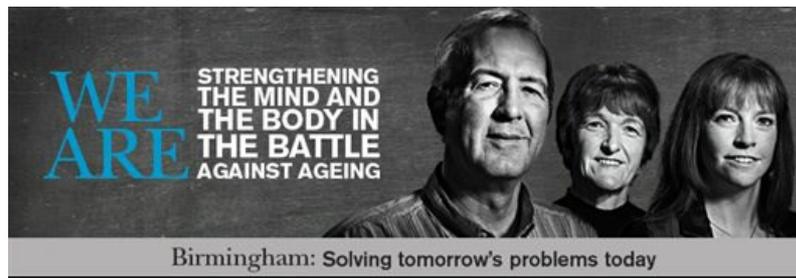


Healthy ageing



Research at Birmingham tackles health and ageing in a number of ways. Birmingham has major groups working on research into the ageing process, including the ageing immune system, stem cells, and inflammatory diseases like rheumatoid arthritis as well as being a major centre for cancer research and cognitive neuroscience.

The brain

Birmingham has a world leading reputation for cognitive neuroscience and one of the key strands of this research focuses on the ageing brain. Working with functional MRI imaging, researchers can understand where in the brain particular processes happen. We also focus on neuropsychology, where we learn about what the brain does by understanding the problems people have after brain damage. A key focus here is in understanding how the brain ages and also how it recovers after severe injuries like stroke. Much work examines the problems patients can have in dealing with the environment around them.

Immunity

As humans age they become more susceptible to infectious diseases (especially bacterial infections), inflammatory disease and have poorer responses to vaccinations. Understanding why our immune systems lose function opens up the possibility of new treatments for a range of diseases that involve the immune system, particularly; chronic inflammatory diseases like Rheumatoid Arthritis, but also blood cancers such as acute myeloid leukaemia.

Birmingham has major interest in how these diseases occur and the effects that different activities and the ageing body have in exacerbating these processes. For example at times of stress, such as after a fall and hip-fracture, the loss of immune function is dramatically increased and this may be caused by an excess of the immune suppressive stress hormone cortisol and a lack of the counter stress hormone dehydroepiandrosterone (DHEA).

“ Professor Janet Lord "Most major diseases become more common as we age. We immediately think of dementia or stroke as diseases of older people. But cancer, inflammatory disease and common infections are also diseases that primarily affect the elderly. At Birmingham we want to understand why this occurs to ensure that in the future, ageing won't have to mean ailing!"
