

- ANOVA can tell us that there is a difference between means – so for three samples it tells us that $\overline{X}_1 = \overline{X}_2 = \overline{X}_3$ is not true.
- But it doesn't tell us where the difference is.
- It doesn't tell us whether \overline{X}_1 differs from both \overline{X}_2 and \overline{X}_3 or whether \overline{X}_2 differs from \overline{X}_3 but not \overline{X}_1 etc.

ANOVA

- Imagine we're interested in the impact of caffeine consumption on an individual's motor performance.
- It's a between-subjects design with 3 conditions:
 - low amount of caffeine (single espresso)
 - large amount of caffeine (double espresso)
 - placebo group (water)