

1. You're testing advertising emails for a bathing suit company and you test one version of the email in February and the other in May.
 - a. The contextual bias here is obvious, there are some extreme differences in weather between February and May, had we sent out THE SAME email during these months we could have studied what impact the weather had on our business, but you can't test the two variables together (weather and new advertising). Nobody wants to buy swimsuits in February anyway, unless they live in South America and Australia.
2. You open a clinic to treat anxiety and find that the people who visit show a higher rate of anxiety than the general population.
 - a. Wouldn't our clinic be a magnet for people with anxiety disorders, ideally wouldn't everyone that comes in the door have anxiety problems? So our sample is biased by default.
3. You launch a new ad billboard based campaign and see an increase in website visits in the first week.
 - a. We need a little more information before we can attribute the uptick in homepage activity to the billboard campaign. What was webpage traffic like the same time last year? Really to be sure the billboards are increasing traffic on our site, we need to have a "how did you hear about us" survey on the homepage. And lastly, is this increased traffic resulting in increased revenue?
4. You launch a loyalty program but see no change in visits in the first week.
 - a. What's going on this first week? Any consumer sentiment changing events in the news? Is it a holiday week when many people are on vacation? What's the weather like? How did we get the word out about our program? Did we even do an A/B test to see if what we were offering in the loyalty program would actually work?