

ACCIDENT RATES

Traffic accidents constitute a major social problem, above all when they have serious consequences. **Safety benefits us all**, and we should therefore be aware of the huge importance of preventing this type of accident.

Traffic accidents are the cause of **40% of deaths** during working hours.

There are three factors involved in accident rates:

- **Human factor:** Dependent on the attitudes and aptitudes of the driver and pedestrian.
- **Technical factor:** Dependent on the proper condition of all elements of the vehicle.
- **Environmental factor:** Dependent on the road and weather conditions.

The human factor causes between 70% and 90% of traffic accidents. It is essential that both pedestrians and drivers act appropriately if accidents are to be avoided.



HUMAN FACTOR: THE DRIVER

This leaflet aims to remind readers of the factors to be taken into account by drivers because of their potential negative influence on driving.

Factors with a negative influence on driving:

1. ALCOHOL.
2. SPEED.
3. FATIGUE.
4. DISTRACTIONS.
5. AGGRESSIVENESS.

Alcohol, speed and fatigue are the main causes of road accidents.

4. DISTRACTIONS

Distractions serve to reduce response capacity. A distracted driver is a factor in one in every three traffic accidents, typically causing two types of accident: **Vehicle leaving the road** or **rear-end collision**.

Factors which could cause distraction:

Internal	External
<ul style="list-style-type: none"> ▪ Mobiles or cigarettes. ▪ Adjusting the radio. ▪ Insects. ▪ Map reading. ▪ Fatigue or alcohol. 	<ul style="list-style-type: none"> ▪ Looking for hotels or bars. ▪ Highly familiar roads. ▪ Admiring the view. ▪ Incorrect signage.

The use of electronic equipment while driving (phone, tablet, satnav systems, DVD, radio/CD) is particularly dangerous as the driver is distracted and the vehicle is not being properly controlled, with one hand busy.

5. AGGRESSIVENESS

Aggressiveness when driving has now become an alarming phenomenon.

Decisive factors in the level of aggressiveness:

- Condition of the driver: drivers under the influence of alcohol or in a hurry tend to have more violent reactions.
- **Age-gender:** younger and older drivers tend to react worse to traffic violations. They also react worse to women than to men.
- **Type of vehicle:** worse reactions are also seen towards groups such as taxi drivers, or those driving old cars.

MOST COMMON TYPES OF AGGRESSION	
%	AGGRESSIONS
63	Offensive and obscene gestures
43	Tailgating
39	Insults and verbal aggression



Plan general de actividades preventivas de la Seguridad Social 2015



SECRETARIA DE ESTADO DE LA SEGURIDAD SOCIAL
DIRECCIÓN GENERAL DE ORGANIZACIÓN DE LA SEGURIDAD SOCIAL

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1. ALCOHOL

Alcohol is probably the greatest risk factor when driving. Drinking alcohol causes physical and mental changes which seriously hamper safe driving.

Effects of alcohol on drivers

- Increased rule-breaking
- Behavioural changes
- Clumsiness
- Increased reaction and braking time
- Sensory dysfunction
- Lack of coordination
- Distorted field of view
- General torpor

The Spanish General Traffic Regulation establishes the maximum permitted level of Alcohol in Blood:

PERMITTED LEVELS	
Drivers of private vehicles and bicycles	0.5 g per litre of blood 0.25 mg per litre of breath exhaled
Drivers of other vehicles	0.3 g per litre of blood 0.15 mg per litre of breath
Novice drivers	0.3 g per litre of blood 0.15 mg per litre of breath exhaled

The risk of suffering an accident increases exponentially after drinking alcohol, as the concentration in the blood rises.

Alcohol in blood	Effects	The risk of accident is multiplied by:
0.15	Reduced reflexes.	1.2
0.20	Difficulty driving in a straight line. False perception of distance. Speed underestimated	1.5
0.30	Movements hampered.	2.0
0.50	Euphoria. Reduced risk perception. Longer reaction time.	3.0
0.80	General impact on behaviour.	4.5
1.20	Intense fatigue Blurred vision	9.0
1.50	Severe drunkenness	16.0
3.5	Coma	-
4.5	Death	-

2. SPEED

Over **30% of accidents** on out-of-town highways and over 13% on city streets are caused by speeding.

Higher speeds:

- increase **reaction time**.
- increase **braking distance**.
- reduce **response capacity**.

Reaction time:

The time it takes from a driver noticing the danger to when they begin to push down on the brake pedal.

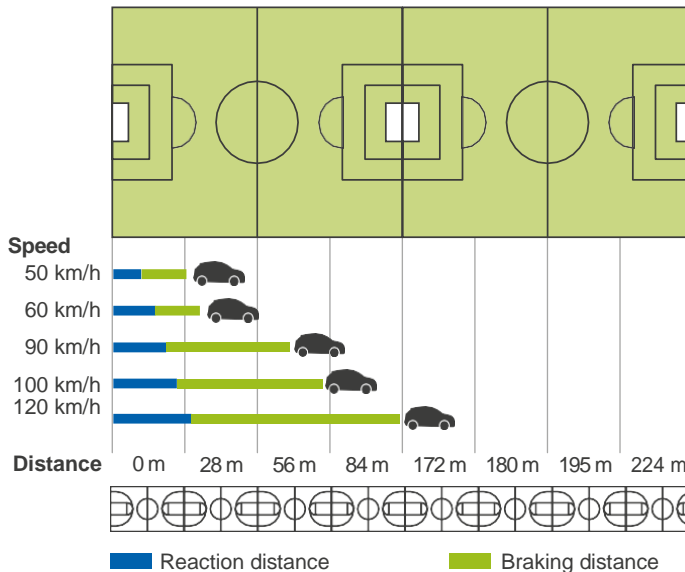
The reaction time is normally **0.75 seconds**:

- A vehicle travelling at **40 km/h** covers **8 metres** before the driver brakes.

Braking distance:

The distance covered by a vehicle between starting to brake and coming to a standstill.

- A vehicle travelling at **120 km/h** will cover **100 metres** in **3 seconds** before reaching a standstill in an emergency.



Safety tips:

- Stick to the speed limit.
- Adapt your speed to road conditions.
- Cooperate with other drivers.
- Understand your vehicle's capabilities.

3. FATIGUE

Fatigue is one of the main risk factors when behind the wheel. Between approximately 20% and 30% of traffic accidents each year are the result of fatigue.

The **effects of fatigue** on driving are:

- Difficulty remaining alert.
- Muscle tension and stiffness.
- Reduced precision.
- False responses.
- Greater risk-taking.
- Behavioural changes.
- Aggressiveness.
- Overestimation of own abilities.

Symptoms of fatigue:

- **Eyesight:** constant blinking, heavy eyes, poor focusing, continuously rubbing your eyes.
- **Hearing:** mishearing, strange buzzing sounds, greater sensitivity to noise.
- **Physical:** pressure in the head and sinuses, numbness in the arms, nodding head, shifting in your seat.
- **Driving:** unwarranted changes of speed, slight change of direction, driving too close to the car in front, reduced sense of speed, mistimed gear changes.

Factors that increase fatigue:

Vehicle	<ul style="list-style-type: none"> ▪ Excessive noise and vibrations. ▪ Inadequate lighting. ▪ Excessive heat. ▪ Poor ventilation.
Road	<ul style="list-style-type: none"> ▪ Driving at night or in bad weather. ▪ Driving on unfamiliar or very busy highways.
Driver	<ul style="list-style-type: none"> ▪ Age. ▪ Inexperience. ▪ Poor seat position. ▪ Personal worries.

Preventing fatigue:

- Drink plenty of water.
- Do not drive for more than 8 hours per day.
- Take a break every 2 hours or 150-200 km.
- Do some exercise when you stop.
- Don't eat heavy meals.
- Drive in comfortable clothes and at a pleasant temperature.