
Shoulder pain linked to increased heart disease ris

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After all the lifting, hauling and wrapping, worn out gift givers may blame the season's physical strain for any shoulder soreness they are feeling. It turns out there could be another reason. A new study led by investigators at the University of Utah School of Medicine finds that individuals with symptoms that put them at increased risk for heart disease could be more likely to have shoulder problems, including joint pain and rotator cuff injury.

"If someone has rotator cuff problems, it could be a sign that there is something else going on. They may need to manage risk factors for heart disease," says the study's lead author Kurt Hegmann, M.D., M.P.H., Professor of Family and Preventive Medicine and Director of the Rocky Mountain Center for Occupational and Environmental Health. The research was published in the *Journal of Occupational and Environmental Medicine*.

Repeated physical stress is most frequently blamed for aggravating shoulder joints and the muscles and tendons that surround them. Think about a pitcher who throws a baseball 100 times a day. While physical exertion can certainly be an irritant, accumulating evidence points other factors that could also be at play. Previous research found that people who had an increased risk for heart disease also had a tendency toward carpal tunnel syndrome, Achilles tendinitis, and tennis elbow, all musculoskeletal disorders.

The current study by Hegmann and colleagues adds shoulder problems to the list and takes the connection one step further. The more heart disease risk factors that each of the study participants had racked up -- including high blood pressure, high cholesterol, diabetes -- the more likely they were to have had shoulder trouble.

36 participants with the most severe collection of risk factors were 4.6 times more likely than those with none of the risk factors to have had shoulder joint pain. They were also nearly six times more likely to have had a second shoulder condition, rotator cuff tendinopathy. Participants with mid-level heart risk were less likely to have had either shoulder condition, at 1.5 to 3-fold. Shared trends bolster that there could be a relationship between heart risk and shoulder problems, but researchers will need to follow up with a prospective study to prove cause and effect.

It may seem like physical strain would be at least just as likely to cause shoulder pain but data from the 1,226 skilled laborers who took part in the study suggest otherwise. Ergonomists carefully monitored airbag manufacturers, meat processors, cabinet makers and skilled laborers. Every forceful twist, push, and pull was factored into a strain index assigned to each worker. But a more straining job did not translate to an uptick in shoulder difficulties. Nor did more time spent doing other physical activities.

"What we think we are seeing is that high force can accelerate rotator cuff issues but is not the primary driver," says Hegmann. "Cardiovascular disease risk factors could be more important than job factors for incurring these types of problems."

He says it's possible that controlling blood pressure and other heart risk factors could alleviate shoulder discomfort, too.
