



**Duke Sports Medicine**

# **RUNNING AND ITS IMPACT ON THE HIP JOINT**

*Previous studies have explored how running affects the knee, however, limited research has been done to determine its effects on the hip*



## **Why We Did This Study**

Running is an activity that people of all ages can enjoy. Many studies have looked at how running affects our bodies, especially our knees. For example, one recent study found that running can make the cartilage in our knees thinner. Not many studies have looked at how running affects our hips. So, this study aimed to find out how running impacts the hip joint.

**Questions? Contact us at [sportsmed\\_research@dm.duke.edu](mailto:sportsmed_research@dm.duke.edu).**

# HOW WE CONDUCTED THIS STUDY

## STUDY EVENTS

- Hip MRI
- Run 3 Miles on a treadmill
- Hip MRI again



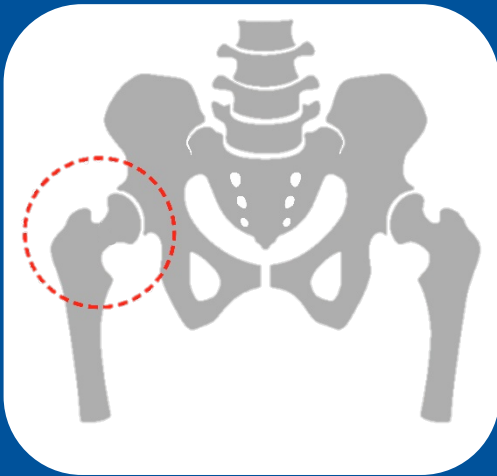
Then, measure the distance on the MRI images between the bones of the hip joint



## PARTICIPANTS

- 5 Males
- 3 Females
- Healthy
- 19 – 38 Years Old
- No history of lower body injury

## THE RESULTS



- The **distance between the bones** in the hip joint **decreased significantly** after the run.
- There was an average loss of  **$3.47 \pm 0.20$  to  $3.36 \pm 0.22$  mm ( $2.8 \pm 2.1\%$  loss)** in distance between the bones after the run

## WHAT DO OUR RESULTS MEAN?

Our results showed that the distance between the bones in the hip joint decreased. This is most likely due to water loss from the tissue surrounding the joint after the run.

Many other studies have focused on running's effect on knee joint cartilage, not the distance between the bones in the hip joint. Our findings are important for understanding how running affects the hip joint in younger runners.

In future studies, we hope to explore how differences in sex, foot strike pattern, and different loading weights may also affect the joint.

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