Name(s)

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Project Number

J0307

Project Title

Traffic Light Safety and Improvement

Abstract

Objectives/Goals

The objective is to see whether the normal traffic light sequence (green, yellow, red), the blinking yellow sequence (green, yellow, blinking yellow, then red), or the blinking green light (green, blinking green, yellow, then red), can stop vehicles in time.

Methods/Materials

30 subjects of all different ages were tested on a #Body Shaping- Step N# Flex# with the left foot area representing the brake, and a place for your right foot, which will be the accelerator. Subjects were timed from the time the brake touched the floor and the moment the traffic light, displayed on the television set, turned red. Each subject was tested 5 times on each light.

Results

The subject would be tested 5 times for each light. The test had been administered to 30 subjects ranging in age from 6 - 83. The time left over after pushing the brake down fully before the light turned red, and then turning red, would be recorded in seconds. The number of failures was recorded and the number of subjects who fully passed the light was also.

Conclusions/Discussion

The blinking green light does prepare the driver for the upcoming light and makes drivers more aware of the light ahead. The blinking green light has a 10% higher rate of stopping before the light turns red compared to the blinking yellow light and a 23% improvement level compared to the normal light. There were a total of 8 failures with the normal light, 5 failures with the blinking yellow light, and only 2 failures where subjects could not put the brake down before the light turned red with the blinking green light.

Summary Statement

To determine if the normal traffic light sequence (green, yellow, red), the solid then blinking yellow sequence, or the solid then blinking green light, can better prepare drivers for the upcoming light even from a distance.

Help Received

Father helped create single traffic light images that were later made into the "movie" that was used for testing of this project