

Could aspirin shoulder the burden of inflammation?

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Aspirin could be used as an anti-inflammatory drug, bringing relief to the thousands who suffer with shoulder pain, Oxford University researchers have found.

In a study published in journal *Science Translational Medicine*, scientists from the Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences looked at tendons taken from patients suffering from <u>shoulder pain</u>.



Dr Stephanie Dakin said: 'Shoulder pain is the third most common problem seen by orthopaedics specialists and with an aging population we will see more of this. There are various treatment options, from physiotherapy to drugs and injections and even surgery. Success rates can be variable. We wanted to understand the underlying processes that cause the problem.'

Dr Dakin first developed her interest in the issue as a vet treating horse with <u>tendon injuries</u>, which can be life threatening in the animals. After completing a PhD researching inflammation in equine tendon disease, she has been funded by Arthritis Research UK to spend the last two years developing her findings and looking at how they can be applied to people as well.

She explained: 'The focus of this current work is to investigate inflammation in shoulder tendon injuries in groups of NHS patients at the Oxford University Hospitals. The purpose of this research is to improve understanding of the role of inflammation in tendon disease to find therapeutic targets – elements of the condition that can be targeted with drugs to relieve or cure it.'

The team found that the processes creating and sustaining inflammation were different in early and late stage tendon disease. They also found processes that appear to be responsible for recovery from tendon pain after treatment. A key finding was that aspirin, that staple of household medicine cabinets, could be an effective treatment.

Dr Dakin said: 'Looking at cells in the laboratory, we found that <u>low</u> <u>dose aspirin</u> has the potential to resolve tendon <u>inflammation</u>. We will now be conducting a clinical trial to investigate if low dose aspirin can help to prevent tendon injuries or treat patients with early stage tendon disease.'



More information: S. G. Dakin et al. Inflammation activation and resolution in human tendon disease, *Science Translational Medicine* (2015). DOI: 10.1126/scitranslmed.aac4269

Provided by Oxford University

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