

Acute Rheumatic Fever and Rheumatic Heart Disease

What is Acute Rheumatic Fever and Rheumatic Heart Disease?

Acute Rheumatic Fever (ARF) is an autoimmune inflammatory response that occurs in some people who have had an untreated Group A streptococcus ('Strep A') infection. Strep A bacteria infections that are associated with ARF include pharyngitis (strep throat) and streptococcal skin infections (pyoderma/impetigo/infected scabies).

Symptoms

Signs and symptoms of ARF can include fever, mono or poly-arthritis/arthralgia, fatigue, Sydenham's chorea, subcutaneous nodules, erythema marginatum, and carditis.

One or more episodes of ARF can lead to Rheumatic Heart Disease (RHD). RHD is a serious chronic illness involving damage to one or more of the four heart valves (particularly the mitral valve) as a result of carditis during the ARF episode. It is definitively diagnosed via echocardiogram. Symptoms of mild RHD may not be noticed for many years. When they do develop, symptoms usually depend on which heart valves are affected, and the type and severity of damage. Symptoms of more severe RHD include chest pain, dyspnoea, fatigue and weakness, peripheral and pulmonary oedema, cerebral vascular attack, endocarditis and life threatening arrhythmias.

Who is at risk?

ARF most commonly occurs between the ages of 5-14 years and 60 % of new RHD diagnoses in the NT are aged under 25 with higher prevalence rates in females. ARF and RHD are **preventable** diseases disproportionately affecting Aboriginal and/or Torres Strait Islander Australians living in regional and remote areas. The Northern Territory carries the highest burden of disease for ARF/RHD in Australia.

Treatment and Prevention

The most effective treatment available is to **prevent** acute rheumatic fever from occurring. Primordial prevention includes promotion of hygiene and good nutrition alongside support to improve the social determinants of health (e.g.; housing, health hardware and sanitation, reducing household overcrowding, cultural safety, access to quality education and health services).

Primary prevention of ARF interrupts the link between a Strep A infection and the bodies autoimmune response. Primary care clinicians and community health workers need to be able to recognise and treat sore throats and skin sores aggressively in high risk populations with IM Benzathine Penicillin (BPG).

Currently, there is no single diagnostic laboratory test for ARF. Diagnoses of ARF are based on clinical signs and symptoms and laboratory tests. All people suspected of ARF, regardless of severity, should be admitted to hospital to enable an accurate diagnosis, optimal treatment, provision of education about ARF/RHD and its management and access to specialists. ARF and RHD are notifiable diseases and management includes notifying ARF/RHD to the NT Rheumatic Heart Disease Control Program.

For people who have already had one episode of ARF, a repeat episode can be prevented through the administration of a penicillin injection every 21 to 28 days for a specified amount of time as defined by the Rheumatic Heart Disease Australia Guidelines ([Acute Rheumatic Fever and Rheumatic Heart Disease Guideline | \(rhdaustralia.org.au\)](https://rhdaustralia.org.au)).

Tertiary prevention aims to slow the progression of RHD by preventing and managing complications to maintain quality of life and prevent premature death. People with RHD need timely access to medical specialists including cardiologists, pathology services, echocardiography, dentists, obstetricians, and cardiac surgeons and vaccination against influenza and pneumococcal infection.

Contact

For more information contact the Rheumatic Heart Disease Control Program at the [Public Health Unit's Centre](#) for Disease Control in your region.

| Rheumatic Heart Disease Program | | | |
|---------------------------------|--|----------------|----------------|
| Top End | RHDdarwin.THS@nt.gov.au | (08) 8922 8454 | (08) 8922 8277 |
| Central Australia | RHDAliceSprings.THS@nt.gov.au | (08) 8951 6909 | (08) 8951 7900 |

| Location | Address | Phone | Fax | Email |
|---------------|---|--------------------------------|----------------|--|
| Darwin | Building 4 Royal Darwin Hospital Rocklands Drive Tiwi NT 0810 | (08) 8922 8044 1800 008 002 | (08) 8922 8310 | CDCSurveillance.DARWIN@nt.gov.au |
| Katherine | O'Keef House Katherine Hospital Gorge Road Katherine NT 0850 | (08) 8973 9049 | (08) 8973 9048 | CDC.Katherine@nt.gov.au |
| Tennant Creek | Schmidt Street Tennant Creek NT 0860 | (08) 8962 4259 | (08) 8962 4420 | CDC.Barkly@nt.gov.au |
| Alice Springs | Disease Control Unit Lower Ground Floor Eurilpa House, 25 Todd Street Alice Springs NT 0870 | (08) 8951 7540 | (08) 8951 7900 | CDC.alicesprings@nt.gov.au |
| Nhulunbuy | Corner Mathew Flinders Way and Chesterfield Court Nhulunbuy NT 0880 | (08) 8987 0357 | (08) 8987 0500 | CDCGove.DoH@nt.gov.au |

Related information:

- RHD Australia – for 2020 Australian Guideline for prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease ([Acute Rheumatic Fever and Rheumatic Heart Disease Guideline | \(rhdaustralia.org.au\)](https://rhdaustralia.org.au))
- The RHD Endgame Strategy: The blueprint to eliminate rheumatic heart disease by 2031. ([End Rheumatic Heart Disease CRE \(telethonkids.org.au\)](https://telethonkids.org.au))
- Australian Institute of Health and Welfare: [Acute rheumatic fever and rheumatic heart disease in Australia, 2016–2020, Summary - Australian Institute of Health and Welfare \(aihw.gov.au\)](https://aihw.gov.au)
- RHD Action | United to End Rheumatic Heart Disease ([RHD Action](https://rhdaustralia.org.au))
- Rheumatic Heart Disease Program Northern Territory [Rheumatic Heart Disease - Authorization \(nt.gov.au\)](https://nt.gov.au)
- CARPA Manual - [CARPA Standard Treatment Manual 7th Edition \(remotephmanuals.com.au\)](https://remotephmanuals.com.au)
- HeartKids Australia - [Kids Heart Charity & Not For Profit Organisation \(heartkids.org.au\)](https://heartkids.org.au)