

Cycling head injuries and fatalities

- Available evidence suggests:

- from 1985 to 2017 **daily bike trips** among West Australians aged 9+ increased 12.6%

- from 1988-1991 to 2013-2016 all age **total injuries** increased 81.8% and all age **head injuries** increased 99.4%

- from 1986 to 2017 **WA's population** increased 82.7%.

- WA cyclist **skull fractures and intracranial injuries** dropped by a combined 14 per year in the three years after WA law enforcement. **Upper limb** injuries increased from 118 in 1988 to 274 in 1998, causing much of the overall increase in hospitalised injuries.

- The number of **serious head injuries** to adult cyclists in WA dropped 19.5% between the five years before the law and the five years after ... but the bridge surveys show a participation decline above 30%.

- **Serious head injuries** to cyclists aged 15 or less dropped 30.5% between the five years before the law and the five years thereafter ... but Bikewest says cycling to school reduced by more than 50% during those five years.

- From 1988 to 1991, **head injuries** averaged 26.6% of all WA cyclist hospital admissions and from 2013 to 2016, head injuries averaged 29.2%. Ian Cameron from the Road Safety Council told the committee that in 2017 the head and neck proportion of road-related hospitalisations was 31.8%.

- WA government figures show the **average length of hospital treatment** for cyclist skull fractures was 8.4 days in the three years before the law and 11

days in the three years after. For intracranial injuries it was 2.1 days before the law and 2.2 days after the law.

- From 1985 to 1992, WA **cyclist fatalities** averaged 7 per year. From 1993 to 2017 they averaged 4.3 per year - a 38% reduction. Context - Perth river bridge surveys show a 30-40% participation reduction which has been maintained per capita.

- **WA television advertisements** currently being aired say 46% of all WA cyclists killed were not wearing helmets, and the head of the state's major trauma centre repeatedly says about 20% of the injured were not wearing helmets (data shows this is correct) ... about 40% of WA cyclists, and more than 50% in Perth's middle to outer suburbs, do not wear helmets. There were 403 hospitalised cyclist head injuries in 2013 and 345 in 2016, a 14.4% decline despite the increasing number of cyclists on WA roads not wearing helmets. Total WA cyclist admissions were down 9.6% from 2013 to 2016.

- **Olivier et al Feb 2019 paper on helmets reducing Australian cyclist fatalities.** Comparing pre-helmet 1988-1989 with the most recent data for 2016-2017, Australian vehicle occupant fatalities decreased 57.1%, pedestrian fatalities decreased 67.4% and cyclist fatalities decreased 63.8%. If the data is expressed per million population, vehicle occupant fatalities decreased 70.66%, pedestrian fatalities decreased 77.72% and cyclist fatalities decreased 75.32%. Olivier et al claim mandatory helmets have saved 1,332 lives from 1990 to 2016. For motor vehicle occupants who don't have to wear helmets, 20,979 lives have been saved from 1990 to 2016 using the formula of these academics.

Cycling total injuries

- In 1987, five years before the WA law, there were more than a thousand **bicycle crashes** reported to police, and by 1996 it was just 718 - a 29% reduction that's similar to the reduction in people cycling. However, there were 630 cyclist **admissions to WA hospital** in 1987 and 715 in 1996 - a 13.5% increase in hospital admissions.
- Average 665 **cyclist hospital admissions** per year in WA from 1988 to 1991. From 2013 to 2016, an average 1,209 cyclist hospital admissions - 81.8% increase on 1988-1991.
- WA Main Roads figures show total **WA road crashes** were 35,631 in 1990, 31,919 in 1992 (down about 4,000) and then constantly upward each year to 39,567 by 1999 (up about 8,000 on 1992). The turnaround is well above population growth and national figures show all road injuries including motorists also bottomed in 1992, suggesting discouraged cyclists who instead drove a car increased traffic density and collision risk for all road users.
- **Injuries to all road users in Australia** have been improving, except for helmeted cyclists and motorcyclists. Australian Institute of Health and Welfare data shows total all-age cyclist injuries in 1990 were 7,520 and in 2015 were 11,430, a 52% increase. This is despite reliable data showing the number of daily bike trips in Australia dropped by 32% from 1986 to 2017, with population growth at 56.8% from 1986 to 2017. A study published in the Australian Medical Journal in 2017 showed that from 2007 to 2015 in Victoria, the number of cyclist serious injuries rose at around 8% per year and more than doubled over the nine years. The NCP survey figures show 19.9% of Victoria's population cycled at least once a week in 2011 and this dropped to 16.6% in 2015.

Cycling participation

- The **National Cycling Participation surveys** (the only official national cycling surveys) show the population percentage cycling **at least once a week** were:

WA - 23.1% in 2011 and 18.5% in 2017 (114,490 fewer cyclists)

Australia - 18.2% in 2011 and 15.5% in 2017 (636,719 fewer cyclists)

And **at least once in the previous year**:

WA - 45.1% in 2011 and 41.9% in 2017 (79,645 fewer cyclists)

Australia - 40.2% in 2011 and 34.2% in 2017 (1,414,931 fewer cyclists)

The NCP survey authors agree that the demographics show the average age of cyclists has been rising since the early 1990s and as a result the decline in cycling is expected to continue. This is probably because baby boomers who grew up learning to cycle without a helmet continued but now as they retire their bikes because of age and ill health are not being replaced by younger generations who have been discouraged since 1990.

- The **2017 participation survey** suggests 133,000 daily bike trips aged 9+ in **WA**, compared to 182,900 in 1985/86, according to the CR69 report by the ABS. That's 27.3% fewer cyclists aged 9+ in 2017 than in 1986. WA's population aged 9+ increased 80.8% from 1986 to 2017 (1,252,384 > 2,264,308).

- The **2017 participation survey** suggests 1,119,000 daily bike trips aged 9+ in **Australia**, compared to 1,645,000 in 1985/86, according to the CR69 report by the ABS. Australia's population aged 9+ increased 56.8% from 1986 to 2017 (13,867,351 > 21,750,699).

- **ABS Census data** show that in 1991, 1.85% of West Australians cycled to work (9,102 / 491,828). By 2001, this was down to 1.27%. The latest Census in 2016 showed the percentage of **commuter cyclists** in WA was 1.25%. This is 9,102 commuter cyclists in 1991 and 11,830 commuter cyclists in 2016, a 30% increase despite 64.1% growth in age 15+ population from 1991 to 2016 (1,256,683 > 2,062,383).

- **ABS Census data** show that in 1986, 1.68% of Australians cycled to work. By 2001, this was down to 1.21%. The latest Census in 2016 showed the percentage of **commuter cyclists** was 1.24%. This is 86,201 commuter cyclists in 1986 and 107,756 commuter cyclists in 2016, a 25% increase despite 59.3% growth in age 15+ population from 1986 to 2016 (12,318,832 > 19,618,310).

- Main Roads WA figures show that between September 1983 and December 1989, **the decade before helmet laws**, Perth enjoyed 10% annual growth in **personal bike trips**.

- According to Main Roads WA, the number of West Australians who **cycled at least once a week** increased from 220,000 in 1982 to about 400,000 in 1989. Cyclist hospital admissions in 1982 were 636 and in 1989 they were 602. NCP 2017 survey data show 18.5% of West Australians cycled at least once a week, which equates to 460,448 people aged 2+. This is a 15.1% increase on the 400,000 in 1989. WA's population aged 2+ increased 63.8% from 1989 to 2017 (1,528,894 > 2,504,410).

- Cyclist participation data from Perth's two river bridges (the Narrows and the Causeway) showed around a 30% to 40% **decline in cycling** after law enforcement in 1992, but Health Department figures showed no decline in hospitalised cyclist injuries.

- In December 1991 six months before law enforcement, 11,406 bikes were counted on the **Narrows** Bridge on **weekends**. In December 1992, six months after law enforcement, it was 4,562. By December 1994 the numbers had recovered to 6,863.
- In December 1991, 35,122 cyclists were counted on the **Narrows** Bridge on **all days**. In December 1992, it was down to 20,581. By December 1994 it had recovered to 27,216.
- In December 1991, 10,596 bikes were counted on the **Causeway** Bridge on **weekends**. In December 1992, it was down to 6,719. By December 1994, it was down to 4,564.
- In December 1991, 33,828 bikes were counted on the **Causeway** on **all days**. In December 1992, it was down to 26,227 and by December 1994, it was down to 18,101.
- In WA, the number of **children cycling to school** dropped from about 65,000 in 1988 to about 22,600 in the year 2012. In 1996, Bikewest issued a news release advising that in the previous five years the number of schoolchildren cycling to school in WA had more than halved.
- Since the early 1990s, well over a thousand kilometres of **cycle paths** have been built in Perth yet cyclist numbers have barely increased, raising questions about the claim that **infrastructure** is the main way to **increase cycling numbers**.
- An ABS survey study for March 2006 showed the average proportion of people among all States using a bicycle as their **day-to-day recreational transport** was 4.8%. However, in the Northern Territory where there is partial adult repeal it was 16%.

- In 2009, the WA government agency Bikewest effectively recommended that if **women** want to cycle regularly, they should cut their hair.
- A Deakin University study in 2007 found that Australia's **female participation** in cycling is approximately half that of men and other studies show female participation in this country is among the lowest in the world.
- **Higher WA helmet penalty or stronger police enforcement** ... NSW had a 350% increase in penalty to \$315 in 2016. National Cycling Participation survey results show people cycling at least once a week in NSW dropped from almost 17% in 2015 to 12.5% in 2017, the lowest rate of any Australian jurisdiction. That's roughly 317,000 fewer people in NSW riding a bike at least once a week, many likely to be driving a car instead and increasing serious accident/injury risk for all road users. In the first 10 months after the fine increase, total cyclist injuries in NSW fell by 7%. Weekly participation dropped by 25% and injuries dropped by 7%.
- **Research by Ian Ker** (Curtin University adjunct professor and principal of Consulting in Applied Transport, Access and Land Use Systems - www.cycle-helmets.com/ker-perth.pdf) found that data from the three major travel surveys in Perth from 1976 to 2006 showed the bicycle mode share was 3.1% of trips in 1976, 5.2% in 1986 and just 1.6% averaged from 2003 to 2006.
- **Australian Bureau of Statistics participation surveys** show 1,074,344 people aged 18+ cycled at least once in the week prior to survey in November 1993, and 1,151,900 people aged 15+ cycled at least once in the year prior to survey in 2013-2014. This is a 7.2% increase compared to 39.3% population growth and disregarding the broader age and timescale criteria of the 2013-2014 ABS survey (see extracts below).
- **Three major inquiries in the past six years** have received expert opinion, studied the available evidence and literature, and concluded that existing helmet laws require at least partial repeal or more thorough examination ...

- The **Queensland parliament's 2013 inquiry** recommended a 24 month trial exempting cyclists aged 16 years and over from wearing a helmet in parks, on footpaths and shared cycle paths, and on roads with a speed limit of 60kmh or less.

- The **Australian Senate's 2016 inquiry** into government regulation of personal choice recommended a comprehensive national dataset be established to provide consistent information on cycling-related injury trends as well as participation rates. A dissenting report recommended cyclists aged 16 years and over be exempted from wearing a helmet in parks, on footpaths and shared cycle paths, and on roads with a speed limit of 50kmh or less.

- The **Bicycle Network's 14 months inquiry concluded in 2018** with 20,000 public submissions and 60% support for change, and recommended a five year trial of cyclists aged 17 years and over being exempted from wearing a helmet on footpaths or off-road cycle paths.

Helmet laws as a cycling disincentive

- The **Bicycle Network**, Australia's largest cycling organisation, last year reversed its long-standing policy of support for mandatory helmet laws by recommending a five year trial of partial adult repeal off roads. This followed a 14 month inquiry with almost 20,000 public submissions, more than 58% supporting a change to helmet laws.
- In a March 2001 **Bikewest survey**, compulsory helmets were among the reasons why 11% of respondents in Perth hadn't cycled in the previous six months. In 2008, 30.3% of survey respondents said their dislike of helmets contributed to whether they would or wouldn't cycle in the next six months.
- A 2014 survey found that 61% said helmet issues were their main barrier to **BikeShare participation** in Australia.
- **A Perth newspaper opinion poll** in 2015 showed 61.7% of respondents wanted helmet laws either scrapped entirely or repealed on cycle paths.
- **A Royal Automobile Club e-newsletter poll** of members in April 2016 found 31% of respondents considered mandatory helmet laws a barrier to their cycling or cycling more often.
- There have been no official helmet wearing surveys in Australia since the 1990s but anecdotal evidence and press reports indicate **well over 40% of WA cyclists ride without a helmet** - more than 50% in middle to outer Perth suburbs. These bare head cyclists know they risk apprehension by police and a fine, yet they are brave enough to enjoy some healthy exercise they consider fun. It goes without saying that they disapprove of the law. These tens of thousands of law breakers every day are indisputable evidence that the WA bike helmet law is unpopular and discourages participation, with a far greater number not willing to cycle without a helmet and risk punishment.

TABLE 1: PERSONS AGED 18 YEARS AND OVER: PARTICIPATION* IN SELECTED SPORTING, PHYSICAL AND LEISURE ACTIVITIES BY AGE AND SEX, NOVEMBER 1993.

Selected activities	AGE (years)							Total
	18-24	25-34	35-44	45-54	55-59	60-64	65 and over	
MALES (Per cent)								
Organised sport	35.8	27.5	23.1	23.2	16.7	18.6	16.4	24.5
Social sport	21.5	18.0	13.9	16.3	14.7	15.2	9.4	15.9
Gardening	28.3	51.8	61.3	57.7	66.6	81.5	67.0	55.7
Exercising at gym/fitness centre	20.3	11.7	11.0	3.8	4.2	1.9	0.7	9.1
Cycling for pleasure or exercise	23.1	10.0	10.3	5.9	2.0	3.1	1.5	9.4
Swimming for pleasure or exercise	24.7	14.1	16.8	10.9	0.0	16.0	6.0	13.9
Walking for pleasure or exercise	32.2	37.1	41.5	35.5	48.0	66.6	47.9	40.7
Fishing	6.3	8.6	9.2	7.9	6.0	3.0	5.0	7.3
Watched sport on TV	70.9	72.9	61.6	58.3	61.4	79.4	74.4	67.6
Listened to sport on radio	21.1	20.8	25.6	22.2	21.2	27.3	21.3	22.5
<i>Total Males ('000's)</i>	<i>955</i>	<i>1360</i>	<i>1311</i>	<i>1050</i>	<i>377</i>	<i>338</i>	<i>820</i>	<i>6212</i>
FEMALES (Per cent)								
Organised sport	26.7	17.8	14.6	12.7	10.1	13.6	7.5	15.3
Social sport	23.1	18.6	13.6	11.6	7.4	2.2	8.6	14.0
Gardening	25.8	53.5	64.3	63.3	68.4	68.8	63.1	56.5
Exercising at gym/fitness centre	17.7	14.6	10.5	5.1	2.9	1.2	1.5	9.2
Cycling for pleasure or exercise	15.7	7.7	5.9	3.9	8.3	7.9	2.4	7.1
Swimming for pleasure or exercise	21.5	15.8	11.7	10.5	6.1	13.2	6.7	12.8
Walking for pleasure or exercise	56.7	58.6	57.8	57.9	70.2	50.4	46.8	56.4
Fishing	2.2	5.5	1.9	0.4	3.2	3.4	1.8	2.6
Watched sport on TV	40.0	44.4	42.2	45.1	55.1	55.8	58.9	47.0
Listened to sport on radio	3.7	6.4	8.3	7.5	10.8	5.4	12.2	7.7
<i>Total Females ('000's)</i>	<i>937</i>	<i>1379</i>	<i>1331</i>	<i>1009</i>	<i>368</i>	<i>340</i>	<i>1043</i>	<i>6408</i>

* Participation is based on Sporting, Physical and Leisure activities undertaken in the week prior to survey week.

ABS Australian Population Survey Monitor published January 1994

(www.ausstats.abs.gov.au/ausstats/free.nsf/

[0/62B40935381D257BCA25722500049563/\\$File/41030_1193.pdf](http://www.ausstats.abs.gov.au/ausstats/free.nsf/0/62B40935381D257BCA25722500049563/$File/41030_1193.pdf))

9.4% males (1993 male population aged 18+ 6,429,488) = 604,372

7.1% females (1993 female population aged 18+ 6,619,328) = 469,972

Total males and females in November 1993 cycling in prior week = 1,074,344

TABLE 1: PERSONS AGED 18 AND OVER: PARTICIPATION IN SELECTED SPORTING, RECREATIONAL AND LEISURE ACTIVITIES IN THE LAST TWO WEEKS BY AGE AND SEX, NOVEMBER 1994.

Activity	Males		Females		Total	
	('000's)	Per cent	('000's)	Per cent	('000's)	Per cent
Aerobics/calisthenics	193	3.1	623	9.6	816	6.4
Basketball	126	2.0	71	1.1	197	1.5
Cricket - outdoor	169	2.7	*	*	n.a	n.a
Cycling, BMX, Mountain Bike	229	3.7	136	2.1	364	2.9
Golf	423	6.8	102	1.6	525	4.1
Lawn bowls	138	2.2	109	1.7	248	1.9
Netball (indoor/outdoor)	*	*	251	3.9	n.a	n.a
Tennis	185	3.0	226	3.5	411	3.2
Fishing	241	3.9	75	1.2	315	2.5

* subject to sampling variability too high for most practical purposes

n.a not available

ABS Australian Population Survey Monitor published January 1995
 (www.ausstats.abs.gov.au/ausstats/free.nsf/
 0/2BBC074A41E65A10CA2572250004955F/\$File/41030_1194.pdf)

3.7% males (1994 male population aged 18+ 6,503,823) = 240,641

2.1% females (1994 female population aged 18+ 6,700,707) = 140,715

Total males and females in November 1994 cycling in prior two weeks =
 382,931

64.4% fewer Australians cycling in two weeks of November 1994 than cycled
 in one week of November 1993



Australian Bureau of Statistics

41770DO001_201314 Participation in Sport and Physical Recreation, Australia, 2013-14

Released at 11:30 am (Canberra time) Wednesday 18 February 2015

Table 2 PERSONS PARTICIPATING IN SPORT AND PHYSICAL RECREATION, Top 55 activities, By sex

	Males	Females	Persons	Males	Females	Persons
	ESTIMATE ('000)			PARTICIPATION RATE (%)		
Aerobics	10.6	88.8	99.6	0.1	0.9	0.5
Aqua aerobics	11.8	77.0	90.8	0.1	0.8	0.5
Athletics, track and field	67.7	44.5	103.4	0.7	0.5	0.6
Australian Rules football	205.8	12.7	224.0	2.3	0.1	1.2
Badminton	63.8	45.3	97.8	0.7	0.5	0.5
Basketball (indoor & outdoor)	281.9	123.5	406.1	3.1	1.3	2.2
Boxing	62.0	40.3	99.8	0.7	0.4	0.5
Bush walking	126.3	161.4	285.6	1.4	1.7	1.5
Canoeing / Kayaking / Dragon boat racing	76.9	49.4	129.7	0.8	0.5	0.7
Cross country running	29.4	38.3	70.6	0.3	0.4	0.4
Cycling / BMXing	777.4	378.7	1,151.9	8.5	4.0	6.2
Dancing / Ballet	30.7	202.9	237.2	0.3	2.2	1.3
Fishing	169.3	12.9	177.1	1.9	0.1	1.0
Fitness / Gym	1,442.7	1,769.7	3,214.0	15.9	18.9	17.4
Football sports (excluding, rugby, soccer, Australian Rules f	167.9	124.4	297.7	1.8	1.3	1.6
Golf	603.5	127.4	732.0	6.6	1.4	4.0
Gymnastics	18.0	19.2	38.0	0.2	0.2	0.2
Hockey (indoor and outdoor)	64.4	58.4	121.4	0.7	0.6	0.7
Horse riding / Equestrian activities / Polo	17.2	116.2	142.0	0.2	1.2	0.8
Ice / snow sports	56.4	44.0	99.5	0.6	0.5	0.5
Indoor cricket	51.4	1.3	54.4	0.6	0.0	0.3
Indoor soccer	178.2	42.0	218.8	2.0	0.4	1.2
Jogging / Running	740.5	624.0	1,363.1	8.1	6.7	7.4
Lawn bowls	129.4	53.2	181.3	1.4	0.6	1.0

Numbers of people aged 15+ who cycled in the previous 12 months of survey in 2013-14 = 1,151,900.

This is 7.2% more people cycling than in November 1993, disregarding the 1993 criteria of 18+ who cycled at least once in the previous week vs the 2013-14 criteria of 15+ who cycled at least once in the previous year.

Australia's 18+ population increased 39.3% from 1993 to 2014 (13,048,816 > 18,177,484).

NEWS RELEASE

Embargoed until 5am
Tuesday March 19 1986

MOTORIST ALERT AS THOUSANDS CYCLE TO SCHOOL

Motorists are urged to watch out for children on bicycles this morning as thousands cycle to school for Bikeweek.

Schoolchildren throughout the State will ride to school in a Bikeweek competition designed to encourage more children into cycling every day.

More than 30 schools and 2000 schoolchildren are expected to take part.

Bikeweek coordinator Jim Krynen said the competition aimed to turn the tide on the declining number of children cycling to school.

"In the past five years the number of schoolchildren cycling to school has more than halved," Mr Krynen said.

"The result of this decline is an increased traffic flow around schools as parents drive their children, which puts children's lives at risk."

Mr Krynen said parents could cycle to school with their children as an alternative to driving.

Computer equipment worth \$500 is up for grabs for schools in the Bikeweek competition - four schools with the highest percentage of bike riders win.

Bikeweek, coordinated by Bikewest, Department of Transport, runs until March 24 with leisure and sporting events promoting cycling for health, economic and environmental benefits.

For further information about the competition or Bikeweek contact Jim Krynen on 430 7550.

**Distribution of Cyclists Admitted to Hospital by Body Region of Injury, WA, 1988-1998
(single years)**

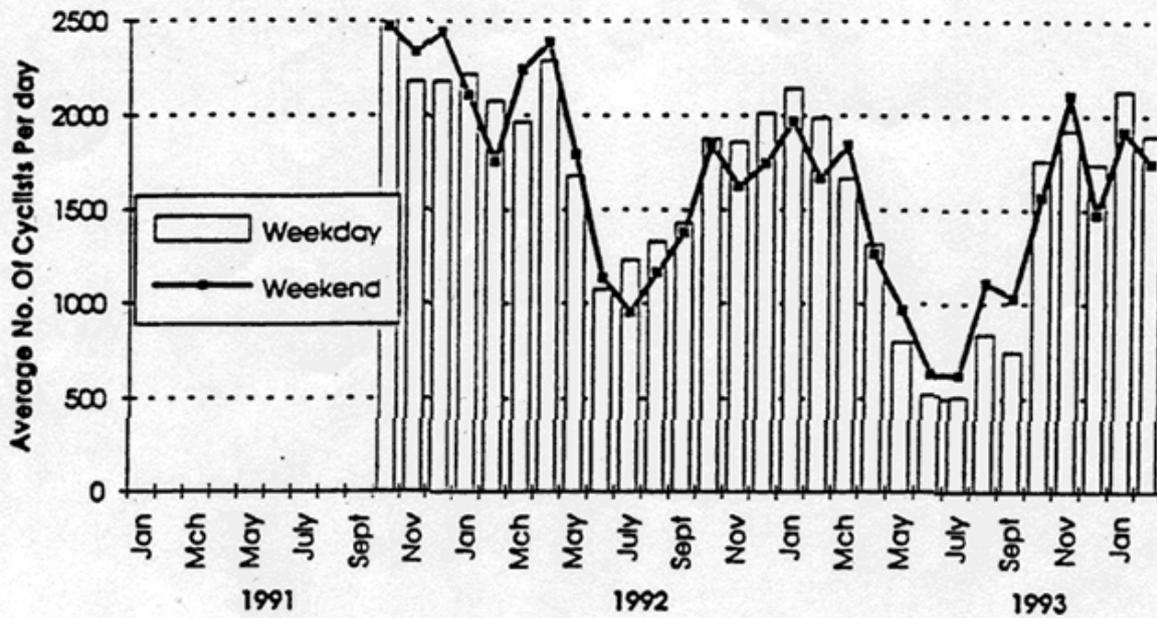
Western Australia, 1988-1998

Injury *	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Head	222 (31.8%)	148 (24.8%)	163 (25.5%)	177 (24.2%)	116 (20.2%)	143 (22.6%)	126 (19.6%)	160 (24.2%)	147 (20.6%)	141 (18.7%)	175 (20.6%)
Upper Extremities	118 (16.9%)	133 (22.3%)	139 (21.8%)	206 (28.2%)	177 (30.8%)	216 (34.1%)	193 (30.0%)	199 (30.2%)	226 (31.6%)	274 (36.3%)	274 (32.2%)
External	133 (19.1%)	134 (22.5%)	121 (19.0%)	140 (19.2%)	91 (15.9%)	99 (15.6%)	103 (16.0%)	107 (16.2%)	114 (15.9%)	88 (11.7%)	90 (10.6%)
Lower Extremities	96 (13.8%)	91 (15.3%)	87 (13.6%)	99 (13.6%)	92 (16.0%)	87 (13.7%)	98 (15.2%)	88 (13.3%)	122 (17.1%)	107 (14.2%)	118 (13.9%)
Face	49 (7.0%)	33 (5.5%)	41 (6.4%)	41 (5.6%)	48 (8.4%)	39 (6.2%)	55 (8.5%)	48 (7.3%)	56 (7.8%)	40 (5.3%)	49 (5.8%)
Abdomen	22 (3.2%)	16 (2.7%)	19 (3.0%)	19 (2.6%)	11 (1.9%)	14 (2.2%)	19 (3.0%)	13 (2.0%)	11 (1.5%)	24 (3.2%)	25 (2.9%)
Spine	10 (1.4%)	3 (0.5%)	15 (2.4%)	14 (1.9%)	7 (1.2%)	8 (1.3%)	16 (2.5%)	7 (1.1%)	16 (2.2%)	11 (1.5%)	15 (1.8%)
Chest	5 (0.7%)	8 (1.3%)	13 (2.0%)	6 (0.8%)	13 (2.3%)	10 (1.6%)	16 (2.5%)	17 (2.6%)	13 (1.8%)	14 (1.9%)	10 (1.2%)
No Injury	43 (6.2%)	30 (5.0%)	40 (6.3%)	28 (3.8%)	19 (3.3%)	17 (2.7%)	18 (2.8%)	21 (3.2%)	10 (1.4%)	55 (7.3%)	94 (11.1%)
Total	698 (100%)	596 (100%)	638 (100%)	730 (100%)	574 (100%)	633 (100%)	644 (100%)	660 (100%)	715 (100%)	754 (100%)	850 (100%)

* No neck injuries because cyclists with a neck injury also sustained injury of the same severity to a higher ranking body region.

Figure 14:

**Average Number of Cyclists Trips Per Day
Narrows and Causeway Bridges**



Western Australia hospitalised cyclist head injuries and total injuries

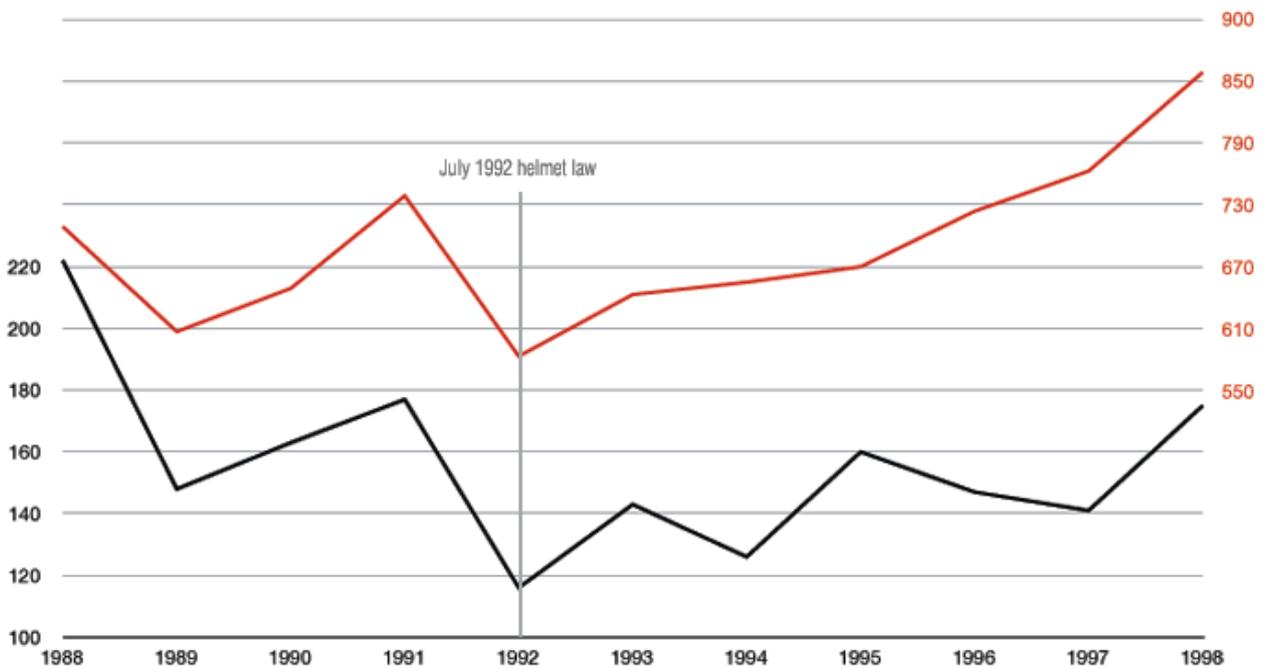
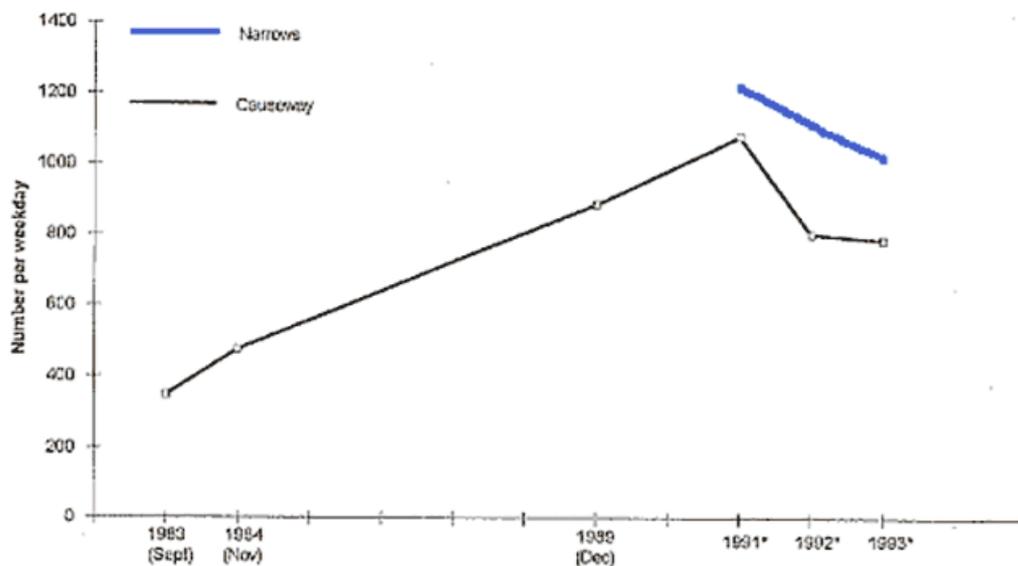


Chart data source: Bicycle Crashes and Injuries in Western Australia, 1987-2000 - Road Safety report RR131 commissioned by Road Safety Council, dated November 2003 and authored by Lynn B. Meuleners, Arem L. Gavin, L. Rina Cercarelli and Delia Hendrie



Source: Main Roads WA surveys of the only two river bridges providing access between Perth and the southern metropolitan area.

* Weekday average (October-November-December)
Based on best available data but indicative only

	1982	1986	1989
No of regular cyclists, WA (thousands)	220	300	400
Cyclist hospital admissions (HOSP), WA	636	660	602
Reported cyclist DSI, WA	123	172	150
HOSP/10,000 regular cyclists, WA	29	22	15
DSI/10,000 regular cyclists, WA	5.6	5.7	3.8

Table data from Somerford P, Pinder T, Valuri G, Price S, Stevens M. Bicycle injury hospitalisations and deaths in Western Australia. Health Department of Western Australia and Robinson DL. Head injuries and bicycle helmet laws. *Accid Anal Prev* 1996; 28: 463-475.

Hard-headed

EXCLUSIVE

■ Gabrielle Knowles and Grant Taylor



Emergency doctors have expressed dismay at the number of WA cyclists refusing to strap on a helmet, despite figures showing they face a far higher risk of dying if involved in a serious crash.

According to the Road Safety Commission, three of the four cyclists killed on WA roads this year were not wearing a helmet.

The results are mirrored by Royal Perth Hospital's trauma registry that reveals eight of the 10 cyclists who died after being admitted to the hospital in the past five years had also failed to protect their head with a helmet.

The *West Australian's* photographers captured dozens of cyclists across Perth flouting WA's compulsory helmet laws last week, including eight who were spotted in just 30 minutes riding through the heart of Fremantle.

RPH State trauma director Sudhakar Rao said about 20 per cent of the cyclists admitted to the hospital each year had not been wearing a helmet.

As well as the increased risk of death, he said they were far more likely to suffer a serious and lasting brain injury, with research showing helmets decreased the risk of long-term damage by as much as 90 per cent.

"Wearing a helmet is not a big imposition, it's a very simple act," Dr Rao said.

"(People think) it does affect their hair, but you can either have ruined hair or you can have a ruined brain. I know what I'd pick."

Dr Rao also criticised Fremantle mayor Brad Pettitt, saying his calls for "no helmet zones" to be introduced within the City of Fremantle were "not helpful".

"You are less likely to get a head injury if you wear a helmet

CYCLING INJURIES

ATTENDANCES AT ALL WA HOSPITAL EMERGENCY DEPARTMENTS

	2013	2014	2015	2016	2017 (Jan 1-Aug 31)
Head injury	572	586	513	519	312
All cycling injuries	2995	2944	2947	2555	1656

ADMISSIONS TO ALL WA HOSPITALS

	2013	2014	2015	2016	2017 (Jan 1 to May 31)
Head injury	403	345	321	345	147
All cycling injuries	1297	1200	1167	1173	506

SOURCE: WA HEALTH DEPARTMENT FIGURES

INJURED CYCLISTS ADMITTED TO ROYAL PERTH HOSPITAL FOR MORE THAN 24-HOURS

Year	Total numbers	No helmet	Deaths	
2012	146	33	2	Eight of the 10 cyclists who died were not wearing helmets
2013	199	36	2	
2014	217	43	3	
2015	191	32	1	
2016	201	32	2	

SOURCE: RPH TRAUMA REGISTRY FIGURES

and if you do get a head injury, it's likely to be a lower-grade head injury, one that you'll recover from," he said.

"Head injuries are one of the most costly injuries for the community to bear.

"Is the City of Fremantle going to pay for the head injuries or does he (Dr Pettitt) expect taxpayers to pick up the bills."

Dr Pettitt said increasing the number of cyclists made riding safer.

"There is evidence that shows the most effective ways of getting more people on bikes is to first improve cycling infrastructure and to then relax the mandatory requirements for adults to wear helmets on cycle paths and low-speed roads," he said.

He said the Northern Territory, where helmet rules were more relaxed, had a lower injury rate of cyclists per head of population.

Road Safety Minister Michelle

2017 FATAL CRASHES

March 26

74-year-old cyclist dies after falling off his bike in Geographe.
■ Was wearing a helmet.

May 3

24-year-old man dies after crashing his mountain bike into a power pole in Gooseberry Hill.
■ No helmet worn.

June 18

76-year-old man dies after being hit by a car near Pinjarra.
■ No helmet worn.

August 24

57-year-old man dies after running into the back of a stationary bus in Melville.
■ No helmet worn.

Roberts said she was satisfied police were doing enough to target the issue.

Police figures show that 750 cyclists — two a day, on average — received a \$50 infringement notice last year. That was up from 529 the previous year.

But Mrs Roberts said it appeared more education was needed and she would instruct the Road Safety Commission to launch an awareness campaign to try to improve helmet compliance.

"Wearing a helmet is like wearing a seatbelt — it could save your life," she said.

Acting Road Safety Commissioner Iain Cameron said that on top of the personal trauma linked to cycling crashes, there was also a big economic cost to the community.

"Over the past five years, 2012 to 2016, the cost of crashes where cyclists have been killed or seriously injured was around \$160 million," he said.

The impact of discouraged cyclists instead driving cars

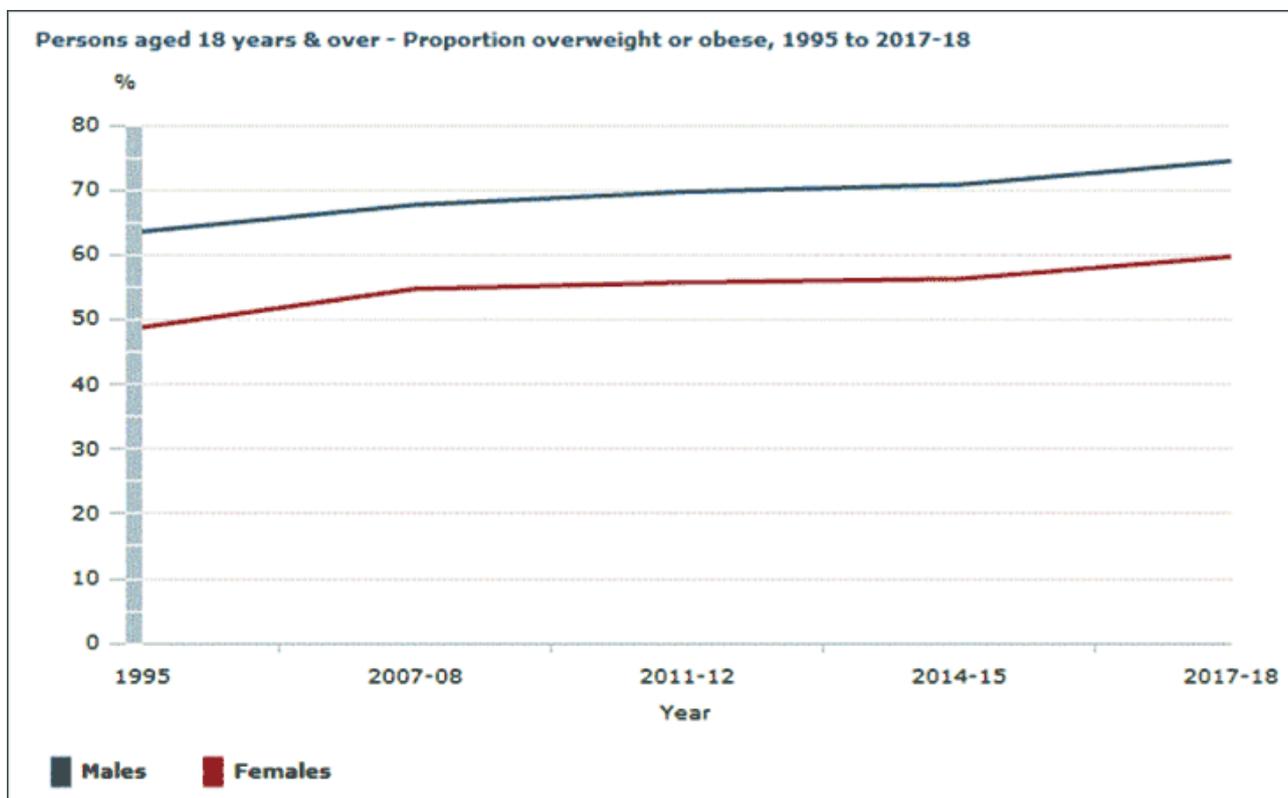
Year	Crash Severity								Total n
	Fatal		Hospitalisation		Total Serious		Other		
	n	(%)*	n	(%)*	n	(%)*	n	(%)*	
1990	181	(0.5)	2,116	(5.9)	2,297	(6.4)	33,334	(93.6)	35,631
1991	186	(0.6)	2,013	(6.0)	2,199	(6.6)	31,245	(93.4)	33,444
1992	171	(0.5)	1,967	(6.2)	2,138	(6.7)	29,781	(93.3)	31,919
1993	190	(0.6)	1,999	(5.8)	2,189	(6.3)	32,322	(93.7)	34,511
1994	195	(0.5)	2,033	(5.5)	2,228	(6.0)	34,618	(94.0)	36,846
1995	194	(0.5)	2,275	(6.0)	2,469	(6.5)	35,408	(93.5)	37,877
1996	220	(0.6)	2,043	(5.4)	2,263	(6.0)	35,331	(94.0)	37,594
1997	184	(0.5)	2,222	(6.1)	2,406	(6.6)	34,176	(93.4)	36,582
1998	199	(0.5)	2,268	(5.8)	2,467	(6.3)	36,642	(93.7)	39,109
1999	189	(0.5)	1,880	(4.8)	2,069	(5.2)	37,498	(94.8)	39,567
Total	1,909	(0.5)	20,816	(5.7)	22,725	(6.3)	340,355	(93.7)	363,080

What happened in 1992?

Table 1. Number of reported road crashes in WA by year and crash severity.
 (Source: Main Roads WA Traffic Accident System)
 *Row percentages provided

<http://www.cycle-helmets.com/crashstats1990-1999.pdf>

The impact of reduced regular recreational cycling activity in Australia



[http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/4B3976684C09F43FCA258399001CE630/\\$File/4364.0.55.001%20-%20national%20health%20survey.%20first%20results.%202017-18.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/4B3976684C09F43FCA258399001CE630/$File/4364.0.55.001%20-%20national%20health%20survey.%20first%20results.%202017-18.pdf)

[0/4B3976684C09F43FCA258399001CE630/\\$File/4364.0.55.001%20-%20national%20health%20survey.%20first%20results.%202017-18.pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/0/4B3976684C09F43FCA258399001CE630/$File/4364.0.55.001%20-%20national%20health%20survey.%20first%20results.%202017-18.pdf)

To determine the levels of physical activity and nutritional habits of Western Australian children and adolescents, the Children and Adolescent Physical Activity and Nutrition Survey (CAPANS) was conducted in 2003.

...

The survey of 2,880 children and adolescents shows that over the past 18 years the number of children who are overweight or obese increased from just over 9% of males and 10% of females in 1985 to 23% of males and 30% of females in 2003.

West Australian children weight (waist girth) pre and post 1992 helmet law

