Belt and braces? Back pain and the effect of a new harness versus traditional utility equipment for police officers

Dr Charles Vivian, 2004

ABSTRACT

Study design: Interventional cohort study to determine the benefits of police officers carrying their personal protective equipment using a harness, rather than the conventional belt.

Study objective: To clarify whether issuing a harness rather than the standard issue belt is an effective intervention to reduce reported low back pain, to determine if the harness is more comfortable, and to establish if the harness causes more reporting of neck pain.

Background data: There is little published data on how different methods of carrying loads affect symptoms of back or neck pain.

Methods: In phase 1, a cross-sectional study of the prevalence of back pain was conducted on a random sample of front line police officers in Thames Valley Police. In phase 2, a randomised controlled trial was performed, to compare the effect on low back pain between groups wearing the harness, belt and braces, and the belt only.

Results: When the results were weighted for number of hours the harness, belt and braces were worn in Police Officers with current low back pain, there was a significant reduction in the Oswestry back score. [3.80 (CI95 1.40-6.20, p<0.001)] There was also a significantly increased level of declared comfort wearing the new harness, using a non-validated measurement. [-0.70 (CI95 -1.15-0.25, p<0.001]. The harness did not increase reported neck pain using the Oswestry neck score. [1.91 (CI95-0.8-4.61, p=0.37].

Conclusion: Issuing a harness to carry Police Officers’ personal protective equipment is an effective intervention to reduce levels of low back pain. Additionally, it is more comfortable, and does not increase neck pain.