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Metformin use beyond diabetes: Reducing cardiovascular events in the healthy elderly**Dan Xu***Curtin School of Population Health of Curtin University, Australia*

As the global ageing population rises, there is increasing interest and demand for research evaluating anti-ageing strategies. One such strategy involves investigating a drug that may have additional mechanisms and pathways of action to combat ageing - metformin. This common glucose-lowering agent for diabetes has been safe, effective and globally affordable for over 60 years. Research into the use of metformin and its beneficial influence on healthy ageing is currently emerging. Although metformin's effect on clinical ageing outcomes may be speculative, findings from studies into cellular and animal models and from observational and pilot human studies support its potential beneficial effects on ageing. Ageing has a significant impact on the cardiovascular system and is the leading non-modifiable risk factor for Cardiovascular Disease (CVD). The incidence and prevalence of CVD increases with advancing age, and CVD is the leading cause of death for populations over 65 years of age. However, most CVD prevention research has focused on development of interventions that target "traditional" CV risk factors such as hypertension, hypercholesterolaemia and diabetes. Metformin has been proposed to be an "anti-ageing" drug, based on preclinical experiments with lower-order organisms and numerous retrospective data on beneficial health outcomes for patients with type 2 diabetes. At present, randomised clinical trials to evaluate metformin's clinical impact on healthy ageing are limited, especially in Asian populations. Here, we review the role of metformin and its potential to reduce cardiovascular events in the healthy elderly, as well as plan to design a pilot study to examine the metformin's healthy aging role in the healthy elderly Chinese population.

Biography

Dr Daniel XU (MD, PhD, FRACGP) is an Academic Coordinator for General Practice Research and International Health at Curtin Medical School, Curtin University. He is in charge of general practice research locally in Australia and international collaboration for undergraduate exchange programs as well as medical educational research at the school. He has been appointed Visiting Professor in the First Affiliated Hospital, Sun Yat-Sen University, Guangzhou, China since 2018. He is a Senior Research Fellow for the Cardiovascular Clinical Trial group in the Curtin School of Populational Health, Curtin University. His research interests include Cardiovascular, Musculoskeletal Health, Healthy aging and Clinical Trial in General Practice. He is a General Practitioner in Belvidere Health Centre, Arch Health and serves as the Board Director and Chair of the Clinical Governance committee in charge of Clinical Service, Research & Teaching. He is a Senior Quality Assurance Examiner for Royal Australian College of General Practitioners

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