

New online study explores link between healthy brains and bodies

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Credit: Ketut Subiyanto from Pexels

So little is understood about the dialogue between the body and the brain. It might seem obvious that our physical state can affect our ability to think, but there are many fundamental questions neuroscientists would

still like to answer—with your help.

A new [Western-led study](#) officially launched today that explores the elusive relationship between physical and [cognitive health](#).

Driven by a pioneering series of online brain games, the study will provide invaluable data and insight for world-renowned neuroscientist Adrian Owen and his team to discover more about the links between the body and the brain.

"What we hope to do is to establish definitively whether exercise is beneficial for cognition function, and if so, which cognitive functions benefit most," said Owen, professor of cognitive neuroscience and imaging at Western's Schulich School of Medicine & Dentistry and the department of psychology in the Faculty of Social Science. "We will also look at how this may vary across the lifespan. If exercise is good for your brain, does it confer the same benefits in the old and the young?"

Each completed online survey also provides participants with instant results about how their own brain and body functions while Owen and his fellow neuroscientists can identify activities and lifestyle habits that could improve or maintain life-long functioning of the brain.

"We are also going to examine whether playing highly immersive video games can improve your cognitive function. So far, the [scientific community](#) is divided on the issue and we want to conduct the definitive study that really gets to the truth."

For the study, Owen has partnered with the award-winning Science and Industry Museum (Manchester, U.K.), the findings are set to be shared at this year's Manchester Science Festival, which returns Oct. 18–27, 2024.

"Manchester Science Festival is one of the most popular events of its

kind in the U.K. and we are really excited by the thought of using this mass experiment to help shape the program this year and find out new things about how our brains affect our bodies and vice versa," said Owen.

People living longer, an [aging population](#) and a recent study suggesting the COVID-19 pandemic has impacted brain power in people aged 50 and over, all make long-term cognitive and physical health increasingly important. Completing the survey will help neuroscientists build a better understanding of how lifestyle factors relate to the health of our brains across our lifetimes and could in future years support individuals to choose activities that promote healthy cognitive aging.

Owen led [a previous study](#) of 11,000 people, published in the journal *Nature*, which showed that computerized brain training games did not improve cognitive function. This new study is different in that participants now play highly immersive video games.

Will there be a difference? That is what Owen and the team hope to find out.

Answer biggest questions facing our planet

This year's Manchester Science Festival, produced by the Science and Industry Museum, will explore "Extremes" and offers the opportunity to get hands-on with some of science's most cutting-edge developments. Festival-goers will explore some of the biggest questions facing our planet through multi-sensory experiences, immersive performances, and hands-on activities.

"We can't wait for the festival's return this October. It is a brilliant opportunity to bring together visitors of all ages and interests to be inspired by science in action, and a wonderful way to showcase

Manchester's long-standing position as a leader in progress and innovation," said Sally MacDonald, director of the Science and Industry Museum.

"We are delighted to be launching the festival with the pioneering Brain and Body study and giving more people the unique opportunity to be part of contemporary developments in science and play a role in furthering scientific knowledge to benefit our collective future."

Roger Highfield, [science](#) director at the Science Museum Group, worked with Owen previously on a mass online survey about IQ, so when the Manchester Science Festival was looking for a partner to study the body and the brain, he knew where to go.

"The survey is huge fun to do, will earn you entry to a prize draw and supports important neuroscientific research—taking part is a no-brainer," said Highfield.

The survey can be completed online (www.brainbodystudy.com) using a desktop, laptop, or tablet, though it is not possible to take part in the survey using a phone. It takes around 75 minutes to complete, includes fun [brain](#) games and cognitive challenges, and at the end will share results with the participant. Anyone who signs up will have a chance to win Amazon vouchers (equivalent to \$100CAD each).

Provided by University of Western Ontario

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