

# Recitation Week 3

- Any problems or questions so far?
- Warmup reviewing sampling
- Functions for other probability distributions
- Bar plots
- Making a function for standard error
- Confidence intervals

# Warmup

- Take a random sample of 15 *integers* from a sequence of *integers* ranging from 1 to 1000.
- Take a random sample of 15 numbers from a normal distribution with a mean of 500 and a standard deviation of 10
- What are some of the differences between sampling numbers these two ways?

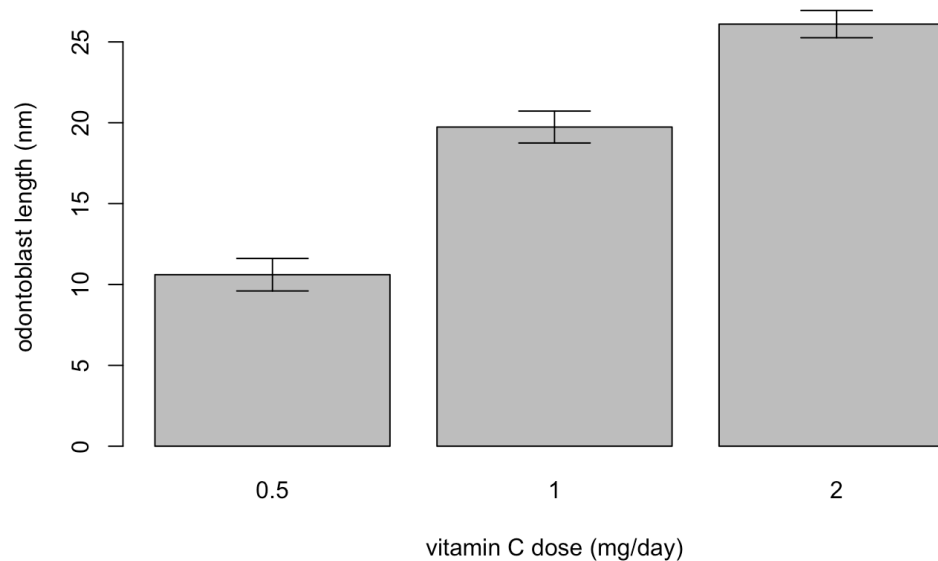
# Exercise 1: Binomial Probabilities in R

- What's the probability of drawing an ace of spades from a deck of cards (with no Jokers)?
- What's the probability of drawing 5 aces (of any suit) in a row from a deck of cards (with replacement!)?

# Exercise 2: Calculating SEMs

- Find means and SEMs for odontoblast lengths for each dose treatment
- Use `subset ( )` to create new data frames to calculate statistics on
- Challenge: Use `group_by ( )` and `summarize ( )` from the `tidyverse` package

# Exercise 3: Practice plotting error bars



- Make a plot like this, but with error bars representing 95% confidence intervals instead of standard errors.
- Challenge: Figure out how to make this plot using the `ggplot2` package