, fatalities have decreased 5.7% since 2006.

“95% OF AMERICANS BELIEVE TEXTING AND DRIVING IS DANGEROUS BUT 35% DO IT.” AAA IDAHO

2010 Idaho TEEN Crash Stats
- Idaho teens are involved in nearly 25% of all Idaho crashes
- Idaho teens are nearly 3x as likely to be in a crash than all other drivers
- Idaho teen crashes cost Idaho $466 million dollars in 2010 alone
- Idaho teens were involved in 27 fatal crashes
- 1 in 5 Idaho teens involved in a fatal crash were impaired
- Idaho teens were involved in 5,177 crashes
- Idaho teens were involved in 274 fatal and serious injury crashes
- 14 Idaho teen drivers died in a car crash
- 43 Idahoans died in crashes with teen drivers.

“TEEN DRIVING DEATHS IN THE U.S. ARE AN EPIDEMIC.” JEFFREY RUNGE, M.D., NHTSAA

Idaho Crash Clock 2010
- A traffic crash occurred every 23 minutes
- A person was injured in a traffic crash every 45 minutes
- A motorcyclist was injured every 18 hours
- A bicyclist was injured every 27 hours
- A pedestrian was injured every 44 hours
- A person was killed in a traffic crash every 42 hours
- A person was killed in an aggressive driving crash every 4.2 days
- An unbelted passenger was killed every 5.1 days
- A person was killed in an impaired driving crash every 3.8 days
Traffic Control Devices, Laws, and Basic Vehicle Control

Traffic Signs

By recognizing and understanding the meanings of traffic signs you are able to stay one step ahead of knowing what to do in sometimes very complicated roadway situations. Take the bear crossing sign, above. Seeing this sign and knowing what it means before getting to the location where bear commonly cross the road might save your life, your car, and the life of a bear. The best actions to take when seeing this sign? Slow down and pay extra attention for movement along both sides of the roadway.

Signs are one of three types: REGULATORY signs, which tell you about laws you must obey, WARNING signs, which help you avoid dangerous situations, and GUIDE signs, which provide information.

Regulatory Signs: The most important regulatory signs are STOP and YIELD signs. They are so important they have their own unique shapes. All other regulatory signs are either white squares or rectangles with red or black lettering. The STOP sign is a red octagon with white letters and border and requires a driver to come to a complete stop at the intersection where it is posted. After stopping the driver must look for other vehicles and pedestrians and determine who has the right of way to go first. A YIELD sign acts much like a STOP sign but if slowing enough ahead of time and analyzing the intersection, you may not have to stop completely if you have the right of way.

Warning Signs: Most warning signs are yellow diamond-shaped signs that warn drivers of possible dangers ahead. But SCHOOL ZONE, SCHOOL CROSSING, and NO PASSING signs are warning signs with their own shapes.

Guide Signs: Provide a variety of information, including ROUTE signs which tell you the name and/or number of the road you are driving on, green mileage signs to nearby destinations, blue signs that tell you about nearby services, and brown signs that indicate points of interest like national parks.

Traffic Lights

Green lights indicate “GO” but you still have to be aware of who has the right of way. For example, a green circle in a turn lane means “GO” only after you yield to oncoming traffic. Be aware of how long the light has been green so you can predict when it will be turning yellow and then red.

Yellow lights warn you to make every effort to stop safely. In Idaho if you are already in an intersection when the light turns yellow you can legally complete your passage through that intersection, though you should do it quickly and carefully. And you cannot enter an intersection if the light is already red.

Red lights mean STOP! When your light is RED it means cross traffic can legally enter that intersection at the posted speed limit.
Right on Red

All states allow vehicles to turn right at a red light but the vehicle must first stop completely and yield to any cross traffic.

Left on Red

Idaho also allows drivers to make a left at a red light. As expected, the vehicle must first come to a complete stop and yield to any cross traffic, but it can only be done onto a one-way street.

Doghouse Signals and Green Arrows

The sign above, known as a doghouse signal, is fairly common at intersections. If the green arrow is lit you have the right of way and can turn. If the green circle is lit you can turn only after yielding to oncoming traffic. And red means stop of course!

Roadway Markings

Signs aren’t the only means of telling drivers what to do and where to drive. Paint and other reflective markers communicate to drivers what is ahead.

Yellow lines separate two-way traffic. A broken yellow line allows a driver to pass another vehicle while a solid yellow line does not.

White lines separate lanes of traffic traveling the same direction. You may cross these broken white lines while changing lanes. Solid white lines indicate that you should not cross them. The solid white lines on the edge of a roadway are there to help you see the edge of the road at night or in other poor-visibility conditions. Solid white lines are also used at crosswalks where you must stop. These are called stop lines.

Some states, including Idaho, use grooves in the pavement, called rumble strips, to alert drivers to a hazard. You might find them near the edge of the road, in the middle of the road, or when approaching a dangerous intersection where cross traffic might not stop.

Other roadway markings include a large “X” and two “Rs” at a railroad crossing, the word “SCHOOL” at school crossings (like the one spelled incorrectly above!), and various parking lot markings to help drivers know where they can and can’t park.

Pay attention to all the signs around you to be a well-informed driver.
Gravity and Energy of Motion

Gravity and energy of motion affect the way a vehicle performs. A 3,000 lbs. vehicle can really get away from you if you do not understand and control these natural forces. Especially in conditions that are less than ideal.

Gravity is the force that pulls all things downward. You can feel this pull when you drive up or down a hill. When traveling up a hill you’ll have to apply more gas to continue at the same speed. When traveling down a hill you’ll have to apply the brake to prevent going too fast. It will also take longer to stop if traveling downhill.

The point at which the weight of an object is even all around it is called its center of gravity. A vehicle handles better with a low center of gravity, which is why sports cars and race cars are as low to the ground as possible. A 4x4 loaded with camping gear on the roof rack has a high center of gravity, and therefore a better chance to roll over in a corner at high speeds.

A moving object has energy of motion, or “kinetic” energy. The more a vehicle weighs the more energy of motion it has and the longer it will take to stop the vehicle. If vehicle A weighs twice as much as vehicle B, vehicle A will take twice as long to stop as vehicle A. However, a vehicle’s energy of motion will change in proportion to the square of its change in speed. This means if you double your speed it will take four times the distance to stop! If you triple your speed – nine times the distance to stop.

Friction and Traction

Probably the most important pieces of equipment on your car are the four tires that hold it to the road. The force that is in play here is called friction – and the friction created by a tire on the road is called traction. Rub your hands together briskly and you’ll feel the heat and resistance this is created by friction.

And while each tire on a vehicle seems large enough to do the job, only a small “footprint” of each tire is actually in contact with the road. That’s not too bad if the tire tread is new, the tire is properly inflated, and the roadway surface is clean and dry, but if not, the footprints are much smaller and/or irregular. Imagine a 3,000 lb. vehicle being held onto the road by four tire “footprints” about the size of a paper plate and you see how important good tires and proper speed really are if you would prefer to stay on the road.

Tire Inflation

Each tire is designed to operate best at a certain level of air pressure inside that tire. Check your owner’s manual or the side of each tire to find that number. It will be listed as psi, or pounds of air per square inch. Many tires will have a number like “35 psi” on them and it is best to keep the air pressure as close to that number as possible.

![Tire Inflation Chart]

WHAT WILL IT TAKE YOU TO... STOP

- 25 MPH
- 35 MPH
- 45 MPH
- 55 MPH
- 65 MPH

SLOW DOWN - ARRIVE ALIVE

TOTAL 364 PL.
TOTAL 364 PL.
TOTAL 364 PL.
TOTAL 364 PL.
TOTAL 364 PL.

ZERO FATALITIES
Overinflated tires have too much pressure in them and only the center of the tire will grip the road properly and it will wear out more quickly in the center of the tire and will not last as long.

Underinflated tires only provide traction on the outside edges of the tire, usually where there isn’t any tread. The outside edges of an underinflated tire will wear out first and they will not last as long.

A properly inflated tire grips evenly across the surface of the tire, whisking away any water on the road and providing maximum traction.

Outside air pressure can change the pressure in your tires without you knowing it. In the winter, when the air is colder, tire pressure drops and you will likely need to add air to your tires. In the summer, when the air is warmer, tire pressure will likely increase and you may need to let out a little air. Use an inexpensive tire pressure gauge to ensure you are keeping your tires at the recommended level. Properly inflated tires help a vehicle handle better and get better gas mileage!

A simple tool to check your tire for proper tread is a penny. Place the penny with the top of Lincoln’s head into the tread of your tire. “If you can see Lincoln’s head, you need more tread.” Try it!

Curves

The physics involved in driving come into play even more when you enter a curve. Energy of motion (momentum) will try to keep your vehicle going in a straight line and your speed will try to make your tires lose traction. Control your speed and you will safely and smoothly enter and exit a corner. You will discover, after taking this course, that the solution to many of our problems on the road is speeding. Slow down and most problems go away.

Force of Impact

Collisions usually happen “in the blink of an eye” and they can be violent and deadly. You can protect yourself and reduce the force of an impact by doing several simple things.

First, slow down. Speed is the most important factor in determining how hard two objects will collide. Always try to reduce speed in an emergency.

Second, a heavier vehicle will cause more damage than a lighter one. Watch out for the larger vehicles on the road.

Third, the distance a vehicle travels after it hits another object affects the force of impact. If you hit the brakes and then a trash can you will continue to move forward for quite some time before stopping. The impact will not be much. However, if you hit your brakes and then a tree, the tree won’t give much and the distance your vehicle will travel after impact will be short. Sadly, your internal organs, including your brain, continue to travel at the speed your car was traveling, resulting in serious injury or death.

Wearing your seat belts is the number one thing you can do to prevent injury and death in a collision. Seat belts will almost always keep your body in the vehicle where you are safer.

Air bags are a balloon-type of device that automatically inflates during a collision to slow your body down and reduce the force of impact. Air bags are designed to be used with seat belts and work best when the driver is at least 10 inches from the steering wheel – where the driver side front air bag is housed. Also, keep your hands at 9 and 3 on the wheel to prevent hand, wrist, and arm injuries during an air bag deployment. Air bags deploy at around 200 mph! Because of this, children under the age of 13 should never be placed in a front seat with an air bag. Their little bodies cannot withstand that much force. Some newer vehicles have switches that give owners the ability to turn front air bags off in cases where children must sit up front.