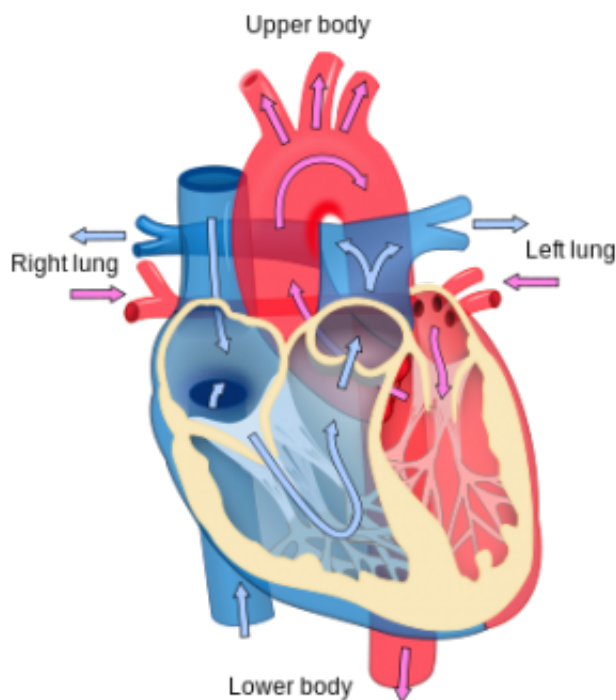


Endurance sport causes strain in right side of the heart

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Heart diagram. Credit: Wikipedia

Otherwise healthy people who exercise strenuously for more than 90 minutes suffer from a post-exercise drop in heart performance, but only in the right side of the heart, according to researchers at the University of Adelaide.

The findings could have implications for long-term [heart](#) health of

athletes and may help researchers to better understand the mysterious link between people involved in sports such as running, cycling or triathlons and an increased risk of [heart arrhythmias](#).

The right side of the heart has been largely overlooked by most research into this issue. However, in a review of all relevant studies conducted worldwide, researchers found a clear problem emerging with the heart's right ventricle.

"The results across all studies were clear: that intense, prolonged exercise is associated with a measurable reduction in performance of the right ventricle of the heart, while the left side remains almost unaffected," says lead author Dr Adrian Elliott from the University of Adelaide's School of Medical Sciences and the Centre for Heart Rhythm Disorders.

The studies reviewed involved sports such as running, cycling and triathlons, and included data from more than 300 professional or amateur athletes aged 28-55 years.

"In all parameters assessed, performance of the [right ventricle](#) declined post-exercise, despite no apparent limitation for the [left ventricle](#)," Dr Elliott says.

"The exact cause of this remains unclear from the studies conducted to date. The most likely reason is the relatively greater increase in load placed on the right side of the heart during exercise, potentially making it more susceptible to fatigue or injury.

Dr Elliott says these changes, while appearing to be fully reversible in the short-term, have an unknown clinical relevance that requires further study.

"Potential issues in the short term include the time required for recovery,

and whether this impairment of the heart impacts on cardiac performance during repeated exercise within relatively short timeframes.

"The long-term health consequences of prolonged and strenuous [exercise](#) also require further investigation," Dr Elliott says.

Dr Elliott will present findings relating to remodelling of the heart in a large cohort of endurance athletes at the upcoming Heart Rhythm Society Annual Scientific Sessions in Boston, USA.

Provided by University of Adelaide

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