Dr Anna Phillips

Anna is interested in how stress and ageing affect our immune systems. She is currently looking at why older people are far more prone to infection after suffering a hip fracture than a young patient with the same injury and whether depression plays a role in this.

Another part of her research is understanding whether being under stress as a long term carer has a negative effect on the immune system. She has also just found that the stress of bereavement in older adults is related to malfunctioning of neutrophil cells which are key to fighting off killer infections like pneumonia.

> Dr Anna Phillips "My earlier work has shown that stressful events, such as bereavement, have a negative impact on people's immune response to vaccination. This has importance for older adults, but also for other groups like parents who provide long term care for children with disabilities. At the moment, parents who care for children with a major physical or mental disability don't receive the yearly 'flu jab or specific support to target the stress of their parenting role, but my research suggests they should be thought of as a vulnerable group."

Anna's team are particularly interested in reducing the negative effects of ageing or stress on the immune system. As we age levels of the stress hormone, cortisol, are higher certain times of day. This has a negative impact on our immune systems, which is made more severe by a significant drop in levels of the immune enhancing hormone, DHEA. In the future they hope to initiate a clinical trial to supplement with DHEA in hip-fracture patients and stressed older adults to prevent the excess levels of infection and mortality in these vulnerable groups.

As well as new pharmaceutical treatments, Anna is also interested in how to make sure that vaccinations given to older people or those experiencing stress are sufficient to give protection against infections. Can this be improved through changing the time of day the vaccination is given or by using interventions to target stress?

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