

## Chapter 2: Basic Data Analysis – Summary Statistics and Graphs

Meaning of the Variables

- $P_L =$
- $P_S =$
- $s =$
- $\bar{x} =$
- $x =$

Formulas

- Relative Risk (RR) =
- Attributable Risk (AR) =
- Attributable Risk % (AR %) =
- Number Needed to Change (NNC) =
- Coefficient of Variation (CV) =    Z-Score =

### Mean and Standard Deviation Practice

A	B	C
22.73	5.139	2195
25.65	4.919	1615
12.374	6.197	1697
5.192	4.323	1832
21.59	10.10	1921
19.77	8.212	
18.96	6.23	

1. Calculate the mean and standard deviation of data sets A , B, and C

A:

B:

C:

2. Which data set is MORE consistent: (Arrange the Dataset in the order of their consistency)

### **Risk Practice!**

	Sick	Healthy	Total
Low Iron Consumption	232	4,321	
Normal iron consumption	2,768	25679	
Total	3,000	30,000	

1a. What is RISKY:

1b. What is the RISK:

2. Calculate the RR:

3. Calculate the AR:

4. Calculate the AR%:

5. Calculate the NNC:

Suppose that the data set has a mean of 1421 and a standard deviation of 233.4. Answer the following questions:

6. Calculate the CV:

7. Calculate the z-score with a data value of 1430:

**Risk Practice!**

	Sick	Healthy	Total
Low Iron Consumption	150	4,500	
Normal iron consumption	2,500	25,000	
Total	3,650	29,500	

1a. What is RISKY:

1b. What is the RISK:

8. Calculate the RR:

9. Calculate the AR:

10. Calculate the AR%:

11. Calculate the NNC:

Suppose that the data set has a mean of 1520 and a standard deviation of 210.2. Answer the following questions:

12. Calculate the CV:

13. Calculate the z-score with a data value of 1500:

**Formula Sheet:**

	Formula
Relative Risk (RR) = BIG number divided by SMALL number; always >1	$RR = P_L / P_S$
Attributable Risk (AR) = large proportion minus small proportion	$AR = P_L - P_S$
Attributable Risk % (AR %) = answer from AR divided by large proportion	$AR\% = AR / P_L$
Number Needed to Change (NNC) = one divided by AR	$NNC = 1 / AR$
Coefficient of Variation (CV) = standard deviation divided by mean into percentage	$CV = s / \bar{x} \times 100\%$
Z-Score = data point minus mean all divided by sample standard deviation	$z - score = \frac{x - \bar{x}}{s} \times 100\%$