Group Number: 2

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Caffeine is a widely popularized substance utilized in many ergogenic aids to act as an exercise performance booster. Caffeine can either be in the form of a beverage, food, or pills/tablets. On average, 89% of American adults ingest caffeine with an average daily consumption of 211 ± 472 mg (Grgic, 2018). In past research studies, caffeine was ingested 60 minutes before exercise with a dose of 3 to 6 mg/kg (Grgic et al. 2020). Previous studies' results support assumptions that pre-exercise caffeine ingestion notably increases strength performance (Krawczyk et al. 2022; Duncan et al. 2013). Although there are no specific recommendations for the amount of caffeine one should consume, the FDA has stated that for healthy adults, up to 400 mg/day does not correlate with negative health effects. On the contrary, caffeine does show benefits with improvements in concentration, fatigue, mental alertness, and athletic performance (Mitchell et al. 2013).

There is extensive research supporting caffeine's beneficial effects as an endurance enhancer and fatigue resistor, but in regards to its influence on strength performance, literature has exponentially increased in recent years (Giráldez-Costas, V., et al., 2022, Grgic, J., et al., 2020, There are studies in the literature that have looked at caffeine's effect on resistance training; however, most of these studies have looked at resistance trained men. Only about 13% of the total subjects in caffeine enhancement literature are females, and just three studies have looked at the effect of caffeine doses (<6mg) on strength performance. (Norum, 2020). One study was conducted to investigate the effects of caffeine ingestion on strength in resistance trained females. The mean years of this study was 30 years old, which suggests that more

research is necessary on college-aged, female, resistance-trained students. (Norum, 2020). Therefore, the purpose of this study is to examine the effect of caffeine intake on strength training performance in recreationally active college-aged females. Ultimately, we hypothesize that strength performance will increase due to caffeine intake.

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