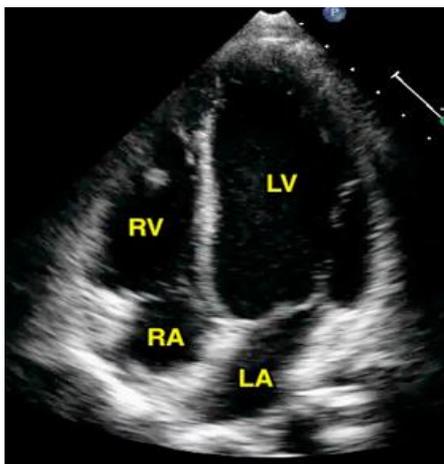
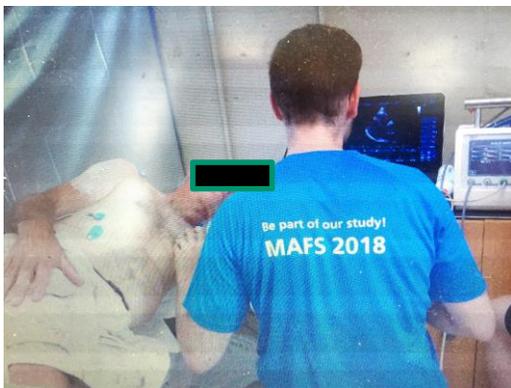


What we wanted to find out:

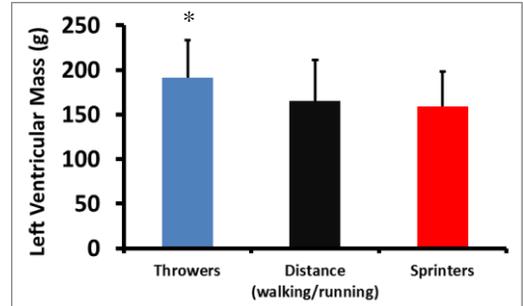
- During resistance-training sessions, blood pressure can increase substantially.
- Chronically high blood pressure can have a negative impact on heart structure and function.
- It is unclear whether a lifetime of resistance-training will have a negative impact on heart structure and function.
- Our purpose was to compare heart structure and function in different groups of athletes involved in the 2018 World Masters Athletic Championships, including those involved in throwing events (who would have a greater lifetime of resistance-training), those involved in sprinting, and those involved in endurance events

Which measurements we took:

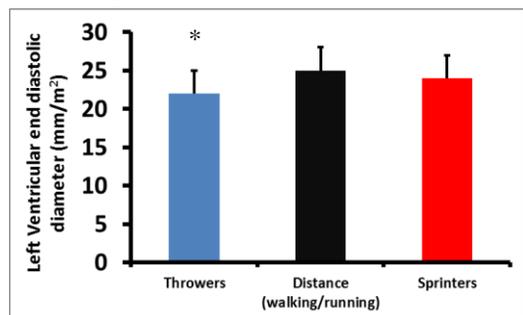
Heart dimensions and function were assessed by ultrasound



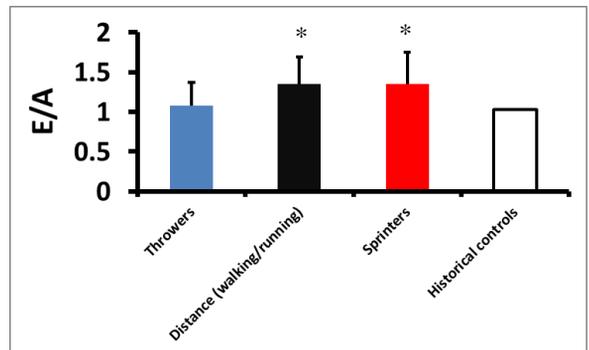
What we found:



*Throwers had greater heart mass, indicating altered heart structure



*Throwers had reduced heart volume, indicating altered heart structure



Higher E/A indicates better heart function

*Heart function was superior in endurance athletes and sprinters compared to throwers; however, heart function in throwers was not lower than age-matched controls

What we conclude from this study:

- A lifetime of resistance-training affects heart structure, but this has no negative impact on heart function.
- A lifetime of either endurance or sprint training improves heart function