Surprising Facts about Bicycle Safety

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OH NO!
A POP QUIZ!
On the scary stuff!

Fatalities!
• Rank these activities from MOST dangerous (#1) to LEAST dangerous (#5), in number of fatalities per million hours of activity.
  a) bicycling _____
  b) swimming _____
  c) motorcycling _____
  d) flying, small planes _____
  e) walking near traffic _____

Emergency rooms!
Rank these activities from MOST dangerous (#1) to LEAST dangerous (#5), in hospital ER visits per year in the USA.
  a) bicycling _____
  b) basketball _____
  c) beds _____
  d) carpets & rugs _____
  e) chairs & sofas _____
ER visits per year

- #1: Basketball 640,000
- #2: Bicycling 560,000
- #3: Beds 400,000
- #4: Chairs & Sofas 300,000
- #5: Carpets & Rugs 124,000

Head injuries!

What percentage of US head injury fatalities are cyclists?
- a) 30%
- b) 20%
- c) 10%
- d) 5%
- e) less than 1%

60,000 to 115,000 head injury fatalities per year in the USA
Typically 750 bicycle fatalities per year in the USA from all causes
Are 75% due only to head injury? If so, that’s 562 … about 1%, probably less!

On average, how often do dedicated cyclists (i.e. bike club members) have a fairly significant crash? ($50 or medical attention)

- Roughly every:
  - a) 1500 miles?
  - b) 5000 miles?
  - c) 10000 miles?
  - d) 30000 miles?
  - e) 50000 miles?

Not many crashes!

- League of American Bicyclists members average about 32,000 miles (or 11 years) between significant crashes
ER injuries?
For a cyclist being treated in an ER, rank the most common injury being treated #1, least common injury #5:
• a) minor leg injuries
• b) minor arm injuries
• c) minor shoulder injuries
• d) non-minor arm injuries
• e) non-minor head injuries

• #1: minor leg = 37%;
• #2: minor arm = 28%;
• #3: minor head = 18% (bruises, scratches);
• #4: minor face = 14%;
• #5: minor shoulder = 13%;
• #6: moderate+ arm = 9%;
• #7: minor "other" = 8%;
• #8: moderate+ head = 6%;
• #9: moderate+ leg = 6%;
• #10: moderate+ shoulder = 5%

Cyclists’ ER treatments

Motoring vs. Cycling
• In these countries, using fatalities per million hours:
  Is cycling safer, or more dangerous, or about the same, as riding in a car?
  • France?
  • Germany?
  • Sweden?
  • Switzerland?
  • Australia?
  • Netherlands?
  • USA?
  • Britain?

• France: cycling is safer than driving, per hour
• Germany: cycling is about equal in safety.
• Sweden: cycling is about equal in safety.
• Switzerland: cycling is about equal in safety.
• Australia: cycling is about equal in safety.
• Netherlands: cycling is about equal in safety.
• USA: ?? Some say cycling is safer, others say more dangerous.
• Britain: cycling is more dangerous

Dedicated British Cyclists:
How many person-years of CTC riding between fatalities? i.e., how long would the average CTC member have to ride to get up to a 50% chance of dying on the bike?
• a) 100 person-years of CTC cycling per fatality?
• b) 500 person-years of CTC cycling per fatality?
• c) 1500 person-years of CTC cycling per fatality?
• d) 15000 person-years of CTC cycling per fatality?
British Cyclist's Touring Club:
60,000 members, 3 - 5 fatalities per year
= 15,000 person-years of cycling per fatality

Of the top four causes of US deaths, how many does cycling reduce or help prevent?
- One?
- Two?
- Three?
- All four?

U.S. Fatalities per Year

For all of society: How does cycling do for
Years of life GAINED vs. Years of life LOST?
- A) 10 to 1 against biking?
- B) About equal?
- C) 10 to 1 in favor of biking?
- D) 20 to 1 in favor of biking?

20 to 1 in favor of biking!
Bicycling saves society
20 years of life
(through improved health, lower pollution, fewer traffic fatalities, etc.)
for every year of life lost to bicycling crashes!

On Average:
How many miles do cyclists ride between fatalities?
- a) 15,000 miles?
- b) 150,000 miles?
- c) 1.5 million miles?
- d) 15 million miles?
- e) 150 million miles?
Data for the USA, Australia, & Britain show:

Cyclists average 5 million miles to 15 million miles between fatalities!

Bike Safety:
We Already Have It!

Bicycling is NOT very dangerous!

It does us no good to pretend cycling is dangerous!

Detriments of the “danger” myth:
- Lack of legal support for cyclists
- Terrible facility design
- Discriminatory laws
- Reduced cycling

Detriments of reduced cycling:
- Reduced support for cycling and cyclists
- Reduced safety of cyclists
- Increased environmental problems
- Increased health costs

It does us no good to pretend cycling is dangerous!
Want even more safety?

Simple Falls:

50% of the problem

To Prevent Falls:

Watch Where you’re Going!

- Watch for Potholes
- Watch for Slippery spots
  - Gravel, wet leaves, wet steel, ice
- Watch for “slots”
  - Drain grates, railroad rails, buggy ruts, edge of the road

Car-Bike collisions:

- 17% of the incidents
- But over 90% of the (few) fatalities

Cyclist-caused Car-Bike crashes

To Prevent Car-bike Crashes:

- Rule #1: Operate your bike according to the rules of the road!
  (If you wouldn’t do something driving your car, don’t do it on your bike!)

Motorist-caused car-bike crashes
Ride far enough right to be courteous –

But first, ride far enough LEFT to be safe!

Bike-bike collisions:

• 17% of the problem!

To improve your odds?

• Ride Straight
• Ride Steady
• Communicate
• Be predictable

Your odds are already very good!

• Cycling is NOT a “hazardous activity”!
• It does us no good to pretend it is!