

Making headlines

An RACQ member's road safety invention is capturing attention.

STORY **BARRY GREEN**
PHOTO **STUART RILEY**

It's called 'Cone-head', but given the facts, perhaps only a 'bone-head' would not wear it.

This distinctive helmet lining has the potential to greatly reduce brain injury or death to motorcyclists and bike riders.

'Cone-head' was recognised in 2007 as Invention of the Year on ABC TV's *The New Inventors* program, and it is the brainchild of RACQ Gold member Don Morgan.

The invention finished fourth out of 12 finalists, among 265 nominations, at the *Wall St Journal's* 2007 Asia Innovation Awards', beating entries from such giants as Brunei Shell, IBM, Hewlett-Packard and Microsoft.

The helmet design is the result of more than 20 years of research by Brisbane-based physicist-inventor Don Morgan.

The cone-shaped, foam lining allows greater absorption of the impact in an accident than is offered by existing lining designs.

Participation in a 1980s' research project that took Mr Morgan to fatal crash scenes proved the catalyst for this potentially life-saving invention.

When examining the helmets involved, he found there was little evidence of damage or crushing to the liner.

"When we related this back to the crash reports, we found that the motorcyclists and cyclists had sustained serious intercranial injuries," Mr Morgan said.

"I thought the foam liners were too hard and stiff. They did not seem to effectively absorb an impact force. The forces were readily being translated across the liner to the skull."

After much research, Mr Morgan concluded that a cone design offered the best protection.

"A cone has that wonderful, simple, unique property, that when you apply a force to it, it will initially compress or crush," he said.

"And as you continue to apply a force, it becomes harder to compress or crush. That's why I use cones in the thickness of the liner. It's a great shock absorber."

His revolutionary liner is made of two layers: the cones and an overlying layer.

"The cone layer is divided into five sections. This is a very important feature because, for the first time, there will be a helmet out there that takes into account the different thicknesses of the skull," Mr Morgan said.

Cone-head has now been licensed and will be incorporated in a new helmet currently being produced in Hong Kong.

It is scheduled for distribution in Australia and New Zealand this year.

Cone-head nearly didn't happen. No Australian manufacturer

or federal or state governments could be convinced of its life-saving potential or financial viability.

"I went for funding from different governments and they weren't interested," Mr Morgan said.

"I went for the Queensland Government Innovation Start Up Scheme on three occasions and I was rejected three times.

"The third time was probably the lowest point of my journey. "I nearly walked away from it, but it was my wife who said, 'look, we've spent much time and much money, our money on this,' so she thought that we'd better stick with it."

Now, thanks to Don Morgan's innovation and perseverance, more bike riders and motorcyclists might be able to walk away from crashes.

Don Morgan, with his Cone-head helmet lining design.

