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Wonder drug quest

Cheap supplement could treat range of diseases

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AN over-the-counter supplement is being trialled as a cheap and safe way to treat a wide range of common age and lifestyle-related diseases.

Instead of using medication to improve a single risk factor or disease pathway, Monash University researchers are taking a different tack to disease prevention, testing whether carnosine can target the actual mechanisms that drive several chronic diseases.

More than 2000 studies in animals and cells have shown its beneficial effects in preventing and treating age-related chronic diseases such as type 2 diabetes, cardiovascular disease, dementia and cancer, and delaying ageing.

Now Victorians can take part in some of the first human clinical trials of the supplement. In 84 overweight and obese adults, and 50 people with type 2 diabetes or

prediabetes, carnosine's effects will be measured on everything from body fat, blood pressure, blood glucose, sleep, depression and cognition.

Associate Professor Barbara de Courten, a National Heart Foundation Future Leader Fellow, said the two trials were testing the hypothesis that carnosine could improve disease markers.

"Unlike a drug that usually works on one pathway and improves only one risk factor, carnosine actually targets the mechanisms underlying many chronic diseases. That's the fascinating thing about carnosine," Prof de Courten said.

"It's cheap, water soluble and easy to mix into foods. If it works, it will be easy to implement at the population level.

"There have been studies in autism, type 1 diabetes, heart failure, Parkinson's disease, so

if it works well in several different diseases, you could mix the powder into muesli bars or other food products."

Carnosine naturally occurs in the muscles, heart and brain of humans and animals, but not in large enough quantities. The capsule is marketed as improving exercise capacity and having anti-ageing properties.

Prof de Courten, who presented her trial plans at a carnosine conference in the US last week, said it had already shown benefits in exercise and there was preliminary evidence of benefit in types 1 and 2 diabetes and heart failure. Her previous work has shown carnosine could improve insulin sensitivity and secretion, key risk factors for type 2 diabetes.