

When deciding which post hoc test to use :

Does it control the Type I error rate ?

Does it control the Type II error rate ?

Is it reliable when ANOVA assumptions have been violated ?

LSD, Bonferroni, and Tukey tests.

- The least significant differences test (LSD) doesn't control the Type I error and is like doing multiple t-tests on the data (but only if the ANOVA is significant).
- Bonferroni and Tukey both control for Type I errors but are conservative. Bonferroni works by dividing the critical alpha level by the number of tests conducted.
- Tukey is less conservative than Bonferroni.