

Table 1. Alternative risk-management strategies and examples

Generation process	Risk-management strategy	Examples targeted at modifying various links in the risk chain			
		Modify risk source	Modify exposure process	Modify effects process	
Self-hazardous behavior Smoking Alcohol abuse Mountain climbing Skin diving Etc.	Mandatory requirements Legal restrictions Product bans Automatic protection strategies Incentives Insurance premium adjustments Taxing hazardous behavior Information dissemination Educational campaigns	Ban saucerharm Provide public transportation on New Year's Eve (to prevent drunken driving) Publication of safe operating instructions for hazardous products	Establish minimum age for consumption of alcohol Offer reduced-cost health insurance to nonsmokers Post hazard warnings at national parks	Require motorcycleists to wear helmets Reduce registration fees for cars with passive restraint systems Sponsor advertisements designed to increase seatbelt use	Require personal health insurance Offer subsidized insurance for inhabitants of flooded plains Provide counseling services for the terminally ill
Congenerated risks Risks to employees from employment Risks to consumers from product purchases	Mandatory requirements occupational safety regulations Product safety standards Regulation of advertising Product bans Incentives Wage premiums for risky jobs Liability rules Taxing occupational risks Information dissemination Product labels Warnings	Prohibit use of certain pesticides in agriculture Provide tax incentives for replacing unsafe equipment Provide manufacturers with product safety information	Establish maximum daily radiation dose for workers Tax hazardous consumer products to reduce consumption	Require public restaurants to provide diners with water (in order to reduce dangers of choking) Provide citrus drinks for government employees working in conditions promoting dehydration	Enforce product safety liability compensation laws Offer supplementary worker insurance programs
Externalities Air, water pollution Radiation Toxic chemicals Noise pollution Nuclear war Auto accidents Etc.	Mandatory requirements Standards Regulations Incentives Pollution licenses Effluent fees Insurance Compensation Information dissemination Government research Warnings	Establish new source performance standards for emissions of air pollutants Tax polluters in proportion to quantity of pollutant emitted Government-sponsored R&D on air pollution control technology	Require auto makers to install collision-resistant bumpers Subsidize mass transit to attract drivers off highways Post public warnings at hazardous sites	Require antidote instructions on poisonous products Require auto makers to install collision-resistant bumpers Offer inexpensive air filtration masks to urban commuters	Provide information on employment opportunities for the handicapped Provide emergency relief (e.g., housing) for victims of toxic chemical spills Offer government-subsidized liability insurance to manufacturers of potentially toxic substances Provide advice and information for horticulture in acid rain areas