



Strength Training And Aerobic Exercise Both Lower Cardiovascular Risks, Reduce Pain

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Different types of work site exercise programs have multiple benefits, including reduced neck and shoulder pain for employees who do all-around exercise and lowered heart disease and stroke risk factors for those who do strength training, reports a study in the July Journal of Occupational and Environmental Medicine, official publication of the American College of Occupational and Environmental Medicine (ACOEM).

Led by Mogens T. Pedersen, PhD, of University of Copenhagen, the researchers randomly assigned 841 Danish office workers to two exercise groups. One group did all-around exercise, such as aerobics, walking, etc. The other group did strength training, focusing on the shoulder and cervical spine (neck) muscles. Both programs included one hour of supervised exercise per week, during working hours. A third group received no exercise program at work.

Cardiovascular risk factors including blood pressure and body fat decreased not only in workers assigned to aerobic exercise, but also in those who did strength training. The average reduction in blood pressure was large enough to lead to a 25 percent reduction in stroke risk.

Both types of exercise also brought reductions in back and shoulder pain by about 30 percent, compared to the no-exercise group. All of these benefits were achieved despite relatively small improvements in overall physical fitness.

Neither form of exercise significantly improved general health or work productivity. This may have been because, as a group, the workers were healthy and highly productive at the start of the study.

Employers have a vested interest in improving employees' health and reducing their health risk factors. Previous studies have shown benefits of work site exercise programs, but it is unclear which types of exercise are most efficient in achieving certain health outcomes. One key question is whether specific types of exercise are needed to reach specific goals: for example, muscle strengthening to address common problems like spinal and shoulder pain or whole-body aerobic exercise to lower heart disease risks.

Both strength training and all-around exercise are a valuable part of work site exercise programs, according to the new study. The results suggest "transfer effects," with both types of physical activity improving both neck/shoulder pain and cardiovascular risk factors. "These positive health-related adaptations occurred in spite of relatively small changes in physical capacity," Dr. Pedersen and colleagues write.

About ACOEM

ACOEM, an international society of 5,000 occupational physicians and other health care professionals, provides leadership to promote optimal health and safety of workers, workplaces, and environments.

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