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## **Mortality following Taser exposure**

The use of electric stimulation in medicine and daily practise (i.e. electrical fence, fishing, anaesthesia of pigs in abattoirs) has risen not only the question of accompanying health risks but also arouse a discussion in what extent there is a danger of life.

It goes without saying that prospective studies cause ethic problems (Volunteers are exposed to projected risks and then get medically examined). Knowledge of deleterious effects to humans normally base on retrospective observations (humans, exposed to other risks for other reasons, are examined). Thus, extensive statistical methods are necessary in order not to succumb systematic errors.

In that content the following questions arise:

- a) How often are Tasers used worldwide?
- b) How many people died in the course of this?
- c) Is there a correlation between a country's technical development and user's training?
- d) What are the reasons for deaths?
- e) What kind of deaths did the taser cause directly and indirectly?
- f) Who is especially vulnerable to Tasers?

The results should give evidence where the use of Tasers is appropriate and where not. This might raise the question if Tasers can generally be regarded as non-lethal weapon, taking in account that a death rate of up to 20 percent is defined as non-lethal. However, analyses of pilot studies have shown that a mortality rate of 20 percent has never been obtained.

Nevertheless it is advisable to look for other Taser related restraints in order to reduce mechanically induced injuries and to answer the question if a multiple use is appropriate and accuracy and range of firing can be enhanced. In that context gas-liquid and beam related method are tested.