DATA

Relative risk in cycling

Risk per participant | Risk by time | Deaths per year | Risk per lifetime | Risk by distance and age | Risk in past 30 days | Other sources

The promotion of cycle helmets portrays cycling as an especially risky activity, but examination of comparative risk data reveals otherwise. It transpires that cycling is in fact one of the safest ways to spend one's time. As well as being safer than the obvious high-risk sports such as climbing, it is also much safer than more 'ordinary' sports such as football, swimming or fishing and, indeed, safer than general 'living' (the net outcome of all causes of death).

The data below compare cycling with other activities based on different indicators.

Risk relative to cycling based on fatality rates per participant (UK)

		Relative risk per participant
Less safe	Airsports	450
	Climbing	137
	Motor sports	81
	Fishing	41
	Horse riding	29
	Swimming	7.0
	Athletics	5.7
	Football	4.9
	Tennis	4.2
	Cycling	**1.0**
Safer	Golf	0.83
	Rambling	0.06

Figures relate to 1986 and are derived from OPAS Monitors from the Office of Population Censuses and Surveys, UK.
The number of fatalities are taken from Coroner's Court records and information on participation rates from the General Household Survey.

Risk by time (US)

		Fatalities per million hours
Less safe	Sky diving	128.71
	General aviation	15.58
	On-road motorcycling	8.80
	Scuba diving	1.98
	Living (all causes of death)	1.53
	Swimming	1.07
	Snowmobiling	0.88
	Passenger cars	0.47
	Water skiing	0.28
	Bicycling	**0.26**
Safer	Flying (scheduled domestic airlines)	0.15
	Hunting	0.08
	Cosmic radiation from transcontinental flights	0.035

Home living (active)	0.027
Traveling in a school bus	0.022
Passenger car post-collision fire	0.017
Home living (including sleeping)	0.014
Residential fire	0.003

Data from Failure Analysis Associates, Inc (now Exponent Inc), Design News, 10 April 1993.

Deaths per year (GB)

	Deaths per year
Cycling, road traffic accidents	**138**
Cycling, other	**29**
All transport	3,032
At home	3,974
Other accidents	5,026
Obesity (England only)	30,000
Heart disease due to inactivity	58,090
All heart disease	157,000

These figures take no account of population at risk, but if exposure is taken into account, the risk of being killed through cycling is very small compared with most of the other activities cited.

Risk per lifetime (US)

	Risk of death during lifetime
Heart disease	1 in 5
Motor vehicle accident	1 in 84
Pedestrian accident	1 in 626
Motorcycle accident	1 in 1,020
Bicycle accident	**1 in 4,919**

Source: National Geographic, August 2006. These statistics show the relative risk to society; no account is taken of exposure.

Risk by distance and age (NL)

	Risk of injury per million km	
Age group	***Motorists (driver)***	***Cyclists***
12 - 14		16.8
15 - 17		18.2
18 - 24	33.5	7.7
25 - 29	17.0	8.2
30 - 39	9.7	7.0
40 - 49	9.7	9.2
50 - 59	5.9	17.2
60 - 64	10.4	32.1
> 64	39.9	79.1
Total	**20.8**	**21.0**

The statistics for motorists exclude driving on motorways, where risk is very much less than on ordinary roads, for there is no comparable factor for cycling.

The average total risk is biased against cyclists because of the inclusion of two age groups (under 18 years) that do not exist in motorists; two groups, moreover, who have neither the caution nor experience of their elders.

Source: Dekoster & Schollaert, 1999

Risk in past 30 days

Researchers polled 5,238 subjects by telephone, simply asking if they'd done any of a predetermined set of activities in the past 30 days. Those who answered "yes" for a given activity were asked further questions about it, including whether they were injured "severely enough that you went for medical care or missed one-half day or more of work, housework, or school." Percentage injured results were: (Powell, 1998)

Aerobics	1.4%
Gardening	1.6%
Walking for exercise	1.4%
Weightlifting	2.4%
Cycling	**0.9%**

The relative risk between gardening and cycling has been examined in another study. 1,337 people were surveyed for a report on sport and recreation injuries. One in six respondents had required medical treatment in this period, with 5% of gardeners having suffered injury warranting attention compared with 3.9% of cyclists. (CenQueensUniv, 2003)

Other sources

- A review of 2,546 patients under age 19 seen by pediatric neurosurgeons at the Medical College of Georgia in Augusta between 1996 and 2002 revealed 64 sports-related injuries, 15 of which were golf-related and 17 of which were bicycle-related. (Rahimi et al, 2005)

References

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pros and cons of cycle helmets.

For more information, please visit www.cyclehelmets.org.