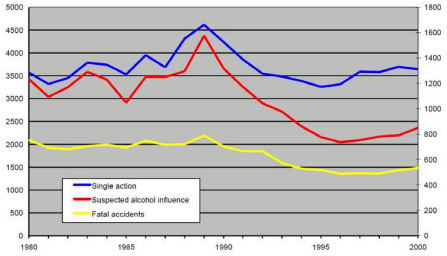
Lower blood alcohol levels and implement random breath testing

The **risk of drinking and driving** increases with both the amount of alcohol consumed and the frequency of high volume drinking occasions, and blood alcohol levels. Impairment in driving skills begins with any departure from a zero blood alcohol level. Comparison of blood alcohol levels (BALs) of drivers in accidents with the BALs of drivers not involved in accidents find that male and female drivers at all ages who had BALs between 0.2g/l and 0.49g/l had at least a three times greater risk of dying in a single vehicle crash. The risk increased to at least 6 times with a BAL between 0.5g/L and 0.79g/L and 11 times with a BAC between 0.8g/l and 0.99 g/L[1] (Zador *et al.* 2000).

More than 1 in 3 of the 40,000 European **road traffic fatalities** each year is due to alcohol[2]. These drink-driving deaths are not equally split between genders, with 15,000 male deaths compared to 2,000 deaths for females.

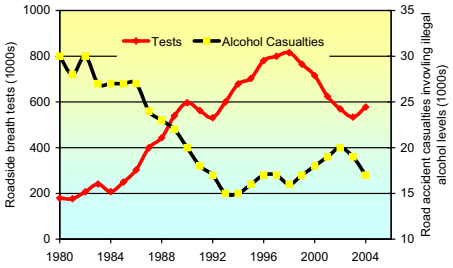
In 2001, the European Commission called for all Member States to adopt a BAL of 0.5g/L lowered to 0.2g/L for inexperienced, two-wheel, large vehicle or dangerous goods drivers, and random breath testing so that everyone is checked every 3 years on average. Take-up of the recommendation is supported by the European Road Safety Action Programme, while the Commission has said that it will propose a Directive if insufficient progress is made towards a 50% reduction in road deaths by the year 2010. Several other recent moves include efforts to tackle drink-driving, including harmonized penalties and the exchange of best practice.

Measures to reduce casualties from drinking-driving are among the most heavily researched strategies to reduce alcohol-related problems. Establishing a maximum blood-alcohol level (BAL) for driving is a well-established and widely diffused drinking-driving countermeasure. Over the years, the level specified as maximum has been lowered in a number of countries, and is as low as zero or 0.2g/l in a number of countries, and 0.5g/l or lower in most countries in Europe. Both establishing a BAL and lowering it are effective in reducing drinking-driving casualties.



Reductions in single accidents (left axis, n), suspected driving under the influence of alcohol and fatal accidents (right axis, n) following the reduction of the BAL from 0.5g/l to 0.2g/L in Sweden in 1990[3]

There is also convincing evidence that both intensive random breath testing, where police regularly stop drivers on a random basis to check their BAL, and sobriety checkpoints, where all cars are stopped and drivers suspected of drinking driving are breath-tested, reduce alcohol-related injuries and fatalities.



Inverse relationship between number of roadside breath tests and number of roadside casualties involving illegal alcohol levels, England[4].

Setting lower BALs (including a zero level) for young or novice drivers; administrative driver's license suspension for a driver caught with a positive BAL particularly in legal systems in which a criminal drinking-driver case may be delayed or successfully fought by a defence lawyer; and the use of an ignition interlock, a mechanical device which does not allow a car to be driven by a driver with a BAL above a low level, for reducing repeat infractions by convicted drinking drivers are all effective in reducing drink driving casualties. It should also be noted that several other alcohol policy measures, such as minimum age laws for the purchase of alcohol are effective in reducing drinking driving casualties, and thus might also be considered drinking-driving countermeasures.

Finally, there are a number of measures that have shown to be not effective in reducing drinking and driving. These include school-based educational courses and designated drivers and ride services, such as the BOB campaign. No study has evaluated whether the use of designated drivers actually decreases alcohol-related motor vehicle-related injuries. Although the BALs of designated drivers are generally lower than those of their passengers they are still often higher than the legal limit for drinking and driving. Further, an increase in passenger alcohol consumption is often found when a designated driver is available.

---

[1] Zador, P., Krawchuk, S. and Voas, R. (2000). Alcohol-related relative risk of driving fatalities and driver impairment in fatal crashes in relation to driver age and gender: an update using 1996 data. *Journal of Studies on Alcohol* 61 387-395.
[2] Anderson, P. & Baumberg, B. (2006). Alcohol in Europe: a public health perspective. http://ec.europa.eu/health-eu/news_alcoholineurope_en.htm
[3] Sporre, T. (2001).Drunken driving. http://www.bra.se/extra/measurepoint/?module_instance=4&name=18.%20Drunken%20driving&url=/dynamaster/file_archive/050119/8aee90e1fcf71757489e3a12eccc82dd/02022121991.pdf
[4] The Information Centre (2006). Statistics on alcohol: England, 2006. http://www.ic.nhs.uk/pubs/alcoholeng2006