

Aerobic and resistance exercise combo can boost brain power of over 50s

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Credit: Peter Griffin/Public Domain

A combination of aerobic and resistance exercises can significantly boost the brain power of the over 50s, finds the most comprehensive review of the available evidence to date, published online in the *British Journal of Sports Medicine*.

And the effects were evident irrespective of the current state of an individual's [brain health](#), the analysis shows.

Physical [exercise](#) for older adults is seen as a promising means of warding off or halting a decline in brain health and cognitive abilities. Yet the evidence for its benefits is inconclusive, largely because of overly restrictive inclusion criteria in the reviews published to date, say the researchers.

In a bid to try and plug some of these gaps, they systematically reviewed 39 relevant studies published up to the end of 2016 to assess the potential impact of varying types, intensities, and durations of exercise on the brain health of the over 50s.

They included [aerobic exercise](#); resistance training

(such as weights); multi-component exercise, which contains elements of both aerobic and resistance training; tai chi; and yoga in their analysis.

They analysed the potential impact of these activities on overall brain capacity (global cognition); attention (sustained alertness, including the ability to process information rapidly); executive function (processes responsible for goal oriented behaviours); memory (storage and retrieval); and working memory (short term application of found information).

Pooled analysis of the data showed that exercise improves the [brain power](#) of the over 50s, irrespective of the current state of their brain health.

Aerobic exercise significantly enhanced cognitive abilities while [resistance training](#) had a pronounced effect on [executive function](#), memory, and working memory.

The evidence is strong enough to recommend prescribing both types of exercise to improve brain health in the over 50s, say the researchers.

The data showed that tai chi also improved [cognitive abilities](#), which backs the findings of previously published studies, but the analysis was based on just a few studies, caution the researchers, so will need to be confirmed in a large clinical trial.

Nevertheless, it's an important finding, they suggest, because exercises like tai chi may be suitable for people who are unable to do more challenging forms of physical activity.

And in terms of how much and how often, the data analysis showed that a session lasting between 45 and 60 minutes, of moderate to vigorous intensity, and of any frequency, was good for [brain](#) health.

The researchers point to some potential limitations

of their review: their evidence was confined only to studies of supervised exercise and which had been published in English.

Nevertheless, they conclude: "The findings suggest that an exercise programme with components of both aerobic and resistance type training, of at least moderate intensity and at least 45 minutes per session, on as many days of the week as possible, is beneficial to cognitive function in adults aged over 50."

More information: Exercise interventions for cognitive function in adults older than 50: a systematic review with meta-analysis, *British Journal of Sports Medicine* (2017). DOI: [10.1136/bjsports-2016-096587](https://doi.org/10.1136/bjsports-2016-096587)

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