



NATIONAL MS BIOBANK

OUR ELECTION ASKS

FEDERAL ELECTION 2025

Improving MS diagnosis, outcomes and treatments through the establishment of a National MS Biobank.

Great progress has been made in MS over the past 25 years. In this timeframe we have delivered many specific MS therapies where there were none available previously.

Despite the incredible progress made, MS remains a serious burden on people's quality of life and on the economy. The great unmet need in MS is to prevent, halt and reverse neurological damage and disability.

MS Australia is now calling for the establishment of a National MS Biobank to support MS Australia studies towards early detection and prevention of MS.

At a cost of **\$8m over five years** a National MS Biobank would:

- ✓ Improve early detection and diagnosis time
- ✓ Halt or delay disease progression
- ✓ Allow earlier access to treatments
- ✓ Improve understanding and detection of the 'pre-MS' period
- ✓ Support the development of an Epstein-Barr virus vaccine
- ✓ Improve monitoring of environmental risk factors

A **Biobank** is a collection of samples from human body organs or blood, including related health information, which plays an important role in enhancing medical research and scientific knowledge

STOPPING MS EARLIER

Early detection of MS allows earlier access to the powerful MS therapies now available.

Early detection of MS would help preserve precious brain tissue, halt or delay disease progression and reclaim many years of function.

Earlier detection requires the development of reliable markers of early disease via a biobank.

ENVIRONMENTAL RISK FACTORS

A biobank would also allow us to monitor the other important environmental risk factors for MS, including:

- Low vitamin D and sunlight exposure
- Smoking and obesity
- The effect of public health initiatives toward preventing MS.

STOPPING MS BEFORE IT STARTS

There is strong evidence that infection with the Epstein-Barr virus (EBV) is essential for the development of MS. International clinical trials are underway for two new-generation EBV vaccines currently in international clinical trial.

Biobanking is essential to monitoring any rollout of EBV vaccines, and their impact on rates of glandular fever and MS.

MS DIAGNOSIS

Data from the Australian MS Longitudinal Study indicates that in 2017-2021 the average time to diagnosis was three years and almost 11 months.

However, there remain people who are not diagnosed as having MS for many years. This reflects the complexity of MS, with some people taking many years to manifest.

Many people diagnosed with MS continue to undergo prolonged and intricate diagnostic processes.

'PRE-MS' PERIOD

MS 'prodrome' - Disease progress in MS likely begins many years before the onset of typical clinical symptoms. Studies have shown a trend of declining health in the years before MS diagnosis known as an 'MS prodrome'.

Better understanding and better detection of this 'pre-MS' period could profoundly improve our ability to recognise and diagnose MS earlier.

Family History - People with a family history of MS are at more risk than the general population. Insights into the 'pre-MS' period have come from studies of healthy close relatives of people with MS.

However, regular brain imaging may prove impractical and too costly for screening large numbers of healthy people. A biobank can provide a more cost-effective option for screening these people.

Blood Test - We do not have a blood test to detect early MS, however, international MS biobanks have identified promising candidates. Further work is required to understand the potential of this, and several other candidates, as blood markers for the 'pre-MS' phase.

BIOBANK ENABLERS

Funding would provide infrastructure and resourcing for a National MS Biobank. Annual infrastructure costs include physical storage and monitoring systems for samples at \$650,000 p.a. Biomarker analysis within the collection is estimated at \$147,000 and image analysis and storage at \$189,000 p.a. Databasing with requisite data linkage is also planned. This is costed at \$200,000 p.a.

Annual resourcing for staff to provide biobank setup and ongoing project management of the National MS Biobank is costed at \$165,000 p.a., plus resourcing for the design and maintenance of the associated database is \$130,000 p.a. Technicians at various sites are costed at \$121,000 p.a.

A NATIONAL MS BIOBANK

A National MS Biobank would be a national collaborative research platform bringing together the best MS researchers across Australia. It will collect blood and other biological sample markers and genetics from people living with MS and their families. Together with clinical data and brain imaging, this rich data source will allow us to screen and group people according to risk or stage of MS.

Such a resource is essential if we are to find patterns to detect MS earlier, and ultimately a large proportion of new cases of MS could potentially be prevented.

MS PREVALENCE

There were **33,335 people living with MS in Australia** in 2021, an increase of 7,728 people (from 25,607 people) since 2017*.

An increase in the number of Australians living with MS corresponds with an increase in the total costs for people with MS in Australia, with total costs for all people increasing from **\$1.751 billion** in 2017 to **\$2.449 billion** in 2021.



*Health Economic Impact of Multiple Sclerosis in Australia in 2021

MS Australia is Australia's national MS not-for-profit organisation that empowers researchers to identify ways to treat, prevent and cure MS, seeks sustained and systemic policy change via advocacy, and acts as the national champion for Australia's community of people affected by MS. MS Australia's Full Election Asks can be viewed at: msaustralia.org.au/election2025