

Stat 1040

Review for Quiz 1, Spring 2012

1. The Coronary Drug Project was a randomized controlled double blind experiment whose objective was to evaluate drugs for the prevention of heart attacks. Not all of the subjects took their medicine. The following table summarizes the results. Deaths are from all causes.

	<i>Clofibrate</i>		<i>Placebo</i>	
	<i>Number</i>	<i>Deaths</i>	<i>Number</i>	<i>Deaths</i>
Adherers	708	15%	1,813	15%
Non-adherers	357	25%	882	28%
Total group	1,103	20%	2,789	21%

a) What is a “randomized, controlled, double-blind” experiment? (3 points)

There is a treatment group and a control group and they are determined randomly, say by the flip of a coin. The control group gets a placebo, a pill or something that resembles the treatment. Furthermore, neither the subjects nor the evaluators know who is in either group, hence the expression “double-blind”.

b) Looking at the clofibrate group, the death rate for the adherers was only 15%, while the death rate for non-adherers was 25%. True or false: ‘this shows that clofibrate saves lives’. Explain clearly. (3 points)

False; even though the treatment group was as much like the control group as possible, the adherers were probably much different from the non-adherers. For example, the adherers were likely more concerned with their health and took better care of themselves than the non-adherers.

- c) 2. A recent study on young children shows that kids who have dental cavities tend to weigh less than children without cavities. A doctor suggests that pain from cavities causes children to eat less and hence they weigh less than children without cavities. Do you agree? Can you identify confounding factors? Explain. (4 points)

Disagree; a more likely explanation for the difference in weight is that kids who are not as healthy and weigh less to begin with are more likely to have cavities.

