

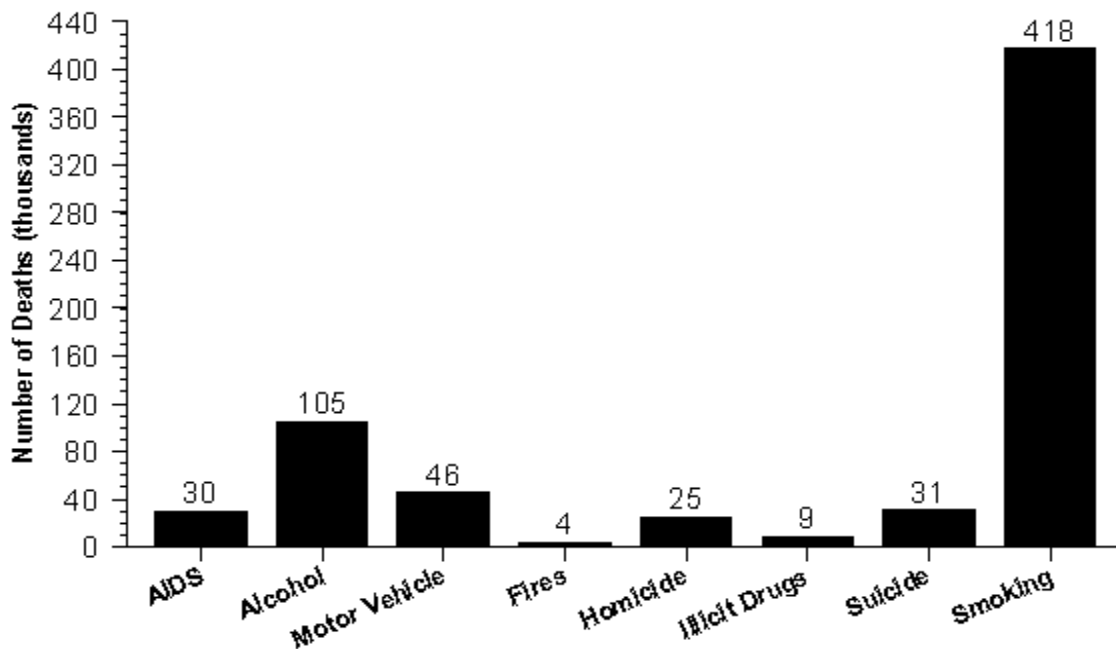
(4.2) & (4.5) The Use and Misuse of Statistics

Review the CASE STUDY on page 224 of your textbook.

Is this conclusion valid? Why or why not?

Review the following graph used by a government agency in the United States to report on leading causes of death:

Comparative Causes of Annual Deaths in the United States



Note: All mortality data are for 1990, except alcohol, which is for 1987.

Source: HIV/AIDS Surveillance Report; National Safety Council Accident Facts; Monthly Vital Statistics Report; SAMMEC; Alcohol-Related Death Index.

What does this graph appear to show?

Think about the graph and what it contains. Do you have any concerns or questions?

Consider these complaints about airlines published in US News and World Report on February 5, 2001:

Most complaints, Nov. '00	
United Airlines	252
American Airlines	162
Delta Air Lines	119
Fewest	
Alaska Airlines	13
Southwest Airlines	22
Continental Airlines	60

Can we conclude that United, American, and Delta are the worst airlines and Alaska, Southwest, and Continental are the best?

Assessing Statistical Data

Again, ask the key questions:

1. Was the **sample size** large enough?
2. Was the **sample representative**?
3. Were the survey **questions unbiased**?
4. Was the **collection method** appropriate?

And add the question:

5. Is the **graph constructed** accurately or do they mislead the viewer?