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Boletín LADEP

Boletín Nº5 - 3^{er} Cuatrimestre 2009

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- SCANDINAVIAN JOURNAL OF WORK ENVIRONMENT & HEALTH
- AMERICAN JOURNAL OF INDUSTRIAL MEDICINE
- JOURNAL OF OCCUPATIONAL MEDICINE AND TOXICOLOGY

Artículo Nº1

Revista: SCANDINAVIAN JOURNAL OF WORK ENVIRONMENT & HEALTH - 2009;35(5):325-333

Título

Impact of work-related factors, lifestyle, and work ability on sickness absence among Dutch construction workers (Impacto de factores relacionados con el trabajo, estilos de vida y capacidad laboral entre trabajadores de la construcción holandeses)

Autores

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Objetivos

Objective. The objective of this study was to evaluate the relative contribution of individual characteristics, lifestyle factors, work-related risk factors, and work ability on the occurrence of short (<2 weeks), moderate (2-12 weeks), and long (>12 weeks) durations of sickness absence.

Métodos

Methods. Altogether 5867 Dutch construction workers with complete sick leave registration were followed from the day of their medical examination in 2005 until the end of 2006. The main outcome of the study was the duration of sickness absence, as registered by an occupational health service. Independent variables consisted of individual characteristics, lifestyle factors, work-related factors, and the work ability index. We used Poisson regression analyses with repeated occurrence of sick leave to calculate rate ratios (RR) and 95% confidence intervals of independent variables for the three categories of sick leave duration.

Resultados

Results. Predictors for sick leave lasting 2-12 weeks and >12 weeks were: older age, obesity, smoking, manual materials handling, lack of job control, lung restriction, and a less than excellent work ability. For most predictors, higher RR values were observed with a longer duration of sickness absence. Obesity, smoking, manual materials handling, and lack of job control remained important risk factors for moderate and long durations of sick leave after adjusting for the strong effects of work ability on sickness absence. The highest population-attributable fractions were observed for: age over 50 years (18%), manual materials handling (20%), and good (18%), moderate (28%), and poor (2%) work ability.

Conclusiones

Conclusion. This study suggests that a variety of preventive measures targeted at smoking, obesity, physical load, psychosocial work factors as well as work ability will contribute to a reduction in the occurrence of sick leave.

Referencias

Refers to the following texts of the Journal: 2006;32(1):75-84 2007;33(5):351-357 2006;32(4):253-255 1997;23 suppl 1:7-11 2007;33(3):233-239

The following article refers to this text: 2009;35(5):321-324

Palabras Claves

Key terms. Construction; construction worker; Denmark; individual characteristic; lifestyle; sick leave; sickness absence; WAI; work ability; work ability index; work factor; work-related factor.

Artículo Nº2

Revista: SCANDINAVIAN JOURNAL OF WORK ENVIRONMENT & HEALTH - 2009;35(5): 376-383

Título

Evaluation of respiratory effects related to high-pressure cleaning in a piggery with and without robot pre-cleaning (Evaluación de efectos respiratorios relacionados con limpieza a alta presión en una granja de cerdos con y sin limpieza previa robotizada)

Autores

Hiel D, von Schéele I, Sundblad B-M, Larsson K, Palmberg L

Objetivos

Objective. Exposure in connection with cleaning piggeries induces airway inflammation. The aim of this study was to compare the health effects related to two different cleaning processes in a piggery.

Métodos

Methods. In a cross-over study design, 12 subjects were randomly exposed for three hours during the cleaning of a piggery with a high pressure water jet, with and without pre-cleaning using a robot. We assessed lung function, bronchial responsiveness, symptoms, body temperature, and exhaled nitric oxide, and performed blood sampling and nasal lavage before and after both exposures.

Resultados

Results. Compared with ordinary cleaning without the use of a robot, pre-cleaning with a robot significantly reduced the increase in bronchial responsiveness ($P=0.049$), total cell number ($P=0.0029$), and pro-inflammatory cytokines (IL-8 level [$P=0.016$]) in nasal lavage, and diminished the increase in neutrophils ($P=0.0029$) in the blood.

Conclusiones

Conclusion. Pre-cleaning of a piggery with a robot reduced exposure to dust and endotoxin, and resulted in an attenuation of the increase in bronchial responsiveness and the airway inflammatory response compared pre-cleaning without a robot.

Referencias

Refers to the following texts of the Journal: 2006;32(2):145-153 2002;28(4):256-263

Palabras Claves

Key terms. Airway inflammation; cleaning; evaluation; high-pressure cleaning; organic dust; piggery; pre-cleaning; respiratory effect; robot; robot pre-cleaning.

Artículo Nº3

Revista: SCANDINAVIAN JOURNAL OF WORK ENVIRONMENT & HEALTH - 2009;35(6): 437-445

Título

Beliefs about back pain predict the recovery rate over 52 consecutive weeks (Creencias sobre la predicción de las tasa de recuperación de dolor de espalda tras 52 semanas consecutivas)

Autores

Elfering A, Mannion AF, Jacobshagen N, Tamcan O, Müller U

Objetivos

Objectives. This study examined the course of low-back pain over 52 weeks following current pain at baseline. Initial beliefs about the inevitability of the pain's negative consequences and fear avoidance beliefs were examined as potential risk factors for persistent low-back pain.

Métodos

Methods. On a weekly basis over a period of one year, 264 participants reported both the intensity and frequency of their low-back pain and the degree to which it impaired their work performance. In a multilevel regression analysis, predictor variables included initial low-back pain intensity, age, gender, body mass index, anxiety/depression, participation in sport, heavy workload, time (1-52 weeks), and scores on the "back beliefs" and "fear-avoidance beliefs" questionnaires.

Resultados

Results. The group mean values for both the intensity and frequency of weekly low-back pain, and the impairment of work performance due to such pain showed a recovery within the first 12 weeks. In a multilevel regression of 9497 weekly measurements, greater weekly low-back pain and impairment were predicted by higher levels of work-related fear avoidance beliefs. A significant interaction between time and the scores on both the work-related fear-avoidance and back beliefs questionnaires indicated faster recovery and pain relief over time in those who reported less fear-avoidance and fewer negative beliefs.

Conclusiones

Conclusions. Negative beliefs about the inevitability of adverse consequences of low-back pain and work-related, fear-avoidance beliefs are independent risk factors for poor recovery from low-back pain.

Palabras Claves

Key terms. Back pain; back pain belief; belief; low-back pain; multilevel model; prediction; recovery rate; work performance.

Artículo Nº4

Revista: AMERICAN JOURNAL OF INDUSTRIAL MEDICINE - 52:707-715, 2009

Título

Validation of self-reported occupational exposures in meatpacking workers (Validación de un cuestionario de exposiciones autopercebidas en trabajadores de envasado de carne)

Autores

Lina Lander, Gary Sorock, Terry L. Stentz, Ellen A. Eisen, Murray Mittleman, MD, Russ Hauser, MD, Melissa J. Perry.

Objetivos

Objectives. The ability of workers to accurately recall exposures that occur on the day of their injury is considered a potential limitation of case-crossover studies. This study assessed validity of occupational exposures reported by uninjured workers at a Midwestern meatpacking plant.

Métodos

Methods. One hundred thirty-six workers were observed for 60 min while working and then interviewed within 8 days (median 3 days) about exposures during the observation period. The level of agreement between self-reports and direct observations was assessed using kappas and intraclass correlation coefficients.

Resultados

Results. Excellent agreement was found between observed and reported work location ($\kappa = 0.97$, 95% CI: 0.92-1.0), task ($\kappa = 0.83$, 95% CI: 0.76-0.91) and tools used ($\kappa = 0.88$, 95% CI: 0.81-0.95). Personal protective equipment varied by work type and location, and agreement between observed and reported usage varied from excellent to poor for various items. Excellent agreement was found for tool sharpening ($\kappa = 0.89$, 95% CI: 0.82-0.97); good agreement for occurrence of break during the observation period ($\kappa = 0.60$, 95% CI: 0.45-0.74); and poor agreement for equipment malfunction, line stoppages, being tired, unusual task, unusual work method, being distracted, rushing, slipping, or falling.

Conclusiones

Conclusions. Agreement between observed and reported occupational exposures varied widely. Self-reported exposures are utilized in many occupational studies, and future exposure validity assessment studies should continue to improve retrospective study methods. Valid exposures will allow researchers to better understand injury etiology and ultimately prevent injuries from occurring.

Palabras Claves

Key terms. Validation; occupational exposure; meatpacking; observation.

Artículo Nº5

Revista: AMERICAN JOURNAL OF INDUSTRIAL MEDICINE - 52:762-773, 2009

Título

Beryllium lymphocyte proliferation test surveillance identifies clinically significant beryllium disease (La vigilancia de la salud mediante la prueba de proliferación de linfocitos por berilio identifica enfermedad por berilio clínicamente significativa)

Autores

Lina Lander, Gary Sorock, Terry L. Stentz, Ellen A. Eisen, Murray Mittleman, Russ Hauser, Melissa J. Perry.

Objetivos

Objectives. Workplace surveillance identifies chronic beryllium disease (CBD) but it remains unknown over what time frame mild CBD will progress to a more severe form.

Métodos

Methods. We examined physiology and treatment in 229 beryllium sensitization (BeS) and 171 CBD surveillance-identified cases diagnosed from 1982 to 2002. Never smoking CBD cases (81) were compared to never smoking BeS patients (83) to assess disease progression. We compared CBD machinists to non-machinists to examine effects of exposure.

Resultados

Results. At baseline, CBD and BeS cases did not differ significantly in exposure time or physiology. CBD patients were more likely to have machined beryllium. Of CBD cases, 19.3% went on to require oral immunosuppressive therapy. At 30 years from first exposure, measures of gas exchange were significantly worse and total lung capacity was lower for CBD subjects. Machinists had faster disease progression as measured by pulmonary function testing and gas exchange.

Conclusiones

Conclusions. Medical surveillance for CBD identifies individuals at significant risk of disease progression and impairment with sufficient time since first exposure.

Palabras Claves

Key terms. Beryllium; chronic beryllium disease; medical surveillance.

Artículo Nº6

Revista: AMERICAN JOURNAL OF INDUSTRIAL MEDICINE - 52:859-867, 2009

Título*Occupational cancer in Italy: Evaluating the extent of compensated cases in the period 1994-2006 (Cáncer laboral en Italia: evaluación del volumen de casos indemnizados entre 1994 y 2006)***Autores**

Alberto Scarselli, Patrizia Scano, Alessandro Marinaccio, Sergio Iavicoli.

Objetivos**Objectives.** The aim of this study is to analyze occupational cancer claims compensated in the industrial sector in Italy between 1994 and 2006.**Métodos****Methods.** A descriptive analysis of compensated occupational cancers based on the Italian Workers' Compensation Authority (INAIL) data was performed. Summary statistics were compiled by sex and age of worker, cancer type, workplace agent and economic sector. The temporal trend in the period 1994-2006 was investigated for the most frequently compensated cancers (mesothelioma and lung cancer from asbestos; nasal cavities cancer from wood and leather dust).**Resultados****Results.** Between 1994 and 2006, 6,243 cancer claims were compensated by INAIL due to occupational exposure in the industrial sector. Most (5,288, or 85%) of these compensated claims occurred in the period 2000-2006, when the annual mean of the most compensated cancers increased approximately four times compared to the period 1994-1999.**Conclusiones****Conclusions.** There is an increasing trend in compensation for work-related cancers in Italy in recent years, even if occupational cancers are still widely underreported.**Palabras Claves****Key terms.** Occupational cancer; compensation; carcinogens exposure; industry.

Artículo Nº7

Revista: JOURNAL OF OCCUPATIONAL MEDICINE AND TOXICOLOGY - 2009, 4:30doi:10.1186/1745-6673-4-30

Título

Evaluation of the tuberculin skin test and the interferon- γ release assay for TB screening in French healthcare workers (Evaluación de la prueba cutánea de la tuberculina y el interferón- γ ensayo de lanzamiento para la detección de la tuberculosis en trabajadores de la salud de Francia)

Introducción

Introduction. Using French cut-offs for the Tuberculin Skin Test (TST), results of the TST were compared with the results of an Interferon- γ Release Assay (IGRA) in Healthcare Workers (HCW) after contact to AFB-positive TB patients.

Métodos

Methods. Between May 2006 and May 2007, a total of 148 HCWs of the University Hospital in Nantes, France were tested simultaneously with IGRA und TST. A TST was considered to indicate recent latent TB infection (LTBI) if an increase of >10 mm or if TST ≥ 15 mm for those with no previous TST result was observed. For those with a positive TST, chest X-ray was performed and preventive chemotherapy was offered.

Resultados

Results. All HCWs were BCG-vaccinated. The IGRA was positive in 18.9% and TST ≥ 10 mm was observed in 65.5%. A recent LTBI was believed to be highly probable in 30.4% following TST. Agreement between IGRA and TST was low (kappa 0.041). In 10 (16.7%) out of 60 HCWs who needed chest X-ray following TST the IGRA was positive. In 9 (20%) out of 45 HCWs to whom preventive chemotherapy was offered following TST the IGRA was positive. Of those considered TST-negative following the French guidelines, 20.5% were IGRA-positive. In a two-step strategy - positive TST verified by IGRA - 18 out of 28 (64.3%) IGRA-positive HCWs would not have been detected using French guidelines for TST interpretation.

Conclusiones

Conclusions. The introduction of IGRA in contact tracings of BCG-vaccinated HCWs reduces X-rays and preventive chemotherapies. Increasing the cut-off for a positive TST does not seem to be helpful to overcome the effect of BCG vaccination on TST.