

Detecting early signs of osteoarthritis

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Researchers at The University of Nottingham are hoping to find out if inflammation of the knee could be an early sign of osteoarthritis — a condition which leads to pain, stiffness, swelling and disability.

Up to six million people in the UK suffer from osteoarthritis in the knee. Now 200 patients, over the age of 55, from GP practices across Nottingham are to take part in a study led by research physiotherapist Michelle Hall in the School of Nursing, Midwifery and Physiotherapy.

Mrs Hall, who is a lecturer in the Division of Physiotherapy Education, said: "It has been shown that people who have inflammation may develop more severe and progressive osteoarthritis and experience greater pain and disability. The ability to detect the presence of inflammation using Ultrasound could therefore be important in terms of prognosis and selection of certain treatments."

With a three-year training fellowship from the Arthritis Research Campaign of £192,000 Mrs Hall will use new ultrasound techniques to identify if this common condition, in people over 55, can be linked to osteoarthritis.

At the moment osteoarthritis can only be identified by x-ray, which is limited to revealing changes to bones and degeneration of cartilage. It does not show up any changes or inflammation to the surrounding soft tissue or joint lining. This inflammation may also contribute to pain and stiffness and could, in fact, be a precursor to osteoarthritis.

Osteoarthritis is known as a "wear and tear" condition in which cartilage wears away, leaving bones rubbing together. Recently scientists have shown that inflammation in the joint lining may also play a role in its development.

The team from The University of Nottingham's physiotherapy education and academic rheumatology departments aim to find out if people with knee pain and/or knee [osteoarthritis](#) also have inflammation in their knees.

Patients will attend the Clinical Sciences Building at the University for the ultrasound scans which will be repeated three months later or if participants report a change in their [knee](#) pain, to chart the progress of the [inflammation](#) to see whether this correlates with x-ray changes or with increases in [pain](#). A control group of healthy volunteers will also undergo ultrasound on their knees as a comparison group.

Source: University of Nottingham ([news](#) : [web](#))

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