

# **SAFETY GUIDELINES FOR MOTORCYLES**

## **General Information**



**WORLD HEALTH ORGANIZATION  
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## PREFACE

In many parts of the Region, accidents are the leading cause of mortality in the most active age groups. More than half of these deaths are caused by road traffic accidents. In some countries, especially where rapid motorization is occurring, motorcycle accidents claim the greatest number of deaths among adolescents. In this context, WHO has selected the prevention of accidents as its theme for World Health Day in 1993.

All this has encouraged me to prepare this small pamphlet setting out safety guidelines on the use of motorcycles. If followed, they will certainly help to reduce the toll of unnecessary injuries and deaths. While this pamphlet has been written primarily for use of health workers, I believe its contents could be useful to all motorcycle users.

I would like to thank Dr A.J. McLean, of the Road Accident Research Unit, University of Adelaide, Australia, which is a WHO Collaborating Centre for the prevention and control of road traffic accidents, for his very valuable contribution to the preparation of these guidelines.



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# **SAFETY GUIDELINES FOR MOTORCYCLES**

Travel by motorcycle can be a very convenient and economical form of transport. It can also be dangerous. The following suggestions may help you to enjoy the benefits of motorcycling and to minimize the risk of accident and injury.

## **THE MOTORCYCLE**

### **Size of motorcycle**

For almost all work on health projects a small motorcycle should be adequate. Even if there may be times when a passenger must be carried, a maximum engine size of 125cc will do the job.

### **Type of motorcycle**

The type of motorcycle selected should be suited for its proposed use. For example, if travel will be mainly on hard surfaced roads, a conventional commuting style motorcycle is to be preferred. However, if much of the travel will be on unsurfaced or unmade roads, a motorcycle designed for such use will clearly be more satisfactory.

### **Equipped to carry passenger and goods**

If a passenger is likely to be carried, it is essential that provision be made on the motorcycle for a seat and footrests for that passenger. If any goods or other articles are to be carried by the rider, provision should be

made to attach carry bags to the motorcycle at either side of the rear wheel so that the rider is not distracted by the need to balance or carry such items while riding.

### **Rear vision mirrors**

The motorcycle should be equipped with at least one rear vision mirror so that the rider does not have to turn his or her head to see whether there are any vehicles following closely behind.

### **Lights**

A motorcycle is one of the smallest vehicles on the road and therefore is sometimes not seen by drivers of other vehicles. It is desirable to have the head light come on automatically when the motorcycle is started to ensure that in daylight other road users will find it easier to see the approaching motorcycle. Turn indicators are also highly desirable because they indicate that the rider is intending to change direction, without the need for a hand to be taken from the handle bars. The indicators also make the motorcycle more conspicuous to other road users.

**Regular maintenance of the motorcycle is important. Once a week:**

Wash the motorcycle, and check:

- Tyre pressures, and add air if needed
- Brake operation
- Lights - headlight, tail light, brake light, indicators
- Battery acid level
- Oil chain (lubricate chain)
- Engine/gearbox oil
- Cooling water (if applicable)
- Two stroke oil (if applicable)

**Monthly maintenance includes the following items:**

**Chain adjustment**

**Tyre tread depth (replace the tyre when there is still some tread remaining; do not wait until the tyre becomes smooth)**

**Brake adjustment**

**Wheel alignment**

**Check over the entire motorcycle for loose nuts or bolts and any damage**

# **THE RIDER**

## **Experience, licence**

If there is a choice available, it is safer to select an experienced motorcycle rider. If the rider is inexperienced, he or she should not be permitted to carry a passenger during, say, the first six months of riding. It is assumed that legal requirements such as holding a licence to operate a motorcycle will have been met by the rider.

## **Protective helmet**

A protective helmet **must** be worn by both rider and any passenger. This may mean that a number of helmets in a range of sizes to suit different riders and/or passengers will be necessary. It is very important that the helmet be a correct fit on the rider's head and that the chin-strap be securely fastened. The helmet should also comply with one or other of the national standards for protective helmets for motorcyclists, such as the American, British, Japanese or Australian standards or the standard of the Snell Foundation in the United States. The shell of some helmets is adversely affected by solvents such as petrol and some adhesives.



## **Eye protection**

Some form of eye protection should be provided for use by the rider. This can be either a clear visor attached to the helmet or a pair of protective goggles. Tinted goggles or visors should not be used at night.

# RIDING THE MOTORCYCLE

## Alcohol prohibited

**No one should be permitted to attempt to ride the motorcycle when affected by alcohol or another drug.**

## The first ride

Before attempting to ride the motorcycle for the first time, the rider should make sure he or she knows the location and operation of all the controls, and allow time for a simple practice ride.

## One passenger

Only one passenger should be carried and then only if the motorcycle is designed and equipped to carry a passenger and the motorcycle is operated by an experienced rider.

## Emergency situations

Stopping a motorcycle quickly in an emergency requires a high degree of skill; it is therefore very important to try to avoid emergency situations. A motorcycle is a small vehicle and is frequently not noticed by other road users, including pedestrians and cyclists as well as other motorcyclists and especially car, bus and truck drivers. The rider of the motorcycle should take particular care to watch for vehicles which may be attempting a U-turn or otherwise turning across the traffic stream. The rider should also watch for animals or children at the side of the road who may suddenly run across the road in front of the motorcycle. At intersections, the rider should always slow right down, even if he or she has priority or right of way, so that he or she can stop if another vehicle enters from an intersecting road without stopping. The cyclist should avoid riding

very close to parked vehicles in case the occupant of one of those vehicles opens a door on the traffic side into the path of the motorcycle.

### **Brake with care**

When it is necessary to stop, the rider should use both the front and rear brakes together. The rear brake alone cannot provide efficient braking. The brakes should not be applied when the motorcycle is leaning over in a turn or on a bend. Braking should be attempted only when the motorcycle is travelling in a straight line. Extreme caution must be exercised when attempting to brake on slippery surfaces such as mud, snow, or ice and also on wet roads and roads covered with loose material such as gravel or sand. Patches of oil on the road, painted road markings, and railway and tram lines are often particularly slippery. Every effort should be made to avoid having to apply the brakes on such surfaces.

### **Don't follow too closely**

The likelihood of having to stop quickly can be reduced by not following too closely behind another vehicle. About four seconds should be allowed between the motorcycle and the vehicle in front if the road is wet or slippery. As speed increases, the safe following distance also increases. Therefore safe following distances for various speeds vary, such as:

15 metres at 20 km/h  
60 metres at 60 km/h  
130 metres at 100 km/h

### **Don't speed**

Travel as slowly as possible. Going fast increases the risk of being involved in an accident and also the risk of being seriously injured or even killed if an accident does occur.