	L_1	L_2
Center	median m	mean $\bar{x}$
Error	$\lvert x_i - m \rvert$	$(x_i - \bar{x})^2$
Spread (Avg. Error)	$\dfrac{\sum \lvert x_i - m \rvert}{n}$	$\dfrac{\sum (x_i - \bar{x})^2}{n-1} = s^2$

$$\sqrt{\frac{\sum (x_i - \bar{x})^2}{n-1}} = s$$

Creating a boostrap null distribution

H_0: No diff b/w 498 & 598

```
# put all the BDotMs in one pool
days <- c(days498, days598)
n498 <- length(days498)
n598 <- length(days598)

diffs <- replicate(10000, {
  sample498 <- sample(n498, days, replace=TRUE)
  sample598 <- sample(n598, days, replace=TRUE)
  # return the difference between the two groups
  mean(sample498) - mean(sample598)
})
```

Estimating the *p*-value

The *p*-value is the probability that a difference at least as large can be seen randomly.

We can estimate this probability as the fraction of bootstrap samples that are as large as the test difference.

```
mean(abs(diffs) >= abs(test_diff))
```

```
## [1] 0.7683
```

$p < 0.05$?

With a *p*-value this large, we cannot reject the null hypothesis that the BDotM is the same for both groups.