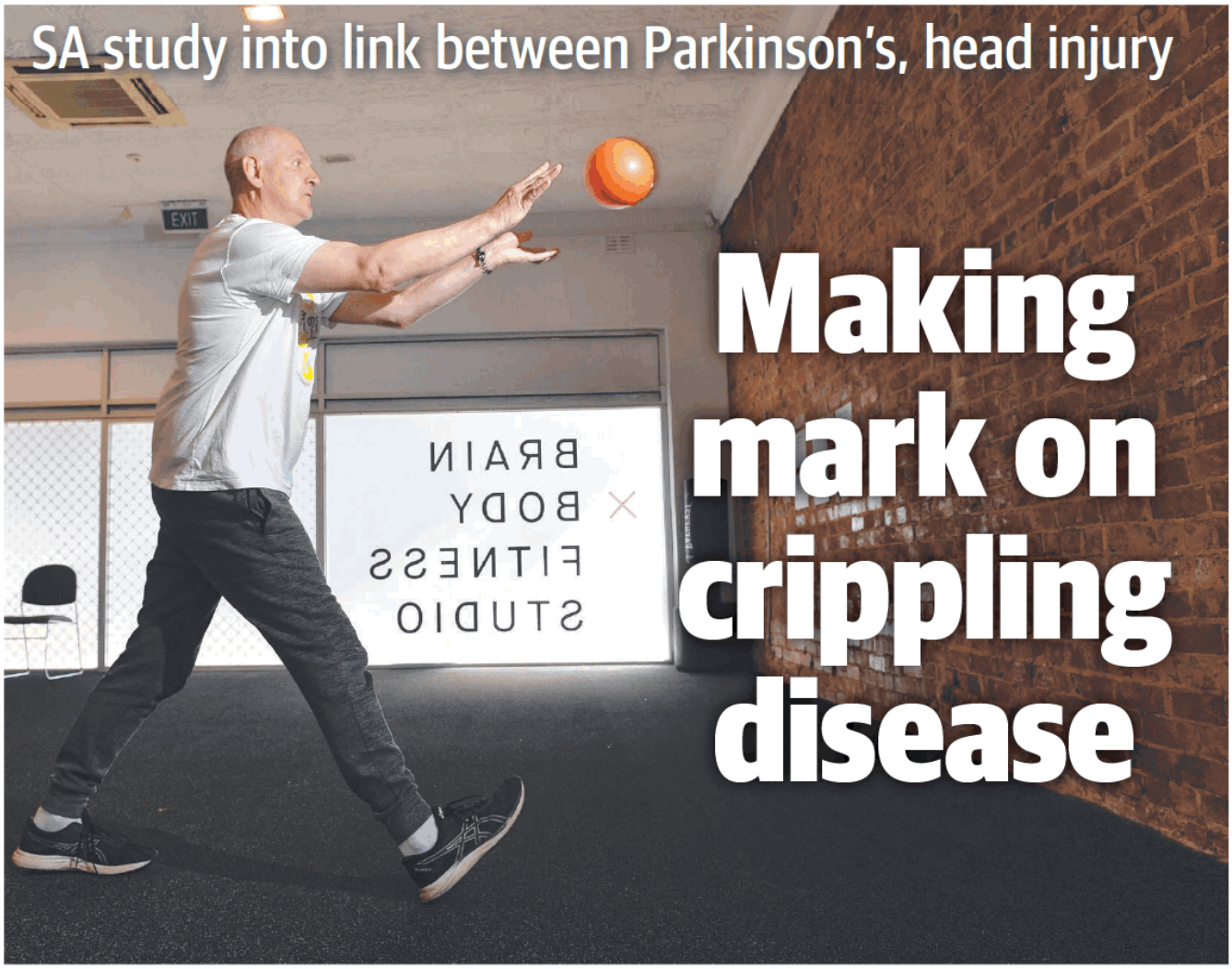
SA study into link between Parkinson's, head injury

Making mark on crippling disease



Mark Mickan goes through his paces at the gym and, inset, cops a blow from Michael Parsons during a 1983 SANFL clash. Main picture: Keryn Stevens

CLARE PEDDIE

IN a football career spanning more than 200 matches, Mark Mickan was not immune from blows to the head.

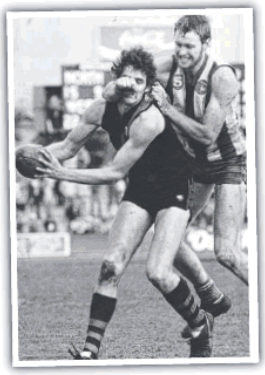
"I got hit in the head several times during my time in the game, but I can't remember any one instance in particular that would be the deal-breaker," the 59-year-old, who was diagnosed with Parkinson's disease in 2016, said.

"There were times when you'd get hit in the head and you'd feel a bit dazed for a few minutes, then someone would come out and say 'How are you going?' and I'd say 'I'm all right' and you'd keep going ...

"Then the clubs just went with what they knew at the time and treated you accordingly."

Adelaide University researcher Associate Professor Lyndsey Collins-Praino is now on a $2m quest to investigate any links between head knocks and Parkinson's.

She has received Federal Government funding to develop a new forecasting tool to predict a patient's long-term prognosis after head trauma.



> "... you sign up knowing there's a possibility you'll get hit in the head, I suppose
> MARK MICKAN

"Right now, if you have a head injury, because we don't know what your ultimate outcome might be, it can feel really scary," Dr Collins-Praino said. "That's why research like this is so important, because it helps us to identify risk and take that critical first step to being able to do something about it."

Following a promising pilot study funded by the NeuroSurgical Research Foundation, the new three-year study will soon recruit patients with traumatic brain injury.

Imaging techniques will be used to see how the brain and body is functioning. Blood tests will check for various biomarkers of brain inflammation, over time.

"This is significant, as we can then compare this to the same markers in both healthy individuals and those who have an established diagnosis of Parkinson's disease," Dr Collins-Praino said.

"This will allow us to generate a unique brain injury neural signature. Then, using machine learning, we can generate a risk prediction algorithm," Prof Collins-Praino said.

If all goes to plan, Dr Collins-Praino said, neurologists will be able to intervene earlier and offer much more targeted clinical management of people deemed most at risk of degenerative disease.

"It gets toward personalised medicine, where we know if person A has a head injury and they meet these criteria that say they are at increased risk for Parkinson's, then there are things we can do," she said.

"That might include identifying them as a participant for clinical trials, helping to get them involved with different rehab strategies like cognitive training and other programs that we know can be really beneficial in delaying onset of neurodegenerative conditions.

"It opens up the idea of tailoring a program based on their risk profile."

Mickan's Parkinson's diagnosis came 14 years after the end of his AFL and SANFL career.

His country upbringing (it carries a higher risk of chemical spray exposure), football career and a family history of Parkinson's put him in a higher risk category.

"Footy gave me the best years of my life, and you sign up knowing there's a possibility you'll get hit in the head I suppose," he said.