

By 2030, cardiovascular disease and death rates will surge in China

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Cardiovascular disease (CVD) and death rates will surge in China by up to 73 percent by 2030, due to aging, smoking, high blood pressure and other risk factors, according to research reported in *Circulation: Cardiovascular Quality and Outcomes*, an American Heart Association journal.

"China is a prime example of a middle income nation in transition. The country's standard of living and life expectancy have improved for many, but aging, dietary changes and less physical activity are leading to more heart disease and stroke," said lead author Andrew Moran, M.D., M.P.H., assistant professor at Columbia University Medical Center in New York City, N.Y. "Our study used a [computer model](#) to forecast future [cardiovascular disease](#) in Chinese adults, and is the first to project the individual and combined effects of major risk factor trends on a national scale."

Moran and colleagues reviewed risk factor surveys of Chinese adults, ages 35-84, since economic reforms in the 1980s, and used them to project future trends in blood pressure, cholesterol, smoking, diabetes and body weight. Although smoking prevalence has declined in men by more than 10 percent since the mid 1980s, 62 percent of Chinese men still smoke, and 49 percent of nonsmokers, mostly women, are exposed to passive smoke, researchers said.

Demographic changes will be the main driver of the CVD epidemic in China in the next two decades, Moran said.

"We projected that yearly cardiovascular disease in China will increase by more than 50 percent due to aging and growth of the population alone between 2010 and 2030," he said. "Projected trends of increased blood pressure, cholesterol and diabetes may result in an additional 23 percent increase in cardiac events."

Together, these percentages may translate into 21.3 million more CVD events and 7.7 million related deaths between 2010 to 2030, researchers said.

Dramatically reducing smoking to 20 percent of the male population by 2020 and 10 percent by 2030, or lowering average systolic blood pressure four points in men and women, would counteract adverse trends in other risk factors and prevent between 2.9 and 5.7 million deaths by 2030, Moran said.

Aggressive anti-tobacco policy and control of elevated blood pressure are two promising policy directions that need to be studied in more detail, he said.

Study co-author Dongfeng Gu, M.D., M.Sc., vice president of the Chinese Academy of Medical Sciences in Beijing, China, said that the demographic changes stand to increase the burden of CVD as well as that of cancer and other non-communicable diseases and disabilities.

"In China, as in many other parts of the world, the government has mainly focused on infectious diseases; however, China now has a 'double burden' of disease," Gu said. "If no massive preventative measures are taken, the burden of cardiovascular disease will inevitably continue to rise in China. The priority for prevention and control of cardiovascular diseases should be adequately addressed by the government and the Chinese public."

"China now finds itself facing a major crisis with the predicted increase in mortality and morbidity from cardiovascular disease," said Sidney C. Smith, Jr., M.D., professor of medicine at the University of North Carolina School of Medicine in Chapel Hill, N.C., and Zhi-Jie Zheng, M.D., Ph.D., senior medical epidemiologist and program director of the division for the Application of Research Discoveries at the National Heart, Lung, and Blood Institute, National Institutes of Health in Bethesda, Md., co-authors of an accompanying editorial. "However, [China](#) is moving in the right direction by implementing major prevention programs. If they succeed, they will serve as an example for other countries now facing the pandemic of CVD."

Provided by American Heart Association

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