The mission of the National Safety Council is to educate and influence society to adopt safety, health and environmental policies, practices and procedures that prevent and mitigate human suffering and economic losses arising from preventable causes.

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Do you know how your ABS's work?

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Anti-lock Braking Systems

"More efficient brakes on an automobile will not, in themselves, make an automobile any safer." This statement, made more than 50 years ago by two psychologists, Gibson and Crooks, is still applicable today.

> *ABS is designed to stop a vehicle in a shorter distance than if the vehicle had skidded to a stop.*

The anti-lock brake system (ABS) was designed in the 1970's as a mechanical solution to brake lock-up, which can result in spinouts and crashes. In other words, these brakes are more efficient to help make driving safer. However, many drivers do not understand how the ABS works, or how it should be used. The apparent lack of information results in overconfident driving behaviors, leading to traffic crashes.

How Do ABS Work?

ABS sensors are located on each wheel and are designed to detect brake lock-up and *automatically* pump the brakes, about 10 times faster than a human can, to prevent the lock-up. This allows the driver to maintain steering control, which is lost when brakes lock-up, prevents skidding, and helps the car stop in a straight line.

When the ABS is engaged, the driver will feel a pumping action under his or her foot. This action is the ABS pumping the brakes – not brake failure as many drivers think.

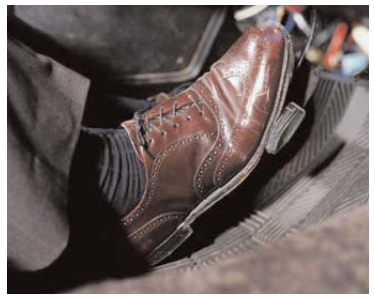
Anti-lock brakes differ among vehicles; however, how they work is similar. Each ABS system has sensors that monitor the rotational speed of selected wheels when brakes are applied. When one of the wheels lock-up, the sensor begins "pumping" the brakes automatically. Some passenger cars and SUV's have anti-lock brakes on all four wheels; pickups and cargo vans have rear-wheel only and tractor-trailers have separate anti-lock systems for the tractors and the trailers.

Source: National Safety Council

How Should You Use Your ABS?

To use the ABS properly, step on the brake pedal firmly and hard. Anti-lock brakes should not be pumped since the system pumps the brakes for you. In fact, drivers should not be afraid to "stomp" on the brakes in an emergency situation. Do not lift your foot off the brake until the vehicle stops. If you release or pump the pedal, this defeats the purpose, because the system relies on hydraulic pressure generated by the driver's foot to engage the brakes.

> *The National Safety Council recommends that drivers new to ABS should practice using them, prior to emergency use, to get used to the feel of the brakes pulsating.*



Practice using the brakes in a vacant parking lot to get to know how they feel and work before you need them in an emergency.