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## **SURGEON BRINGS LIMB LENGTHENING EXPERTISE TO THE PRIVATE**

Brisbane Private has added revolutionary limb lengthening surgery to its array of services following the recruitment of one of the specialty's most passionate advocates.

Lower limb orthopaedic surgeon Dr Sheanna Maine, who has opened her Queensland Limb Reconstruction Clinic at the hospital, is one of only a handful of clinicians in the state using 'growing nails' to lengthen the bones of patients with one leg shorter than the other.

The technique, which uses a magnetic gearing system to lengthen a surgically inserted intramedullary nail about 1mm per day, is allowing surgeons to correct limb length discrepancies caused by birth defects, disease or injury with greater ease than ever.

"Recent technology has made the procedure a lot simpler to perform and far less risky," said Dr Maine, the secretary of the Australian Limb Lengthening and Reconstruction Society.

"Prior to the use of intramedullary nails which sit inside the bone, we had to use external frames. These are large scaffold like structures that are far more complicated and laborious to use for all concerned. We still use frames for complex deformity correction surgery, however for lengthening procedures, growing nails are a very nifty technique and give the patient a lot more freedom."

Dr Maine, who also specialises in paediatric orthopaedics, said while congenital limb deformities could be treated more easily in childhood, many parents did not realise they had the option – or even a problem – until it was too late.

"If a child's leg is shorter by less than 2cm, we can generally solve the issue by using other techniques that stop the longer leg growing," she said.

"The problem is the abnormality sometimes gets missed, while a lot of people don't even realise it can be fixed. I see a few kids who are on the verge of adulthood and they've had this problem for years but it's never been picked up or looked at.

"It's difficult telling them we had the chance to fix it but we now have to use a more difficult procedure. That's why community awareness is so important."

Dr Maine said the timeframe from consultation to successful recovery depended on how much a limb needed to be lengthened.

"If that is 3cm, it takes about 30 days. If you're after 15cm, it's obviously a lot longer," she said. Once lengthened, then further time is required for the bone regenerate to solidify and harden before the nail can be removed."

“The nail grows independently of the patient and works by a magnetic gearing system. You have an external magnet that spins and lengthens the nail at 1mm per day but because of limitations related to soft tissues, we don’t usually do more than 8cm at a time.

“That means if we’re caring for a child who needs a limb lengthened by 13-15cm, we need to do it once and then bring them back a couple of years to do the rest.”

Dr Maine said she had a passion for limb lengthening surgery because it was a process rather than a single operation.

“For starters, the planning is quite complicated because you want to ensure you’re doing the right thing for the patient at the right time,” she said.

“Then the execution is technically tricky and involves close contact with the patient. You see them quite frequently so get to know them on a very personal level. You don’t just see them and wave goodbye.

“Then, when it’s all over, you see a significant difference in their quality of life and that’s quite inspiring.”