

CYCLING FACT SHEET No. 45

Airless tyres are worth a look

What if you could ride over rusty nails, broken glass, thorns and sharp rocks without ever getting a puncture? What if there was no longer the need to carry spare tubes or a repair kit?

Following some very encouraging international reports, the Department for Planning and Infrastructure's Cycling Unit obtained two sets of airless tyres from the United States, and these were then fitted to a standard hybrid bicycle and to a road bike.

The tyres have been on the market for about three years and consist of hundreds of thousands of microscopic air cells trapped in a matrix of very tough polyurethane. They are manufactured in various densities that equate to commonly used air pressures in pneumatic tyres, ranging from 30psi to 175psi.

Airless tyres weigh about the same as the equivalent sized standard tyre and come in a good range of widths and tread patterns. The 26 x 1 3/8 standard hybrid tyres purchased by the Cycling Unit cost \$30 each, with the 700 x 20s for road bikes being slightly more expensive. At the moment, these tyres cannot be bought in Australia – we source our Nu-Teck airless tyres directly from the American manufacturer's online store.

A special tool, which costs about \$25 as a one-off expense, is required to stretch the tyre onto the rim.

Although it takes a little practice to lever the airless tyres snugly onto the rim, the process does not require any super strength. A short video showing the installation procedure will shortly be placed on the Cycling Unit's website.

Overall, the airless ride is good – a little firmer than you get on normal tyres but not significant enough to affect comfort, with cornering and braking presenting no problems.

Riding on wet roads or paths requires a little extra care when the tyres are new, however once the glossy coating has worn away, the grip on wet surfaces appears to be equivalent to that of standard tyres.

The manufacturer gives a two-year warranty against cracking, rotting, mildew and corrosion, and unlike some rubber tyres, airless polyurethanes can be entirely recycled.

The Cycling Unit has not had the tyres long enough to determine how well they wear but the manufacturer claims that their product will last about twice as long as high quality pneumatic tyres, making them a very cost-effective alternative.

Airless tyres offer advantages to almost all cyclists. Women in particular are reluctant to stop and repair a puncture in dark or remote places and will often rather risk rim damage by riding home on the flat. Having tyres that can never puncture provides considerable peace of mind.

This fact sheet is one of a series dealing with the use of bicycles for recreation and transport in Western Australia. The series looks at a range of cycling-related topics including ride routes, touring tips, maintenance, safety, road rules, insurance and product reviews. You can find more cycling fact sheets online at www.transport.wa.gov.au/cycling



Bikewest
Department of Transport
441 Murray Street, Perth WA 6000
Tel: (08) 9216 8000
Fax: (08) 9216 8497
Email: cycling@transport.wa.gov.au