

Study finds potential markers for severity of childhood arthritis

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(Medical Xpress)—Children who suffer from arthritis could one day receive more targeted treatment thanks to potential markers for the severity of the disorder discovered by researchers at the University of Adelaide and Women's and Children's Hospital.

The early results of a world-first study looking at 115 children with [juvenile arthritis](#) have shown that changes in the levels of particular molecules known as prostanoids - which are formed from essential fatty acids - in the blood of these patients may predict the course of arthritis more accurately, and help provide more individualised treatment.

"Arthritis in children is almost as common as [juvenile diabetes](#), with up to one in 500 children affected. Despite having many available treatments, not all children with arthritis will respond to standard therapies," says the leader of this research, Dr Christina Boros, Senior Lecturer in the University of Adelaide's School of Paediatrics and Reproductive Health, researcher in the Robinson Institute, and Head of Rheumatology at the Women's and Children's Hospital.

"For many children arthritis can be a physically debilitating and emotionally challenging condition. Some are unable to perform simple tasks because the swelling of their joints can affect their motor skills. Many children with arthritis also suffer from the [psychological consequences](#) of having a chronic disease, which can continue with them into [adult life](#).

"Juvenile idiopathic arthritis can present at any age, with some children diagnosed as early as 6-9 months. The longer children go without treatment, the more likely they are to have permanent joint damage," she says.

"So far, we've been able to determine relationships between the [blood levels](#) of molecules called prostanoids and disease activity in childhood arthritis. These appear to be more accurate than traditional blood markers of inflammation.

"This is promising research. We are now expanding our study to look at a larger group of children with arthritis, and how prostanoids may predict arthritis disease activity over time as well as how the use of medications affects prostanoid levels."

Dr Boros says that having confirmed biomarkers could not only change how we treat the childhood arthritis, but also reduce the physical, emotional and financial burden of the disease.

"There are many medications available for juvenile arthritis but unfortunately there is still no cure. Anything that can improve treatment and prevent joint damage is welcome."

Provided by University of Adelaide

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