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## PRESS RELEASE

December 5, 2000

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### NO EVIDENCE THAT BACK BELTS REDUCE INJURY SEEN IN LANDMARK STUDY OF RETAIL USERS

Washington, DC—In the largest study of its kind ever conducted, the Centers for Disease Control and Prevention's (CDC)'s National Institute for Occupational Safety and Health (NIOSH) found no evidence that back belts reduce back injury or back pain for retail workers who lift or move merchandise, according to results published today in the *Journal of the American Medical Association (JAMA)* Dec. 6th issue.

The study, conducted over a two-year period, found no statistically significant difference between the incidence rate of workers' compensation claims for job-related back injuries among employees who reported using back belts usually every day, and the incidence rate of such claims among employees who reported never using back belts or using them no more than once or twice a month.

Similarly, no statistically significant difference was found in comparing the incidence of self-reported back pain among workers who reported using back belts every day, with the incidence among workers who reported never using back belts or using them no more than once or twice a month. Neither did the study find a statistically significant difference between the rate of back injury claims among employees in stores that required the use of back belts, and the rate of such claims in stores where back belt use was voluntary.

Back belts, also called back supports or abdominal belts, resemble corsets. In recent years, they have been widely used in numerous industries to prevent worker injury during lifting. There are more than 70 types of industrial back belts, including the lightweight, stretchable nylon style used by workers in this study. Approximately four million back belts were purchased for workplace use in 1995, the most recent year for which data were available. The results of the new study are consistent with NIOSH's previous finding, reported in 1994, that there is insufficient scientific evidence that wearing back belts protects workers from the risk of job-related back injury.

"Work-related musculoskeletal disorders cost the economy an estimated \$13 billion every year, and a substantial proportion of these are back injuries," said CDC Director Jeffrey P. Koplan, M.D., M.P.H. "By taking action to reduce exposures, employers can go a long way toward keeping workers safe and reducing the costs of work-related back injury."

This study was the largest prospective study ever conducted on use of back belts. From April 1996 to April 1998, NIOSH interviewed 9,377 employees at 160 newly opened stores owned by a national retail chain. The employees were identified by store management as involved in materials handling tasks (lifting or moving merchandise). Through interviews, data was gathered on detailed information on workers' back-belt wearing habits, work history, lifestyle habits, job activities, demographic characteristics, and job satisfaction. The study also examined workers' compensation claims for back injuries among employees at the stores over the two-year period.

In a prospective study, researchers identify a cohort or group of workers for evaluation, and then collect current information on that group as the study progresses. In this study, NIOSH determined workers' habits in wearing back belts in advance of any injuries, and collected data as workers filed back injury claims.

Findings from this study included:

- There was no statistically significant difference between the rates of back injuries among workers who wore back belts every day (3.38 cases per 100 full time equivalent workers or FTEs) and back injury rates among workers who never wore back belts or wore them no more than once or twice a month (2.76 cases per 100 FTEs).
- There was no statistically significant difference between the incidence of self-reported back pain among workers who wore back belts usually every day (17.1 percent) and the incidence of self-reported back pain among workers who never wore back belts or wore them no more than once or twice a month (17.5 percent).
- There was no statistically significant difference between the rate of back injury claims in stores requiring the use of back belts (2.98 cases per every 100 FTEs) and the rate in stores where back belt use was voluntary (3.08 cases per 100 FTEs).
- A history of back injury was the strongest risk factor for predicting either a back-injury claim or reported back pain among employees, regardless of back-belt use. The rate of back injury among those with a previous history of back pain (5.14 cases per 100 FTEs) nearly twice as high as the rate among workers without a previous history of back pain

(2.68 per 100 FTEs).

- Even for employees in the most strenuous types of jobs, comparisons of back injury claims and self-reported back pain failed to show any differences in rates or incidence associated with back belt use.

"We appreciate the partnership offered by workers and management in helping us conduct this important study," said NIOSH Acting Director Lawrence J. Fine, M.D., D.P.H. "We look forward to working closely with industry and labor to disseminate our findings as widely as possible."

CDC protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by **providing credible information on critical health issues**; and promotes healthy living through strong partnerships with local, national and international organizations.

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Editor's Note: For further information on the study, or for other information on preventing work-related musculoskeletal injuries, contact the CDC's NIOSH toll-free information number, 1-800-35-NIOSH (1-800-356-4674) or visit the web page at [www.cdc.gov/niosh](http://www.cdc.gov/niosh).