

Nº15

Boletín LADEP

Boletín Nº15 - 3º Trimestre 2012

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Boletín Nº15 - 3º Trimestre 2012 (Julio - Septiembre)

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Artículo Nº1

REVISTA: AMERICAN JOURNAL OF INDUSTRIAL MEDICINE - 55:650-655, 2012

Título

Hepatitis B virus infection and waste collection: Prevalence, risk factors, and infection pathway
(Infección por el virus de la hepatitis B en trabajadores de limpieza: prevalencia, factores de riesgo y mecanismos de infección)

Autores

Rachiotis G, Papagiannis D, Markas D, Thanasias E

Antecedentes

Background. Waste collectors have a potential risk of infectious diseases. The aim of the study was to assess; the prevalence of hepatitis B (HBV), risk factors for infection and possible ways of virus transmission among municipal solid waste workers (MSWWs) in a municipality of central Greece.

Métodos

Methods. A cross-sectional study was conducted among the employees of a municipality in Central Greece. The prevalence of an HBV infection biological marker (anti-Hbc) and its association with exposure to waste, socio-demographic factors, and history of occupational injuries with sharp objects/needle sticks was examined among 208 employees.

Resultados

Results. The prevalence of HBV infection among the municipal waste collectors was 23%. Logistic regression analysis showed that exposure to waste (OR=4.05;95%CI=1.23-13.33) and age (OR=5.22;95% CI=1.35-20.1) were independently associated with the anti-Hbc positivity. Moreover, waste collectors who reported occupational injuries with needle sticks were at higher risk of HBV infection (RR=2.64; 95% CI=1.01-6.96).

Conclusiones

Conclusions. Occupational exposure to waste is a possible risk factor for HBV infection. Occupational injury with sharp instruments could be a means of hepatitis B virus transmission. Immunization of MSWWs and adoption of more safe ways for waste collection could be considered in order to control the risk of HBV infection

Artículo Nº2

REVISTA: AMERICAN JOURNAL OF INDUSTRIAL MEDICINE - 55:669-676, 2012

Título

Laryngeal cancer and silica dust exposure: A systematic review and meta-analysis (Cáncer laríngeo y exposición a polvo de sílice: revisión sistemática y meta-análisis)

Autores

Chen M, Lap Ah T

Antecedentes

Background. Individual epidemiological studies generally lack the power to examine the association between silica exposure or silicosis and laryngeal cancer. We summarized pertinent evidence from published literature by using meta-analysis.

Métodos

Methods. A systematic literature search was performed to identify cohort and case-control studies, and the method of meta-analysis was used to combine standardized mortality ratios (SMRs) or standardized incidence ratios (SIRs) from cohort studies and odds ratios (ORs) from case-control studies.

Resultado

Results. A significantly increased risk of laryngeal cancer (pooled $OR=1.39$, 95% confidence interval (95% CI): 1.17-1.67) among workers exposed to silica dust was observed by combining six case-control studies with adjustment for smoking and alcohol consumption. A similarly increased but statistically non-significant risk estimate was observed from cohort studies, with a pooled SMR of 1.38 (95% CI: 0.79-1.96) for silicosis cases; and a pooled SMR of 1.13 (95% CI: 0.82-1.45) and a pooled SIR of 1.50 (95% CI: 0.59-2.42) for workers with silica dust exposure.

Conclusiones

Conclusions. This systematic review demonstrated a weak association between silica or silicosis and laryngeal cancer. Owing to the inherent limitations of the original studies, interpretation of the results of this meta-analysis should be cautious

Artículo Nº3

REVISTA: INDUSTRIAL HEALTH - INDUSTRIAL HEALTH 2012; 4(5): 299-306

Título

Leukotrienes B4, C4, D4 and E4 in the Exhaled Breath Condensate (EBC), Blood and Urine in Patients with Pneumoconiosis (Leucotrienos B4, C4, D4 y E4 en condensado de aire exhalado, sangre y orina en pacientes con pneumoconiosis).

Autores

Pelclová D, Fenclová Z, Vlcková S

Resumen

Leukotrienes (LTs) are involved in the pathogenesis of lung fibrosis and were increased in exhaled breath condensate (EBC) of the patients with pneumoconiosis. However the possible influence of extra-pulmonary disorders on the EBC markers is not known. Therefore in parallel with EBC, LTs' levels in the plasma and urine were measured in patients with pneumoconiosis (45 × asbestos exposure, 37 × silica exposure) and in 27 controls. Individual LTs B4, C4, D4 and E4 were measured by liquid chromatography - electrospray ionization - tandem mass spectrometry (LC-ESI-MS/MS). In EBC, LT D4 and LT E4 were increased in both groups of patients ($p < 0.001$ and $p < 0.05$), comparing with the controls. Both LT B4 and cysteinyl LTs were elevated in asbestos-exposed subjects ($p < 0.05$). Asbestosis with more severe radiological signs (s1/s2-t3/u2) and lung functions impairment has shown higher cysteinyl LTs and LT C4 in the EBC ($p < 0.05$) than mild asbestosis (s1/s0-s1/s1). In addition, in the subjects with asbestosis, cysteinyl LTs in EBC correlated with TLC (-0.313 , $p < 0.05$) and TLCO/Hb (-0.307 , $p < 0.05$), and LT C4 with TLC (-0.358 , $p < 0.05$). In pneumoconioses, EBC appears the most useful from the 3 fluids studied.

Artículo Nº4

REVISTA: JOURNAL OF OCCUPATIONAL MEDICINE AND TOXICOLOGY - 2012, 7:19

Título

Bronchial asthma and COPD due to irritants in the workplace - an evidence-based approach
(Asma bronquial y EPOC debido a irritantes en el lugar de trabajo: un enfoque basado en la evidencia)

Autores

Baur X, Bakehe P, Vellguth H

Antecedentes

BACKGROUND. Respiratory irritants represent a major cause of occupational obstructive airway diseases. We provide an overview of the evidence related to irritative agents causing occupational asthma or occupational COPD.

Métodos

Methods. We searched MEDLINE via PubMed. Reference lists of relevant reviews were also screened. The SIGN grading system was used to rate the quality of each study. The modified RCGP three-star system was used to grade the body of evidence for each irritant agent regarding its causative role in either occupational asthma or occupational COPD.

Resultados

Results. A total of 474 relevant papers were identified, covering 188 individual agents, professions or work-sites. The focus of most of the studies and the predominant diagnosis was occupational asthma, whereas occupational COPD arose only incidentally.

The highest level assigned using the SIGN grading was 2+ (well-conducted systematic review, cohort or case--control study with a low risk of confounding or bias). According to the modified RCGP three-star grading, the strongest evidence of association with an individual agent, profession or work-site ("**") was found for 17 agents or work-sites, including benzene-1,2,4-tricarboxylicacid-1,2-anhydride, chlorine, platinum salt, isocyanates, cement dust, grain dust, animal farming, environmental tobacco smoke, welding fumes or construction work. Phthalic anhydride, glutaraldehyde, sulphur dioxide, cotton dust, cleaning agents, potrooms, farming (various), foundries were found to be moderately associated with occupational asthma or occupational COPD.

Conclusiones

Conclusions. This study let us assume that irritant-induced occupational asthma and especially occupational COPD are considerably underreported. Defining the evidence of the many additional occupational irritants for causing airway disorders will be the subject of continued studies with implications for diagnostics and preventive measures.

Artículo Nº5

REVISTA: MEDICINA DEL LAVORO - MED LAV 2012; 103, 5: 338-346

Título

Biological monitoring of low-level exposure to benzene (Monitorización biológica de niveles bajos de exposición a benceno).

Autores

LARCHER C, FRIZZERA E, PRETTO P

Introducción.

Introduction: Conflicting opinions exist about the reliability of biomarkers of low-level exposure to benzene. We compared the ability of the urinary excretion of trans,trans-muconic acid (t,t-MA), s-phenilmercapturic acid (s-PMA) and urinary benzene (U-Benz) to detect low level occupational and environmental exposure to benzene

MÉTODOS

Methods. We monitored airborne benzene by personal air sampling, and U-Benz, s-PMA, t,t-MA and cotinine (U-Cotinine) in spot urine samples, collected at 8 am and 8 pm, in 32 oil refinery workers and 65 subjects, randomly selected among the general population of urban and suburban Cagliari, Italy. Information on personal characteristics, diet and events during the sampling day was acquired through in person interviews

RESULTADOS

RESULTS: The median concentration of airborne benzene was 25.2 mg/m³ in oil refinery workers, and 8.5 mg/m³ in the general population subgroup. U-Benz in morning and evening samples was significantly more elevated among oil refinery workers than the general population subgroup ($p=0.012$, and $p=7.4 \times 10^{-7}$, respectively) and among current smokers compared to non-smokers ($p=5.2 \times 10^{-8}$, and $p=5.2 \times 10^{-5}$ respectively). Benzene biomarkers and their readings in the two sampling phases were well correlated to each other. The Spearman's correlation coefficient with airborne benzene was significant for U-Benz in the evening sample, while no correlation was seen with t,t-MA and s-PMA readings in either samplings. The two benzene metabolites were frequently below limit of detection (LOD), particularly among the general population study subjects (17-9% and 39%, for t,t-MA and s-PMA respectively). Morning U-Cotinine excretion showed a good correlation with U-Benz in the morning and in the evening sampling ($p<0.001$), and with s-PMA in the evening sample ($p<0.001$), but not with t,t-MA in either samplings. t,t-MA in the evening sample was the only biomarker showing a moderate inverse correlation with BMI ($p<0.05$). The multiple regression analysis adjusting by BMI and number of cigarettes smoked during the day confirmed the results of the univariate analysis.

Discusión.

Discussion: Our results suggest that unmetabolized U-Benz would allow a more reliable biomonitoring of low-level exposure to benzene than s-PMA and t,t-MA.

Artículo Nº6

REVISTA: MEDICINA DEL LAVORO - MED LAV 2012; 103, 5: 382-393

Título

Biological monitoring of exposure to perchloroethylene in dry cleaning workers (Monitorización biológica de exposición a percloroetileno en trabajadores de limpieza en seco)

Autores

MACCA I, CARRIERI M, SCAPELLATO ML

Antecedentes

Background. Perchloroethylene (PCE) is the most widely used solvent in dry cleaning.

OBJETIVOS

Objectives: The aim was to evaluate PCE pollution and to identify the most reliable biological indicators for the assessment of workers' exposure.

MÉTODOS

Methods. The study was performed in 40 dry cleaning shops covering a total of 71 subjects. Environmental monitoring was carried out with personal diffusive samplers (Radiello®) for the entire work shift; biological monitoring was performed by measuring PCE in urine and blood and trichloroacetic acid (TCA) in urine on Thursday evening at end-of-shift and on Friday morning pre-shift.

RESULTADOS.

RESULTS: The mean concentration of PCE in air was 52.32 mg/m³, about 30% of the TLV-TWA and the mean value of the PCE in pre-shift blood samples was 0.304 mg/l, slightly more than 50% of the BEI. In dry cleaning shops employing less than 3 persons PCE in air exceeded the TLV-TWA in 7.8% of cases; the size of the shops was inversely related to pollution. Statistically significant correlations were found between PCE exposure and PCE in blood end-of-shift ($r=0.67$) and pre-shift ($r=0.70$), and PCE in urine end-of-shift ($r=0.68$); no correlation was found between exposure and PCE in urine pre-shift and urinary TCA.

CONCLUSIONES

CONCLUSIONS: Dry cleaning shops still register conditions of exposure and pollution by PCE, although to a lesser extent than in the past. The most reliable indicators for biological monitoring are PCE in end-of-shift urine and PCE in blood both at end-of-shift and pre-shift at the end of the workweek.

Artículo Nº7

REVISTA: OCCUPATIONAL AND ENVIRONMENTAL MEDICINE - OCCUP ENVIRON MED 2012;69:500-507

Título

The application of an occupational health guideline reduces sedentary behaviour and increases fruit intake at work: results from an RCT (Aplicación de una guía clínica de salud laboral en el trabajo para reducir el comportamiento sedentario e incrementar la ingesta de fruta: resultados de un ensayo clínico aleatorizado)

Autores

Verweij L, Proper K, Weel A

Objetivos

Objective: To evaluate the effectiveness of a draft occupational health practice guideline aimed at preventing weight gain on employees' physical activity, sedentary behaviour and dietary behaviour and on body weight-related outcomes.

Métodos

Methods. A randomised controlled trial was performed comparing guideline-based care to usual care among 16 occupational physicians and 523 employees in the Netherlands between 2009 and 2011. Occupational physicians in the intervention group followed the draft guideline by providing advice to employers on how to assess and intervene on the obesogenic work environment and conducted five face-to-face behavioural change counselling sessions with employees to improve their lifestyle. Data of employees were collected by questionnaire and physical measurements at baseline and 6-months follow-up. Linear and logistic regression analyses were performed to determine effects.

Resultados

Results. The intervention showed significant effects on sedentary behaviour at work (β -28 min/day, 95% CI -2 to -54) and on fruit intake (β 2.1 pieces/week; 95% CI 0.6 to 3.6). No significant intervention effects were found for physical activity, sedentary behaviour in leisure time or during weekend days, snack intake and body weight-related outcomes.

Conclusiones

Conclusions. Guideline-based care resulted in a more favourable sedentary behaviour at work and increased fruit intake but did not improve employees' physical activity, snack intake or body weight-related outcomes.

Artículo Nº8

REVISTA: OCCUPATIONAL AND ENVIRONMENTAL MEDICINE - OCCUP ENVIRON MED 2012; 69:582-586

Título

Estimation of benefit of prevention of occupational cancer for comparative risk assessment: methods and examples (Estimación del beneficio de la prevención de cáncer laboral por evaluación comparativa del riesgo: métodos y ejemplos)

Autores

Jyuhn L, Yu Ying Ch, , Saou-Hsing L

Objetivos

OBJECTIVE: To quantify the life years gained and financial savings by preventing a case of occupational cancer.

Métodos

METHODS: The authors retrieved data from the Taiwan Cancer Registry and linked them with the National Mortality Registry to estimate the survival functions for major occupational cancers: lung, pleural mesothelioma, urinary bladder and leukaemia. Assuming a constant excess hazard for each type of cancer, the authors extrapolated lifetime survival functions by the Monte Carlo method. For each patient with cancer, the authors simulated an age- and gender-matched person without cancer based on vital statistics of Taiwan to estimate life expectancy and expected years of life lost (EYLL). By using the reimbursement data from the National Health Insurance Research Database, the authors calculated the average monthly healthcare expenditures, which were summed to estimate the lifetime healthcare expenditures after adjusting for the corresponding monthly survival probability.

Resultados

RESULTS: A total of 51,408, 136, 12,891 and 5285 new cases of lung, pleural mesothelioma, bladder and leukaemia cancers, respectively, were identified during 1997-2005 and followed until the end of 2007. The EYLL was predicted to be 13.7 ± 0.1 , 18.9 ± 0.7 , 4.7 ± 0.3 and 19.4 ± 0.5 years for these cancers, respectively, and the lifetime healthcare expenditures with a 3% annual discount were predicted to be US\$22,359, US\$14,900, US\$51,987 and US\$59,741, respectively.

Conclusiones

CONCLUSIONS: The burden of these occupational cancers, in terms of EYLL and lifetime healthcare expenditures, was substantial. Such estimates may provide useful empirical evidence for comparative risk assessment that can be applied in health policy-making and clinical decision-making.

Artículo Nº9

REVISTA: OCCUPATIONAL AND ENVIRONMENTAL MEDICINE - OCCUP ENVIRON MED 2012;69:651-657

Título

Occupational exposure to particles and incidence of acute myocardial infarction and other ischaemic heart disease (Exposición laboral a partículas e incidencia de infarto agudo de miocardio y otra enfermedad isquémica cardíaca)

Autores

Wiebert P, Lönn M, Fremling K

Antecedentes

Background: Ambient particulate air pollution has been linked to cardiovascular disease. Occupational particle exposure levels may be several times higher than ambient levels but has been less studied.

Objetivos

OBJECTIVES: The authors investigated the association between occupational exposure to particles and the incidence of ischaemic heart disease (IHD).

Métodos

METHODS: The cohort included all manual workers in the Swedish national census of 1980 with information on demographic data and occupation. Information on hospital admissions for acute myocardial infarction or other IHDs and cause of death were obtained from nation-wide registers. A job-exposure matrix for exposure to small (<1 µm) and large (>1 µm) particles was developed. HRs were calculated with Cox regression with adjustment for sex, age, socioeconomic group and urban/rural residential area.

Resultados

RESULTS: Exposure to small particles was associated with an increased HR for acute myocardial infarction of 1.12 (95% CI 1.09 to 1.15), and HR for exposure to large particles was 1.14 (95% CI 1.10 to 1.18). The association was somewhat stronger for workers exposed to small particles for more than 5 years, 1.21 (95% CI 1.11 to 1.31), but no trend with exposure intensity was found. The risk associated with exposure to small particles was higher among women than among men, 1.30 (95% CI 1.12 to 1.51) and 1.10 (95% CI 1.07 to 1.14), respectively. Findings were essentially similar for other IHDs.

Conclusiones

Conclusions. This explorative study gives some support to the hypothesis that occupational exposure to particles increases the risk of acute myocardial infarction and other IHD. The findings must be interpreted cautiously due to lack of smoking data.

Artículo Nº10

REVISTA: SCANDINAVIAN JOURNAL OF WORK ENVIRONMENT & HEALTH - SCAND J WORK ENVIRON HEALTH 2012; 38(4):337-342

Título

Retrospective cohort study of the risk of impaired glucose tolerance among shift workers (Estudio de cohortes retrospectivo del riesgo de intolerancia a la glucosa entre trabajadores a turno).

Autores

Oyama I, Kubo T, Fujino Y, Kadowaki K, Kunimoto M, Shirane K, Tabata H, Sabanai K, Nakamura T, Matsuda S

Objetivos

OBJECTIVE: The aim of this study was to investigate the effect of shift working on the risk of developing impaired glucose tolerance (IGT).

Métodos

METHODS: This study comprised 6413 male employees (5608 daytime workers, 512 3-shift workers and 293 2-shift workers) whose work schedules remained constant during the follow-up period (mean follow-up period 9.9 years). IGT was defined as Hemoglobin A1c $\geq 5.9\%$. The Cox proportional hazards model was used to estimate the risk of developing IGT, after making adjustments for age, smoking, alcohol consumption, leisure-time physical activity, body mass index (BMI) and Hemoglobin A1c (HbA1c) at baseline. Analysis was additionally performed for a sub-cohort of 1625 workers with BMI of 20.0-25.0 kg/m² that did not change by >2.0 kg/m² during the follow up period.

Resultados

RESULTS: The risk of developing IGT was significantly elevated among both 3-shift workers [hazard ratio (HR) 1.78, 95% confidence interval (95% CI) 1.49- 2.14] and 2-shift workers (HR 2.62, 95% CI 2.17-3.17). Significant elevations of the risk were still observed at the additional analysis on the sub-cohort (3-shift work: HR 3.55, 95% CI 2.02-6.25; 2-shift work: HR 4.86, 95% CI 2.62-9.01).

Conclusiones

Conclusions.: Both 2- and 3-shift workers were associated with a high risk factor of developing IGT compared to day workers. Moreover, 2-shift workers had a higher risk than 3-shift workers. The risk was observed even among workers whose body mass remained within the normal range

Artículo Nº11

REVISTA: SCANDINAVIAN JOURNAL OF WORK ENVIRONMENT & HEALTH - SCAND J WORK ENVIRON HEALTH 2012; 38(4):343-348

Título

The relationship between current and former shift work and the metabolic syndrome (Relación entre actuales y antiguos trabajadores a turno y el síndrome metabólico)

Autores

Puttonen S, Viitasalo K, Härmä M

Objetivos

OBJECTIVES: The occurrence of possible health hazards among former shift workers is not well-known. We studied associations of former and current shift work with the metabolic syndrome (MetS).

Métodos

METHODS: Participants were 1811 full-time employees of a large airline company (1009 men). Working times were categorized into five groups: day worker [N=297 (the reference group)], former shift worker (N=341), 2-shift worker (N=418), night-shift worker (N=283), and in-flight worker (N=472). MetS was measured by the International Diabetes Federation (IDF) criteria and the National Institute of Health Adult Treatment Panel III (NCEP) guideline. The prevalence of the syndrome in the study population was 28.5% and 20.8%, respectively.

Resultados

RESULTS: Among male former shift workers, MetS was more prevalent compared to male day workers [IDF: age-adjusted odds ratio (OR) 2.13, 95% confidence interval (95% CI) 1.35-3.37; NCEP: OR 1.83, 95% CI 1.13-2.96]. Associations did not change after additional adjustments for education, smoking, physical activity, alcohol consumption, and insomnia symptoms (IDF: OR 2.00, 95% CI 1.26-3.19; NCEP: 1.67, 95% CI 1.02-2.72). Male 2-shift workers also had an elevated risk of IDF-defined MetS (OR 1.64, 95% CI 1.06-2.55) but the association weakened in the fully adjusted analyses (OR 1.48, 95% CI 0.93-2.24). Prevalence of the MetS was marginally significantly higher among night-shift work (IDF: OR 1.51, 95% CI 0.95-2.34) and was attenuated further with additional adjustments (OR 1.37, 95% CI 0.84-2.22). Among women, no significant differences in prevalence of the MetS between day work and shift work were observed.

Conclusiones

Conclusions. Findings of the cross-sectional study suggest that MetS diagnosed by standardized criteria is more prevalent among former male shift workers than current day workers who have never worked in shifts.

Artículo Nº12

REVISTA SCANDINAVIAN JOURNAL OF WORK ENVIRONMENT & HEALTH - SCAND J WORK ENVIRON HEALTH 2012; 38(5):393-408

Título

A systematic review of the cost-effectiveness of worksite physical activity and/or nutrition programs (Revisión sistemática del coste-efectividad de la actividad física en el lugar de trabajo y/o los programas de nutrición)

Autores

Van Dongen JM, Proper KI, van Wier MF, van der Beek AJ, Bongers PM, van Mechelen W, van Tulder MW

Objetivos

OBJECTIVES: The aim of this study was to appraise and summarize the evidence on the cost-effectiveness of worksite physical activity and/or nutrition programs.

Métodos

METHODS: We searched EMBASE, MEDLINE, SportDiscus, PsycInfo, NIOSHTIC-2, NHSEED, HTA, and Econlit for studies published up to 14 January 2011. Additionally, we searched for articles by reviewing references, searching authors' databases, and contacting authors of included studies. Two researchers independently selected articles. Articles had to include a cost-effectiveness and/or cost-utility analysis comparing a worksite physical activity and/or nutrition program to usual care or an abridged version of the program. Data were extracted on study characteristics and results. Two researchers independently assessed the risk of bias using the Consensus on Health Economic Criteria list (CHEC-list).

Resultados

RESULTS: Ten studies (18 programs) were included. More than 50% of the studies fulfilled 11 (58%) of the 19 CHEC-list items. From various perspectives, worksite nutrition and worksite physical activity and nutrition programs (N=6) were more costly and more effective in reducing body weight than usual care. When only intervention costs were considered, most worksite nutrition (N=4/5) and worksite physical activity and nutrition programs (N=5/6) were more costly and more effective in reducing cholesterol level and cardiovascular disease risks, respectively.

Conclusiones

Conclusions. The cost-effectiveness of more costly and more effective programs depends on the "willingness to pay" for their effects. It is unknown how much decision-makers are willing to pay for reductions in body weight, cholesterol level, and cardiovascular disease risks. Therefore, conclusions about the cost-effectiveness of worksite physical activity and/or nutrition programs cannot be made. There is substantial need for improvement of the methodological quality of studies and particular emphasis should be placed on the handling of uncertainty.

Artículo Nº13

REVISTA: SCANDINAVIAN JOURNAL OF WORK ENVIRONMENT & HEALTH - SCAND J WORK ENVIRON HEALTH 2012;38(5):447-455

Título

Hazard functions to describe patterns of new and recurrent sick leave episodes for different diagnoses (Funciones de riesgo en la descripción de patrones de ne nuevos y recurrentes episodios de baja laboral para diferentes diagnósticos)

Autores

Navarro A, Moriña D, Reis R, Nedel FB, Martín M, Alvarado S

Objetivos

OBJECTIVES: This study aims to identify the hazard functions that describe the occurrence patterns of new and recurrent sick leave (SL) episodes for mental, respiratory, and musculoskeletal diagnoses.

Métodos

METHODS: The data come from a cohort of workers in the Hospital das Clínicas da Universidade Federal de Minas Gerais, Brazil, including all employees working ≥ 20 hours per week, whose first employment relation with the hospital started between 1 January 2000 and 31 December 2007 (N=1579). We created 15 samples corresponding to combinations of diagnoses causing SL and the number of previous episodes already suffered. We fitted Weibull, log-normal, and log-logistic models by resampling and selected the model having the lowest Akaike information criterion in the greatest number of resamples.

Resultados

RESULTS: Differences were observed in the probability distributions associated with the process generating a SL. Diagnosis showed important differences in terms of risk intensity: mental episodes were the least frequent. There were differences in risk intensity and shape of the function over time depending on the episode number, particularly between the first episode and recurrences. In addition, these differences varied by diagnosis.

Conclusiones

Conclusions. In most of the samples analyzed, we identified a mixture of distributions, implying a need to revise the statistical methods of analysis for SL occurrence with the aim of obtaining consistent estimates of the risk and the associated factors.

Artículo Nº14

REVISTA: SCANDINAVIAN JOURNAL OF WORK ENVIRONMENT & HEALTH - SCAND J WORK ENVIRON HEALTH 2012; 38(5):476-483

Título

Occupational exposure to endocrine-disrupting chemicals and the risk of uveal melanoma
(Exposición laboral a disruptores endocrinos químicos y riesgo de melanoma de úvea)

Autores

Behrens T, Lynge E, Cree I, Lutz J-M, Eriksson M, Guénel P, Merletti F, Morales-Suarez-Varela M, Afonso N, Stengrevics A, Stang A, Févotte J, Sabroe S, Llopis-González A, Gorini G, Hardell L, Ahrens W

Objetivos

OBJECTIVES: We investigated the association between occupational exposure to endocrine-disrupting chemicals (EDC) and the risk of uveal melanoma using international data of a case-control study from nine European countries.

Métodos

METHODS: After exclusion of proxy interviews, 280 cases and 3084 control subjects were included in the final analysis. Information on possible exposure to EDC was derived from 27 job-specific questionnaires (JSQ), which solicited detailed questions on occupational tasks. Relative risk estimates were based on the JSQ and potential exposure to a group of endocrine-disrupting agents. We constructed several exposure scores, taking into account intensity of exposure, use of personal protective equipment, and exposure duration. We calculated unconditional logistic regression analyses, adjusting for country, age, sex, eye color and a history of ocular damage due to intense ultraviolet (UV) exposure.

Resultados

RESULTS: The overall exposure prevalence to EDC was low reaching a maximum of 11% for heavy metals with endocrine-disrupting properties. Although working in some industries was associated with increased melanoma risk [such as dry cleaning: odds ratio (OR) 6.15, 95% confidence interval (95% CI) 2.0-18.96 and working in the glass manufacturing industry: OR 3.49, 95% CI 1.10-11.10], agent-specific risks were not elevated. The strongest possible risk increase was observed for organic solvents with endocrine-disrupting properties (OR 1.31, 95% CI 0.78-2.21). Calculation of exposure scores did not indicate consistently elevated results with higher score values. Sensitivity analyses did not alter these results.

Conclusiones

Conclusions. Occupational exposure to EDC was not associated with an increased risk for uveal melanoma.

Artículo Nº15**REVISTA: THE NEW ENGLAND JOURNAL OF MEDICINE - N ENGL J MED 2012; 367:295-297****Título****The Cost-Effectiveness of Environmental Approaches to Disease Prevention** (Coste-efectividad de los enfoques ambientales de la prevención de enfermedades)**Autores**

Chokshi DA, Farley TA

Article

Although preventive approaches to disease are intuitively appealing and frequently presented as a way to reduce costs, analyses have suggested that they're generally no more cost-effective than therapeutic interventions. But are some more cost-effective than others?

Artículo Nº16**REVISTA: ARCHIVOS DE PREVENCIÓN DE RIESGOS LABORAL - ARCH PREV RIESGOS LABOR 2012; 15 (3): 136-141****Título****Estudio de la actividad muscular mediante electromiografía de superficie durante el uso de silla de evacuación domiciliaria****Autores**

Gallego Y, Caballero E

Objetivos

Comparar las diferentes técnicas al manipular la silla de evacuación domiciliaria por el personal sanitario e identificar aquella que es más favorable ergonómicamente, analizando el registro de la musculatura implicada mediante la técnica de electromiografía de superficie.

Métodos

El ensayo se ha centrado en el descenso por escalera y se ha distribuido en las cuatro disposiciones posibles para la misma operación de transporte, donde las variables del estudio han sido: las características antropométricas de los trabajadores (percentil 5 y percentil 95, correspondientes a los extremos de la curva normal de distribución de talla-peso), la ubicación de los mismos durante la técnica de traslado de la silla (parte superior e inferior), y la posición del individuo que se sitúa en la parte inferior (ciclo de bajada deambulando frontalmente o de espaldas).

Resultados

Para ambos trabajadores participantes en el estudio, se identifica como posición más favorable de trabajo la ubicación en la parte inferior de la escalera descendiendo de frente, al ser la que supone menor actividad muscular. En general, se observa que la demanda física para los distintos músculos analizados es mayor para el trabajador correspondiente al percentil 5 (menor talla-peso), a excepción de la musculatura paravertebral que para determinadas posiciones de manipulación es significativamente mayor para el percentil 95.

Conclusiones

La posición que supone menor actividad muscular en la técnica de transporte de la silla de evacuación domiciliaria por escalera es la ubicación en la parte inferior, descendiendo de frente.