



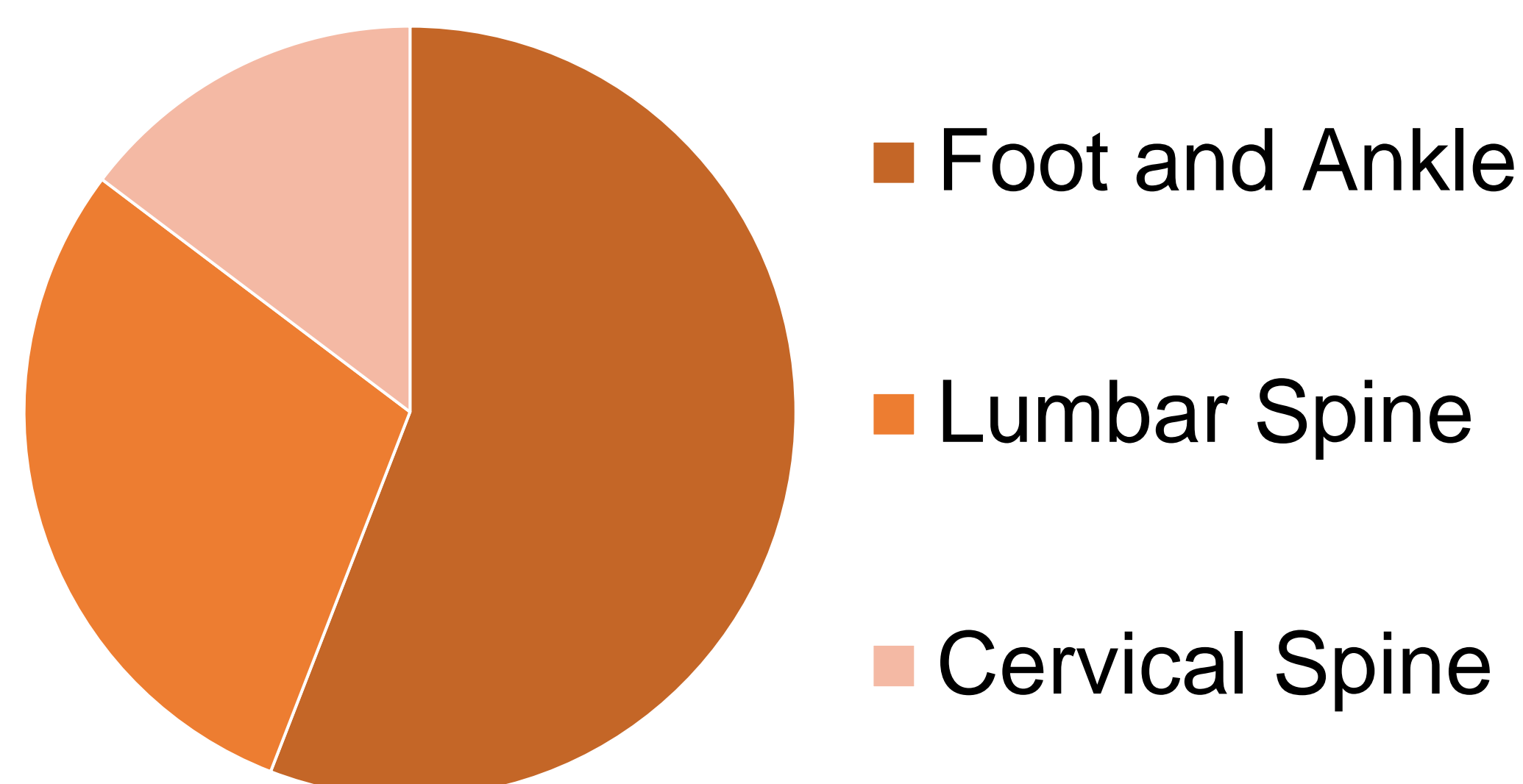
Effects of Resistance Training of the Foot on Dance-Related Exercise and Performance

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INTRODUCTION

- Dancers have a 90% injury rate compared to 20% in football and rugby players.
- Dancers are expected to turn, leap, and dance in constricting shoes that mold the foot into a position that is not natural or supportive.
- The extreme positions required for successful movement patterns may impact landing balance and stability.



➤ The chart above shows the proportion of injuries in dancers by region.

- Ramkumar et al. *Journal of Dance Medicine & Science*. 20(1): 31-32, 2016
- Macintyre et al. *Clinics in Sports Medicine*. 19(2): 351, 2000

PURPOSE

➤ The purpose of this study is to examine changes in power, balance, and stability in collegiate dancers following a resistance training intervention.

HYPOTHESIS

➤ Since the dancers will be strengthening the base of support for their movement technique, we hypothesize they will have improved balance in their turns and stability in landing their leaps.

IMPACT ON THE COMMUNITY

- Dance is a high impact sport that puts intense strain on the body and lacks proper equipment and training to keep the performers healthy
- This study will help highlight the importance of balance and stability to reduce the injury rate observed in dancers
- This study will help dancers, as well as their coaches, improve their strength in order to lower the injury rate and stay healthy
- The idea that dancers should not participate in strength training exercises in order to maintain the “ideal figure” will be put to the test.



METHODS

Pre-Testing

- Maximal Force Production
- Balance
- Stability

Training Program

- 6-Week Training Program
- 2-3x per Week
- Foot- and Single-Limb Focused

Post-Testing

- Maximal Force Production
- Balance
- Stability

