## How Fast is TOO FAST?

## A discussion on the



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9 you're fine - 10 you're Mine!

## Did you know?



Most Speed Relaited Grashes occur on roads with Speed Limits under 50 MPH .

## If you double your speed, your

 minimum stopping distance also doubles.
## True or False?

## Kinetic Energy Formula

- $\mathrm{Ke}=1 / 2 \mathrm{~m}^{*} \mathrm{v}^{2}$


## It's Speed not Speeding

## If you speed:

(1) You have less time to avoid crashes
(2) You have less control over the vehicle
(3) It lengthens your stopping distance
4) It increases the likelihood of crashing and
(5) increases the severity of the crash
(7) GHSA Report

Speeding Away from Zero


## But Not Me?



## Have you ever

- Have you ever run a yellow light?
- Have you ever weaved between lanes to be at the head of traffic?
- Have you ever driven 5 MPH or more over the speed limit?
- Have you ever been angry or upset thinking traffic was moving too slow for your liking?
- Have you ever tried to beat you arrival time on your GPS?


## From the movie Starman, 1984



## How do you CONVERT MPH TO FPS?

## Think in fps not mph

- Miles per Hour
- Speed
- Scalar quantities possess magnitude only
- Feet per Second
- Velocity
- Vector quantity, incorporating direction with speed
- $V=S * 1.466$
- $35 \mathrm{mph}=51.31 \mathrm{fps} / \mathrm{s}$

How Fast is TOO Fast

## CAN REDUCING YOUR SPEED BY JUST 3 MPH MAKE A DIFFERENCE?



20 is plenty!

How Fast is TOO Fast

## WHAT IS THE MOST COMMON TYPE OF CAR COLLISION?



Wipe Off 5!

# Stopping Distance 

RELATIVE STOPPING DISTANCES for passenger cars, buses, and large trucks


## Are You a Safe Driver?

## How much time do you Really Save?



## 30-Mile Trip at different speeds

- 55 miles per hour - 32.7 minutes
- 65 miles per hour
- 27.7 minutes ( 5 minutes saved)
- 75 miles per hour
- 24 minutes ( 8.7 minutes saved)


## Do the Math

- Formula: Distance/mph x 60 (minutes)
- Example: $30 / 75=.4 \times 60=24$ minutes
- This math assumes you can maintain a constant speed without slowing down for traffic, signals or curves in roads.


## Reality is ...

In reality, you'd probably save only 4 minutes, at best. And keep in mind, most trips are short. The average time saved on a 5-mile trip, driving 65 mph on a 45 mph posted road, is only 1.9 minutes.

We are literally killing ourselves with MAXIMUM EFFORT LITTLE REWARD

## What is

## PERCEPTION-REACTION TIME?

## Remember Braking Distance

Rコロ Typical stopping distances for an average family car


40
 distance


 96 m (315 feet)

## RaC <br> Corntiont

## Question?

## DOES WEAVING BETWEEN LANES GET YOU TO YOUR DESTINATION SOONER? WHICH IS SAFER?

## YES \& NO

Mythbusters


What is the
PHANTOM TRAFFIC JAM?

## The Phantom Traffic Jam

## Cascading Failure




## What it looks like in Real Life



One Solution to the Traffic Wave Problem

## Variable Speed Limits

What is a
ZIPPER MERGE?

## The Merge

Typical Merge



## "Yes, Mr Police Officer. I did see the speed limit. I just didn't see you."

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The Best Safety Device is a Rear View Mirror with a Cop in it.
Dudley Moore


## Tortoise or the Hare?



## Slow and Steady Wins the Race

# Your Speed Does Not Matter Forward is Forward 

## Please Drive Safely

## Thank You



