

Kent Sweeting injects  
an Achilles tendon to  
treat tendinosis.

# Injections may be just the shot for curing Achilles problem

The effectiveness of a relatively new form of treatment for chronic Achilles tendinosis will be tested in an APERF funded study.

Prolotherapy, or the injection of combined glucose and local anaesthetic around the tendon, is not a widely used treatment for Achilles tendinosis, according to Queensland clinical sports podiatrist, Kent Sweeting.

But he's about to find out how effective and cost efficient it is in curing tendinosis in a randomised clinical trial that will compare it with the more widely used treatment of eccentric loading exercise. The study will also compare the effectiveness and cost of combined prolotherapy and exercise.

Kent has received a \$4000 grant from APERF to conduct the study. It will be carried out under the supervision of physician Michael Yelland, an associate professor in Primary Health Care at Griffith University who conducted a similar study, using combined prolotherapy and exercise in the treatment of chronic lower back pain.

Kent, a primary health care research fellow at Brisbane's Griffith University, works mostly with runners in his specialist sports injury clinic four days a week.

"As a result of work carried out in the past five to ten years, researchers have shown that Achilles tendinosis, or tendon degeneration, is what clinicians actually see most of the time when patients present with Achilles tendon pain, as opposed to tendonitis - true tendon inflammation. People with tendinosis develop blood vessels in and around the tendon and we know those vessels shouldn't be there. They are associated with the pain. Prolotherapy is designed to sclerose the blood vessels and stimulate the body to lay down collagen in the area which helps rebuild the tendon."

Tendinosis occurs in six to 17 per cent of the athlete population and, as most podiatrists would know, is notoriously difficult to treat.

The most popular current treatment is a 12 week program of eccentric loading exercise which helps lengthen the muscle as it contracts, building strength.

Recruitment for the study began with funds from the Musculoskeletal Research Foundation of Australia in April last year. In total, 24 people will be recruited and assessed over 12 months. Some will have weekly prolotherapy injections containing 20 per cent dextrose, 0.1 per cent lignocaine and 0.1 per cent ropivacaine, with the number of treatments determined by the time it takes to achieve pain-free activity.

Others will undertake the exercises twice daily for 12 weeks and a third group will have injections and undertake exercise.

The pilot study is expected to help answer the following research questions with statistical significance:

- Is there a difference in clinical, functional, sonographic and economic outcomes between eccentric exercises and prolotherapy injections?
- Do combined eccentric exercise and prolotherapy injections have better clinical functional, sonographic and economic outcomes than either eccentric exercises or prolotherapy injections alone?
- Is there a correlation between a person's foot posture and the likelihood of developing Achilles tendinosis?
- Are increasing age and severity of ultrasonic grading of tendinosis predictors of a better response to prolotherapy than to eccentric exercises?

Kent, who graduated with first class honours from Queensland University of Technology (QUT) in 2004, says the APERF grant will go a long way to help fund the pilot phase of the study.

"It may just give us more evidence to back up the use of prolotherapy in the treatment of chronic Achilles tendinosis." •