Published on *American Council on Science and Health* (https://www.acsh.org)

Will Tai Chi Prevent Cardiovascular Disease?

By ACSH Staff — March 11, 2016

[1] Tai chi via Shutterstock

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Traditional Chinese exercises, including tai chi, qigong and baduanjin, are being touted in mainstream media [3] as a way to improve biochemical, physiological and psychological measures among cardiovascular disease patients.

There are a number of reasons to be skeptica;. First, it's a meta-analysis and therefore readily susceptible to selection bias. Second, it's entirely possible that concurrent healthy lifestyle practices unrelated to tai chi or any Asian exercise could be responsible improved heart health in those previously stricken with a heart attack or stroke. Nothing is a wake-up call like a heart attack.

The meta-analysis in the *Journal of the American Heart Association* [4], pooled data from 35 randomized controlled trials conducted between 1957 and 2015 to see what effects Chinese exercise had on over 2,000 subjects with known ischemic heart disease, coronary artery disease, cerebrovascular disease, peripheral vascular disease or hypertension. Outcomes were both objective and by self-reported, another factor that may undermine the validity, and included blood pressure, triglyceride, cardiorespiratory fitness, physical function and mood states.

The aggregated data showed an average reduction in systolic and diastolic blood pressure of 9 mm/Hg and 5 mm/Hg, respectively. Analyses also revealed a small reduction in cholesterol levels and reduced levels of depression among TCE groups compared to control conditions.

Based on these findings, researchers claim that Chinese exercises could help to lower the risk of stroke by up to 41% and coronary heart disease by up to 22%.

But can they really be responsible for the health benefits among this cardiovascular disease cohort? It's tough to say, as the findings of the meta-analysis might be more conjectural than

authors are willing to admit. Regular exercise is shown to have significant benefits with regards to blood pressure, cholesterol, and depression. And while authors position tai chi and other Chinese exercises as physical activity, the metabolic equivalent [5] (METs)—an index measure of aerobic intensity—associated with those hardly classify them as exertion at all. METs for tai chi [6] range from 1.5 to just 4.6. To put that in context [7], sleeping requires 1 MET while routine activities such as light housework require approximately 4 METs.

Interestingly, authors found no improvements in peak oxygen uptake of patients performing Chinese exercise compared to patients in the control groups.

So, it's unclear what mechanism of action is responsible for the reduction in blood pressure, cholesterol and depressive symptoms among these folks, but it's unlikely to be from Chinese exercise alone. A more probable explanation is that these patients adopted other health enhancing behaviors in addition to Chinese exercise such as improving their diet and/or engaging in physical exercises with a comparatively higher cardiac demand.
