

## Research offers hope for rheumatic fever sufferers

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Northern Territory data has been used to prove that timely treatment for people with rheumatic fever reduces the risk of recurring illness and death.

The findings, published in the prestigious Journal of the American Heart Association, show the health benefits of regular penicillin injections for children and adults suffering the burden of rheumatic heart disease

Research author Jessica de Dassel a Menzies School of Health Research (Menzies) PhD student says the study used complicated statistical analyses of over 7000 doses of penicillin received by 1610 people between the years 2007 and 2013. The penicillin doses were all given as an intramuscular injection.

“Getting penicillin injections on time every four weeks stopped people from getting recurrent episodes of rheumatic fever. Not only that - it also reduced their overall risk of dying.

Only people who received at least 40% of their scheduled injections were protected against rheumatic fever, getting at least five doses every year is important. Additional doses provided extra protection, so the message is clear - every dose counts” said Ms de Dassel.

Ms de Dassel studies at Charles Darwin University supported by supervisors Menzies Associate Professor Anna Ralph and Professor Jonathan Carapetis with Professor Nick de Klerk from the Telethon Kids Institute, Perth.

“Regular penicillin injections are the standard preventive medicine prescribed after a first diagnosis of rheumatic fever, to stop recurrences. But until now, the real-world effectiveness of this strategy in the Northern Territory was unknown. In this study, we found what people’s real experiences of treatment is,” says Associate Professor Ralph.

The published research shows for every 10% increase in adherence to penicillin, the odds of acute rheumatic fever (ARF) recurrence reduced by 17% and the odds of death reduced by approximately 12%. People who got more than 80% of their injections (at least 11 doses a year) benefited most.

“The evidence that increased adherence prevents ARF recurrence and death should be a powerful motivational tool for health care providers to support their patients to get regular penicillin injections” said Ms de Dassel.

Menzies is engaged in a variety of projects to tackle rheumatic fever, which causes rheumatic heart disease, a serious health problem for young Aboriginal people in the Northern Territory.

For more information about rheumatic fever and rheumatic heart disease, go to the RHD Australia website [www.rhdaustralia.org.au](http://www.rhdaustralia.org.au).

The research is available at the [Journal of the American Heart Association](http://www.heart.org).

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**Menzies School of Health Research**

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