

VEHICLE SAFETY

BICYCLE HELMET USE

U.S. HEALTHY PEOPLE YEAR 2000 OBJECTIVES

- 9.13 Increase the use of helmets to at least 50 percent of all bicycle riders
9.24 Extend to 50 states laws requiring helmets for all bicycle riders
-

This question measures the frequency of bicycle helmet use.

Head injury is the leading cause of death in bicycle crashes.¹ The protective effect for helmets when controlled for age and motor vehicle involvement has been estimated as 41 percent for teenagers aged 13 through 19 years old.² Since 1994, Oregon law states that youths under the age of 16 are required to wear a helmet when riding a bicycle.

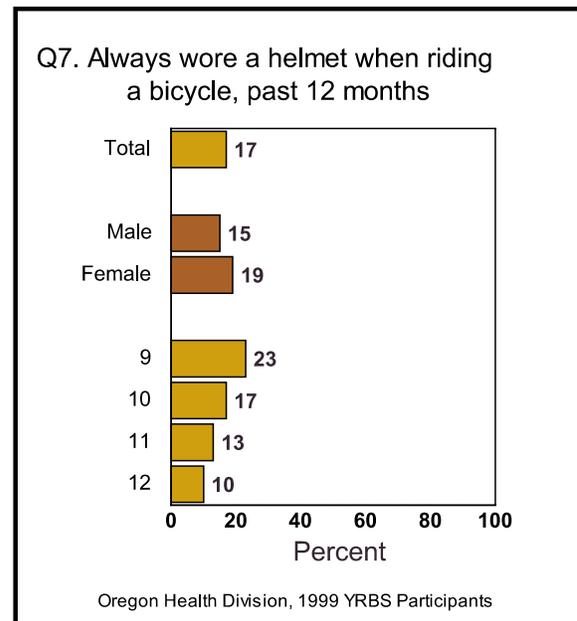
During 1997 and 1998, the Oregon Trauma Registry reported a total of 42 severe injuries to bicycle riders 10 through 18 years of age who were wearing a helmet and 93 to those the same age who were not wearing a helmet. The helmet status was unknown in sixteen cases.³ (Note: The Trauma Registry includes only patients who did not die at the scene and who had injuries severe enough to require trauma system entry.)

WHAT OREGON STUDENTS REPORTED

Q7. When you rode a bicycle during the past 12 months, how often did you wear a helmet?
(Of YRBS participants who rode a bicycle one or more times during the past 12 months)

Sixty-nine percent of Oregon YRBS participants rode a bicycle during the past 12 months. Of those who rode a bicycle, only 17 percent always wore a helmet.

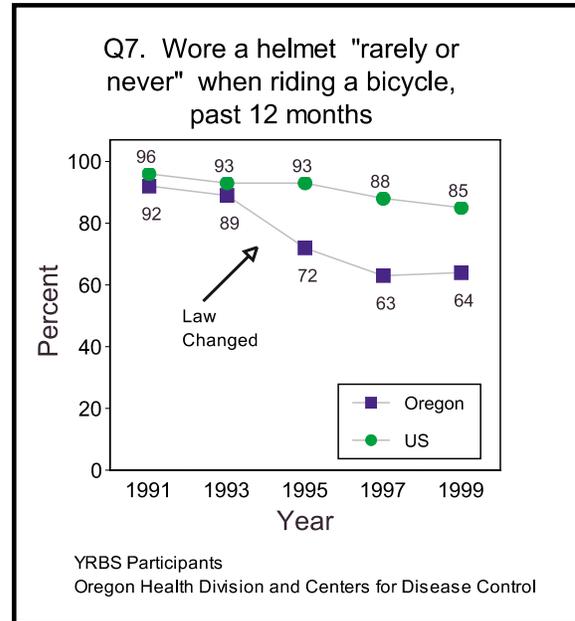
More females than males always wore their helmets when bicycling (19 vs. 15 percent). Bicycle helmet use decreased by grade level, from 23 percent in the 9th grade to 10 percent in the 12th grade.



Q7. DATA TRENDS

More Oregon youth bicycle riders wear helmets than youth riders nationally. In 1999, 64 percent of the Oregon versus 85 percent of national YRBS participants who rode bicycles rarely or never used bicycle helmets. In other states, the proportion of high school students reporting that they rarely or never wore helmets when riding bicycles varied from 59.8 percent in Vermont to 96.3 percent in South Dakota. The proportion of helmet wearers refers only to those students who reported riding a bicycle during the twelve months preceding the survey. Nationally, 71 percent of students were bicycle riders; in Oregon, 69 percent of the YRBS participants were riders.

In Oregon, the proportion of high school age youth who rarely or never wear their helmets when riding has declined since 1993. The biggest drop in percentage occurred between 1993 and 1995, the year after the state enacted a helmet law for bicyclists under age 16.



WHAT OREGON STUDENTS WROTE

“I was hit by a car going 25 MPH – without my helmet I would not have been alive today.”

SEATBELT USE

U.S. HEALTHY PEOPLE YEAR 2000 OBJECTIVES

- 9.12 Increase the use of safety belts and child safety seats to at least 85 percent of motor vehicle occupants
- 9.14 Extend to 50 states laws requiring safety belts for all ages

This question measures the frequency of seatbelt use among Oregon high school students.

Motor vehicle crashes are the leading cause of death for Oregon youth.⁴ Seatbelt use is estimated to reduce motor vehicle fatalities by 40 to 60 percent and serious injuries by 45 percent to 65 percent.⁵ Since 1990, Oregon law has required all drivers and passengers to use seatbelts. Increased seat belt use could have important health consequences for the many young drivers who are involved in motor vehicle crashes. In 1998 among Oregon drivers ages 16-19, there were 12,652 motor vehicle crashes; 5,513 resulted in injury and 85 crashes resulted in one or more fatalities.⁶

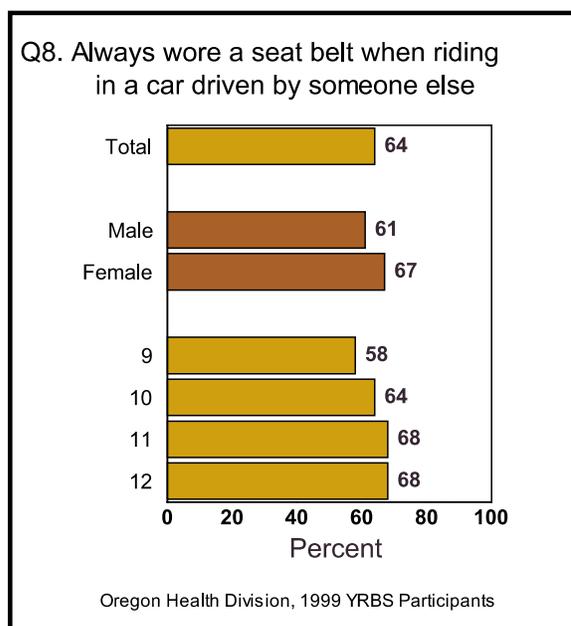
WHAT OREGON STUDENTS REPORTED

Q8. How often do you wear a seatbelt when riding in a car driven by someone else?

Sixty-four percent of Oregon 1999 YRBS participants reported they always wore a seatbelt when riding in a car driven by someone else.

More females than males always wore a seatbelt (67 vs. 61) and seatbelt use increased by grade level. There was a six-percent increase in seatbelt use between 9th and 10th graders and a four percent increase between 10th and 11th graders, while the percent of 11th and 12th graders using seatbelts were identical.

Teens have a much lower self-reported seat-belt use rate compared to adults and younger children ages 0-12. The Oregon Adult Behavior Risk Factor Survey (BRFSS) finds different role models being made to teens. In the 1997 BRFSS, 85 percent of adults with children in their household reported that they always wore their seatbelt.⁷ Observational studies document that 88 percent of youth ages 0-12 wear or use proper restraints such as car seats or seatbelts.⁸ Among young adults, seatbelt use appears to decrease. Among BRFSS participants ages 18-24, 75 percent reported always using their seatbelts, versus 84 percent of all participants.⁷

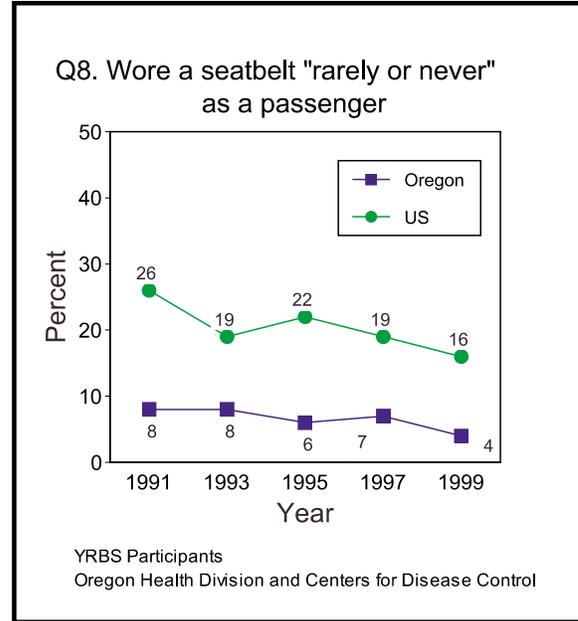


Q8. DATA TRENDS

Oregon participants report a higher percent of regular seatbelt use than the national average. In addition, the rate of Oregon youths wearing their seatbelts shows an upward trend.

In 1999, 64 percent of 1999 Oregon YRBS students always used their seatbelts, while four percent rarely or never wore them. Nationally, 16 percent of students had rarely or never worn their seatbelts when riding with someone else, and this risky behavior was more likely among boys than girls.

In 1997, Oregon students were more likely to always wear their seatbelts, with 53 percent of the Oregon versus 33 percent of the national YRBS participants reporting regular seat belt use.



DRINKING AND DRIVING

The next two questions measure the frequency of drinking and driving among Oregon high school students.

Inexperienced youthful drivers are at highest risk for becoming involved in a motor vehicle crash. Youth are challenged to master the complex set of motor skills and cognitive processes that are necessary to drive safely. When inexperienced youthful drivers drink alcohol and drive, their ability to anticipate and correctly respond to driving risks is highly compromised. Alcohol-related traffic crashes cause serious injury and permanent disability. Approximately 30 percent of all motor vehicle accidents involve alcohol, and 41 percent of those crashes result in a fatality.⁹ During 1988 through 1995, over 27 percent of the teenage drivers involved in fatal accidents had been drinking alcohol.¹⁰ The legal age for drinking in Oregon is 21. It is always illegal for teenagers to drink and drive, so there is no legal blood alcohol content for youth in Oregon.

In Oregon during 1998, 26 percent of the teen drivers involved in fatal crashes had been drinking. These crashes caused 22 fatalities.⁶

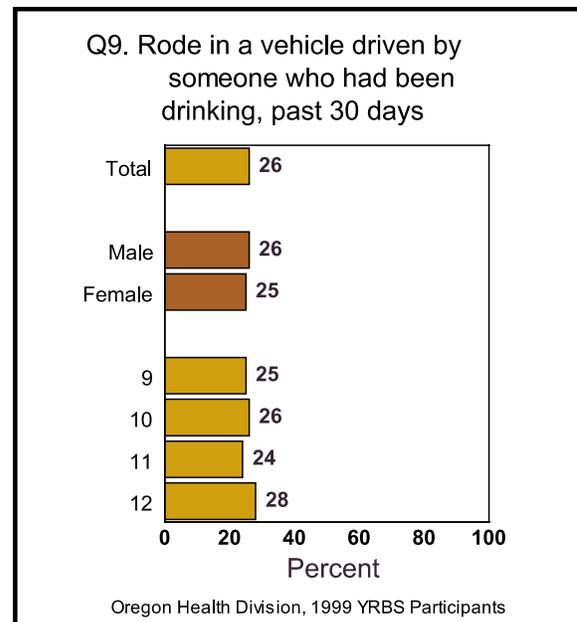
WHAT OREGON STUDENTS REPORTED

Q9. During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?

During the 30 days prior to the survey, 26 percent of Oregon YRBS participants rode one or more times in a car or other vehicle driven by someone who had been drinking alcohol. Over half of the students (57%) who rode with a drinking driver rode multiple times.

More 12th graders rode with a drinking driver than from the other grades. Of students who drank while they drove, 76 percent also rode with a drinking driver.

It should be noted that the YRBS survey did not ask students to assess if the drinking driver was impaired due to alcohol consumption. It is unknown if the driver was a peer or an adult. Also unknown is whether the student, as a passenger, had been drinking or was impaired by alcohol.



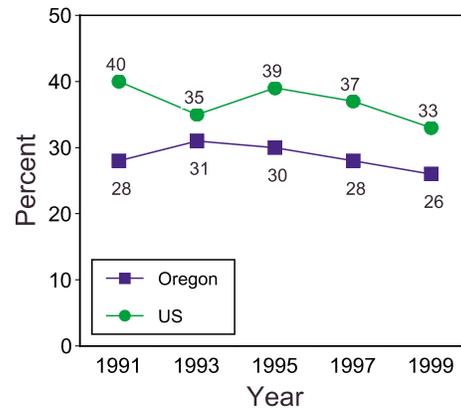
Q9. DATA TRENDS

Fewer Oregon YRBS participants rode with drinking drivers than the national average.

In 1999, 26 percent of the Oregon and 33 percent of the national YRBS participants reported that during the 30 days preceding the survey, they had ridden one or more times with a driver who had been drinking. Nationally, 12th grade males were more likely to ride with a driver who had been drinking than were 9th grade males.

In 1997, 28 percent of the Oregon and 37 percent of the national⁷ YRBS participants rode one or more times with a driver who had been drinking, a slight decrease for both.

Q9. Rode in vehicle driven by someone who had been drinking, past 30 days



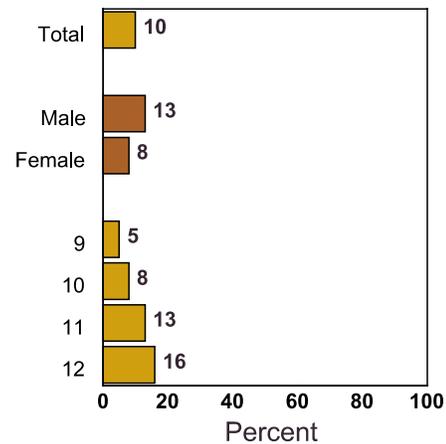
YRBS Participants
Oregon Health Division and Centers for Disease Control

Q10. During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?

During the 30 days prior to the survey, 10 percent of Oregon 1999 YRBS participants had driven a car or other vehicle after drinking alcohol. Nearly half (46%) of those students who drove after drinking had done so more than once.

One and one-half times more males drove after drinking than females (13 vs. 8 percent) and driving after drinking increased with grade level. Seventy-four percent of drinking drivers had also ridden with a drinking driver. Seventeen percent of the students who reported drinking and driving were not legally old enough to drive.

Q10. Drove a vehicle after drinking alcohol, past 30 days



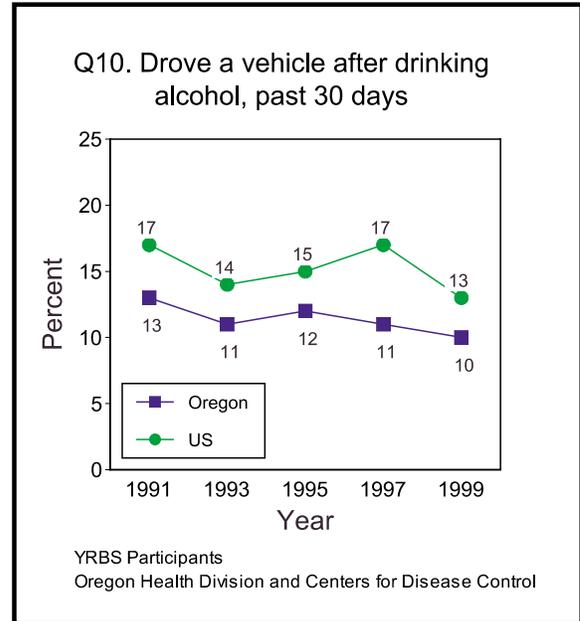
Oregon Health Division, 1999 YRBS Participants

Q10. DATA TRENDS

The Oregon youth drinking and driving rate has been lower than the national rate. While the youth drinking and driving rate has been increasing nationally, there has been a decrease in the Oregon drinking and driving rate.

In 1999, 10 percent of the Oregon and 13 percent of the national YRBS participants drank and drove in the past month. Nationally, high school boys were twice as likely as girls to drink and drive. Prevalence of drinking and driving varied greatly among states (7.2% in Utah to 31.4% in North Dakota).

In 1997, 11 percent of the Oregon and 17 percent of the national YRBS participants drank and drove in the month prior to the survey.



WHAT OREGON STUDENTS WROTE

"I believe the main problem in all high schools is drinking -- even the kids you wouldn't expect. The only reason I stopped was because of my mom -- the cops let us go every time we got pulled over (3 times in the car)!"

"I believe there should be a lot more done to STOP DRINKING AND DRIVING -- not just teenagers -- adults too!"

REFERENCES AND ENDNOTES

1. Centers for Disease Control and Prevention. *Injury-control Recommendations: Bicycle Helmets*. Morbidity and Mortality Weekly Report 44:1-17, 1995.
2. Thompson, Diane C, Rivara, MS, Frederick P, and Thompson RS. *Effectiveness of Bicycle Safety Helmets in Preventing Head Injuries: A Case-Control Study* Journal of American Medical Association 276(24):1968-73, December 1996.
3. 1997/1998 Oregon Trauma Registry Data.
4. Oregon Department of Human Services, Health Division, Center for Disease Prevention and Epidemiology. *Child Death in Oregon, 1998*.
5. National Highway Traffic Safety Administration. *Presidential Initiative for Increasing Seat Belt Use Nationwide: Recommendations from The Secretary of Transportation*. Washington, D.C.: U.S. Department of Transportation, 1996.
6. Oregon Department of Transportation, Transportation Development Division, Crash Analysis Reporting System, 1999.
7. Behavioral Risk Factor Surveillance System, data from the 1997 and 1998 telephone survey of adult Oregonians.
8. Oregon Dept. of Transportation, *Occupant Protection Observational Study*, August 1999.
9. National Highway Traffic Safety Administration. *The Economic Costs of Motor Vehicle Crashes*, Technical Report 1994. Washington, D.C.: U.S. Department of Transportation, 1995.
10. Centers for Disease Control and Prevention. *Involvement by Young Drivers in Fatal Motor-vehicle Crashes – United States, 1988-1995*. Morbidity and Mortality Weekly Report 45:1049-1053, 1996.