## RIVERINE HERALD EXCLUSIVE

## by Lachlan Durling and Charmayne Allison



**THE MAGIC:** Surgeon Devinder Garewal demonstrates the sterilised Exactech short-stem prosthesis, assembled and ready to be inserted into the patient yesterday, the first time the operation has been done in Australia.

## Back-up plan for surgery

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But which could provide millions fighting shoulder pain with hope for the future

"The problem with traditional longstem reverse shoulder replacement is there's very little you can do from there," Mr Garewal said.

"Whereas short-stem shoulder replacement means less bone stock needs to be removed to insert the prosthesis."

So if the short-stem shoulder replacement fails in the future, there's a back-up plan.

"We can then revert to using a longer stem, allowing for an additional replacement," Mr Garewal said.

"And while shoulder replacements are generally a last resort for people who are in their 70s or older, this will allow us to use it in younger patients as well, because we will have another option if it does fail down the line."

Mr Garewal was trained in the new procedure while completing a shoulders master's course in Spain, where short-stem surgery was launched.

And having completed more than 50 similar shoulder replacements with long-stem prostheses, he said he wasn't daunted by this new aspect of the surgery.

"Above all, I'm just excited that it got to be done for the first time in Australia here, in Echuca," he said.

"I consult here on a regular basis and knew the theatre team could manage this beautifully even though it is a new approach to this particular surgery."

## Technology is critical

THE nation's first short-stem prosthesis wasn't the only cutting-edge component of the surgery.

Hi-tech navigation software was also used to ensure the shoulder replacement fell in the prime position.

"The navigation aspect starts when I first see the patient before theatre and organise their operation," Mr Garewal said.

"They get a CT scan of the deformity of the socket side. And using that, the software calculates the best position for the shoulder placement to be put in."

Before the surgery, Mr Garewal spent time identifying where the best bone is in the

He then planned where he wanted to place the shoulder replacement, as well as the best angles to use.

"Once I've planned it, the data is then put onto a unit that I can then see in theatre and actually play with at the time," he said

"Once we start the operation, I put a tracker into a little part of the bone just outside the shoulder but within the surgical field so both the unit and the

tracker can speak to each

This means during the operation Mr Garewal can easily locate landmarks connected to the perioperative CT scan

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"So it basically validates those points and tells my instruments where I am," he said.

"This will then allow me to be very accurate on where I put my drill holes and where I actually centre the main part of the prosthesis — but also makes sure the angle is correct so the shoulder replacement works really well."



**ON TARGET:** Devinder Garewal used software to guide the drill into bone. The guidance means the prosthesis will last longer as less stress is placed on a correctly aligned joint.

