Awards Ceremony and Poster Session

Session 1 8:15-9:00

Biological sampling micro and nano-particulate matter in occupational and environmental exposures. Fireman E.

Session 2 10:45-11:00


Identification of metal sensitization in sarcoid-like metal exposed patients by the Melisa® lymphocyte proliferation test. Alcalay Y, Stejskal V, Bar-Shai A, Kivity S, Fireman E.

Respiratory Hospitalizations of Children Living Near a Hazardous Industrial Site: A Case-Control Study. Laufer Peretz A.
Factors predicting the prognosis of seizures occurrence in young adult population. Tavor M, Neufeld MY, Chodick G, Zack O, Moshe S.
תקציר הרצאות ברי הר אוצרת
Biological sampling micro and nano-particulate matter in occupational and environmental exposures.

FIREMAN E 1

1Prof. of Occupational and Environmental Medicine, Sackler School of Medicine –Tel Aviv University. Head of Laboratory of Pulmonary and Allergic Diseases-Tel Aviv Medical Center. Head National Laboratory Service for Interstitial Lung Diseases- Israeli Ministry of Health.

In general, inhaled particulate matter 10µ are deposited on the upper airways and removed by mucociliary clearance or mechanical processes, such as coughing and sneezing. Inhaled PM2.5, PM0.1, and nano-sized ultrafine particles (UFP) are more likely to reach the lung parenchyma. Fine and ultrafine fractions represent more than 50% of the total PM10 composition, and it is believed that nanoparticles constitute the most toxic component of PM10. As such, these extremely small components of PM10 are capable of triggering lung inflammation and oxidative stress in a manner similar to that of the coarse particles themselves. Most of the initial assessments of particulate burden and involvement of inflammatory and structural cells in occupational lung diseases were made in studies using fibreoptic bronchoscopy in conjunction with bronchoalveolar lavage (BAL).

The relative invasiveness of this technique, however, has restricted the use of bronchoscopy to a limited number of specialised centres, and hampered its development into a practical and suitable tool for screening programmes, exposure evaluation or repeated follow-up of workers exposed to hazardous dust in large populations.

The ongoing search for non-invasive techniques has led to a number of development approaches, such as the examination of cells, quantification of biochemical mediators, and characterization of particulate matter in samples of induced sputum (IS) as well as the quantification of biochemical mediators and characterization of particulate matter in the condensation of exhaled breath exhaled breath condensate (EBC).

In the last years we have concentrated our research on the application of this technique in occupational and environmental exposures measuring microranged and ultrafine particles.
Moshe Shany – הרצאה מס’ 1

Functional and inflammatory abnormalities in artificial stone exposed workers

NOACH-OPHIR N 1,2,3, KORENSTEIN R 4, ALCALAY Y 1,2, BAR-SHAI A 1,2, ISRAELI-SHANY L 1,2, , KRAMER M 5, FIREMAN E 1,2,3

1Laboratory Pulmonary and Allergic Diseases, 2Tel Aviv Medical Center 3Environmental and Occupational Medicine Sackler School of Medicine Tel Aviv University 4Department of Physiology and Pharmacology Sackler School of Medicine Tel Aviv University 5Pulmonary Institute Rabin Medical center, Beilinson Hospital

Background: Silica (SiO2) is the most abundant mineral on earth. The marble industry in Israel that manufactures kitchen and bath countertops is based mainly on artificial stone that contains 93% silica in the form of natural quartz, as a substitute for marble and granite. There are ~400 small and middle-size enterprises in Israel that work with artificial stone and the estimation is that approximately 3000 workers are involved in cutting and processing artificial stone which produces high concentration of silica dust. Overexposure to crystalline silica may cause silicosis, an irreversible lung disease characterized by inflammatory process following by apoptosis and fibrosis of lung tissue.

Study Purpose: To screen by biological monitoring workers exposed to artificial stone dust in order to study the functional and inflammatory pathways to elucidate the pathophysiology of a new emerging type of silicosis.

Study population: Fifty exposed artificial stone workers compared to fifty individuals free of occupational exposure.

Methods: Occupational questionnaires were fulfilled by all exposed participants. – Pulmonary Function Testing (PFT), Induced Sputum (IS) and Exhale breath condensate (EBC) testing were done by conventional methods. Quantitative silica (Si) content analysis was performed using Nitron XL3 XRF analyzer (Thermo Scientific).

Results: PFT were performed in all marble workers were significantly lower compared to control group (VC=76.9±2.4, 97.7±2.3; TLC=92.7±2.1, 105.6±1.9; FVC=78.9±2.6, 98.9±2; FEV1=73.1±3.1, 98.3±2; FEV1/FVC=74.7±1.7, 85.7±1.3; DLCOSB=70.5±2.6, 91.6±1.8 accordingly. P value <0.01); IS showed a significant higher neutrophilic inflammation compared to control group (67.9±2.8, 46.1±2.9 accordingly. P value <0.01); Particle size distribution of particles retrieved from IS samples display a similar pattern when compared to particle size distribution of artificial stone dust collected from a marble factory, (91.46%, 97.95% particles are included in the respirable fraction (< 4 µ ); 20/28 (71.4%). EBC samples contained measurable levels of silica (above 40ppm ) compared to control group that had no detectable silica.

Conclusions: The study population display lower PFT’s and neutrophilic inflammatory IS pattern with high levels of respirable silica in their airways.
Identification of metal sensitization in sarcoid-like metal exposed patients by the Melisa® lymphocyte proliferation test

ALCALAY Y 1,2, STEJSKAL V 4, BAR-SHAI A 1,2, KIVITY S 2, FIREMAN E 1,2,3

1Laboratory Pulmonary and Allergic Diseases, 2Tel Aviv Medical Center, 3Environmental and Occupational Medicine, Sackler School of Medicine, Tel Aviv University, 5University of Stockholm MELISA Medica Foundation

Background: Sarcoidosis is a systemic disorder of undetermined etiology. It is defined histopathologically by noncaseating granulomas, but it remains an enigma for several reasons. Granulomatous inflammation is a nonspecific finding, since it is also present in mycobacterial/fungal infections, hypersensitivity pneumonitis and in association with inhalation of metal dust or fumes. Exposure to metal dusts and fumes takes place in many occupational settings. The lung can respond to the inhalation of these metals in a variety of lung diseases, such as parenchymal lung fibrosis and granulomatous lung disorders. We hypothesized that metal-exposed patients with sarcoid-like reactions are misdiagnosed as having sarcoidosis.

Aim: To identify sensitization to metals other than beryllium that cause granulomatous lung disease.

Methods: 12 sarcoid-like metal-exposed patients and 2 patients with confirmed chronic beryllium disease (CBD) underwent the beryllium lymphocyte proliferation test (BeLPT) and the Melisa lymphocyte proliferation test (MeLPT). Thirteen out of 14 biopsies were tested for metal content by scanning electron microscope (SEM). Metal selection for MeLPT was done according to SEM results and exposure history.

Results: Metal sensitization was identified by MeLPT in 9/12 sarcoid-like patients. Thirteen of the 14 sarcoid patients showed noncaseating granulomas, and two of the 14 sarcoid-like patients were clinically diagnosed as having no histological evidence of noncaseating granulomas. The MeLPT results agreed with the BeLPT results in 1/2 CBD patients.

Conclusion: MeLPT is an effective additional tool for identifying sensitization to metals other than beryllium in sarcoid-like metal-exposed patients. An SEM analysis is recommended as the first step in the evaluation of those patients in order to demonstrate clinical evidence of exposure. Given that the metals identified by SEM are not always those with immunogenic properties, we propose that Melisa® lymphocyte proliferation tests should be the second step in identifying metal sensitization in this patient population.
מושב שני – הרצאה מס’ 3

איתור חשיפה לביואווירוסולים ואנדוטוקסינים במכוני תערובת ובПроизводе שבבי

הנוזלי חיתוך וקירור

פרדו א, בן ארי ח, אומנסקי ס

המוסד לבטיחות ולגיהות

מבוא:
ביואווירוסולים הם חלקיקים מרחפים המורכבים או נגזרים מאורגניזמים חיים (חיידקים, פטריות, וירוסים) וביניהם אנדוטוקסינים של חיידקים גרם שליליים, מולקולות ביולוגיות בעלות משקל מולקולרי גבוה, אלרגנים, מיקוטוקסינים ופפטידוגליקנים. חשיפה נשימתית כרונית לאבק אורגני굴ל ביואווירוסולים וביניהם אנדוטוקסינים, במקומות עבודה, נקשרת לתוצאים בריאותיים כגון דלקות בדרכי הנשימה, ריגוש יתר של מערות האף והגרון, ירידה בתיפקודי ריאות, תסמינים של hypersensitivity pneumonitis ותסמונת הרעילות של האבק האורגני (ODTS).

במחקר הנוכחי נבדק פוטנציאל החשיפה נשימתית לביואווירוסולים הכוללים חיידקים, פטריות ואנדוטוקסינים בתהליכי עבודה במכוני תערובת לייצור מזון לבעלי החיים ובעיבוד שבבי בתעשיית המתכת.

שיטות:
בבתי מלאכה לעיבוד שבבי ומכוני תערובת להכנת מזון לחיות (עופות ובקר) נבצעו אנליטיishments של תהליכים ושיטות עבודה, מאפיינים של האינטראקציה בין העובד למקור החשיפה, ומשתנים התורמים לפיזור חלקיקים ולחשיפה, ובוצעו ניטורים סביבתיים לצפייה בע佤อากาศ, אנדוטוקסינים ופפטידוגליקנים. מקטע בר שאיפה של חלקיקים מרחפים נבדק בשיטה גרבימטרית; אנדוטוקסינים נדגמו ב- aerosol sampler TM button, pyrogen free ונדקו בשיטת ה-LAL (Limulus Amebocytes Lysate) הטורבידימטרית על פי פרוטוקולים מנחים; כלל חיידקים בני-קיימא, חיידקים גרם שליליים וכלל פטריות יוצרות נבגים נדגמו בעזרת ראש דגימה יעודי מסוג aerosol sampler TM n button המצוייד במסנן ג’לטין סטרילי ובמקביל בעזרת דוגם אנדרסן רב נקב וחד שלבי (N-6) היישר אל צלחות פטרי שיועדו להגדרה וספירת מושבות. זיהוי מין החיידקים התבצע בשיטת rRNA Gene PCR and sequencing לאחר בידוד תרביות של המיקרואורגניזמים השכיחים ביות ר.

נערך מבחן t להבדלים בין ממוצעים של פרמטרים רציפים, והבדלים הוגדרו כמובהקים ברמה של 0.05 < p. קשרים בין משתנים נבדקו באמצעות קורלציית פירסון ורגרסיה ליניארית.

תוצאות:
הרמה הממוצעת של אבק גרעינים (6.2±מ”ג/מ”ק) במכוני תערובת התקרבה ל-57% מהרמה המרבית המותרת לחשיפה על פי ה-ACGIH והרמה הממוצעת של אנדו-טוקסינים (15.1±EU/M) הייתה גבוהה מתקן החשיפה ההולנדי הנמצא בשימוש לגורם זה. אחוזי החריגה של ריכוזי אבק גרעינים ואנדוטוקסינים מרמות מרביות מותרות באוויר במכונים תערובת היו 14% ו-26%, בהתאומת. באבק נמצאו חיידקים ושאר פטריות עלולים להיות פתוגנים. רמות חיידקים והפטריות באוויר במכוני תערובת חלשו ב-57% ו-75% מהתוצאות, בהתאמה, בניגוד לממוצעיםราว 1,474±17,17 CFU/M, 4,472±5,53 CFU/M ו-1,474±190 CFU/M, בהתאמה, באוחזת שבבי.

ריכוזי החלקיקים, האנדוטוקסינים, החיידקים והפטריות באוויר במכוני תערובת חלשו ב-57% ו-75% מהنتائج, בהתאמה, בניגוד לממוצעיםราว 1,474±17,17 CFU/M, 4,472±5,53 CFU/M ו-1,474±190 CFU/M, בהתאמה, באוחזת שבבי.

ליעוז מזון בלתי-aligned Nabucovישים שבחבריות המופטרים

דיון:
 Burbis ההתחלה הדיפלומטית במפגשים ישראליות מצא מ実際に התהליכיםلحוונה

 rhetor במחונע חותרנה וב- במקומן במכוני תערובת

ריכוזי חיידקים הגובר שלולימים (0.69)
Exposure to various occupational health and safety hazards, including airborne contaminants, should be evaluated to assess potential exposure risks. The exposure of workers to airborne contaminants, such as endotoxins, is a function of the concentration multiplied by the exposure time, as opposed to biological processes where some processes and the duration of exposure are short and the involvement of workers is intermittent. Inhalation of airborne endotoxins can lead to systemic inflammatory responses (OTDS). In some cases, high concentrations of endotoxins may exceed levels that could trigger a respiratory response. Levels of dust, bacteria, and other airborne microorganisms can serve as predictors of endotoxin concentrations in the air in mixed facilities, although the lack of good matches between exposure metrics in biological processes may indicate the presence of particulates and biowastes that are not uniform and cannot be easily controlled. Exposure to dust concentrations above 5 mg/m³ and airborne particles above 3 mg/M³ in biological processes indicates a high probability of raising endotoxin levels beyond typical levels. The protection coefficient of respiratory protection in some processes in mixed facilities may be inadequate.

The study was conducted with the support of the Prevention and Research for Health and Safety in the Ministry of Economics.
Respiratory Hospitalizations of Children Living Near a Hazardous Industrial Site Adjusted for Prevalent Dust: A Case-Control Study

NIREL R 1, MAIMON N 2, FIREMAN E 3,4, AGAM S 1, EYAL A 5, PERETZ A 6

1Department of Statistics, The Hebrew University of Jerusalem, Jerusalem, Israel; 2Division of Pulmonology, Department of Medicine, Ben-Gurion University Soroka University Medical Center, Beer-Sheva, Israel; 3Department of Occupational Environmental Medicine, Tel-Aviv University, Tel-Aviv, Israel; 4National Laboratory Service for Interstitial Lung Diseases, Tel-Aviv Sourasky Medical Center, Tel-Aviv, Israel; 5Occupational Medicine Department, Clalit Health Services, Negev District, Israel; 6Occupational Medicine Clinic, Rabin Medical Center, Petah Tiqua, Israel

Background: The Ramat Hovav Industrial Park (IP) located in southern Israel, hosts 24 chemical industry facilities and the national site for treatment of hazardous waste. Yet, information about its impact on the health of local population has been mostly ecological, focused on Bedouins and did not control for prevalent dust storms. This case-control study examined whether living near the IP could lead to increased risk of paediatric hospitalization for respiratory diseases.

Methods: Children < 14 years of age who lived within 40 km of the IP and were hospitalized for respiratory illnesses were compared to children admitted for non-respiratory conditions. Individual exposures were based on residential proximity to the IP. Associations between hospitalization and exposure to IP pollution were examined for three age groups (<1, 1-5, 6-14) controlling for important covariates and particulate matter with aerodynamic diameter < 10 μm (PM\textsubscript{10}).

Results: We found evidence for increased risk of respiratory hospitalization with proximity to the IP for infants in the first year of life [Odds ratio (OR): 2.41, 95% confidence interval (CI): 1.46-3.97]. Regional PM\textsubscript{10} was associated with an overall increased risk (OR: 1.03, 95% CI: 1.01-1.06), based on PM\textsubscript{10} interquartile range. In models with both distance from the IP to residence and PM\textsubscript{10}, the estimate for infants aged <1 year was smaller but still significant (OR: 1.99, 95% CI: 1.12-3.55).

Conclusion: Residential proximity to a hazardous industrial site may contribute to early life respiratory admissions, beyond that of prevailing PM\textsubscript{10}. 
Arnost Vilhlem Badar (1892-1962), ורדים החטיפת התעסוקתיות בחברת העוסקים בבריאות.

שקופת חולים מאוחדת

מבוא: ארנסט וילהלם באדר, שביתת תחקור חorca החטיפת התעסוקתיות, חיבר את "החברה הגרמנית לרפואה תעסוקתית" (Deutsche Gesellschaft fuer Arbeitsmedizin) שהוקמה ב-1962. פרסומים שונים מהשנים האחרונות הציגו תפקיד בולט שרופא תעסוקתי חשוב זה מילא בתקופת השלטון הנאצי (ספריהם של פיקרסקי ואלסנר, שניהם משנת 6555).

שיטה: במכונות הגרמי לryptonיני חטיפת תעסוקתית בדוק (巴拉크ן בפשפ הרשנועה) מסמכים רבים מארכיונים שונים, במכרות גלגלים אחרים על תפקודות של באדר בתיקופת הנאצים. במהלך ההיפוך הוא סמד או על התפקדותו המדברית, מרחב השפעה้า היא על תבוקפת וו קונ

מסקנה: ח hüküm מתקדימת ההשכבה של הרפואה בתיקופת שלחן השילוש החטיפת התעסוקתיות איננה ככלה זה המשמעת הרבר סיוווניה לתיקופת של הרפואה התעסוקתיות ול쵸 עב"ר העשור של אפיפיויתוק קודו של חי קודו לקב. בנייצי הדלגבוי או ח"י של שרגה, "ד"ארנסט וילהלם באדר לא היה הולך "אנט-נאצי". מצט שג נראיה ק מודב

לתאר את נוכזי בולט וע العلي של האידיאולוגיה הנאצית.

בארד שיר לשקופת החטיפת של רופאים גורמים שונים אפיפיויתוק מקצועיות затומת וחוזר
עלית המ권ת שלתון: באדר יעד להגדון ולא, עם עמידה בברית ומילון, בצופי
בעי שלנו קוף ח التواصل הסליבי של שיאלוד쏠 בורו למגזר, או היא הראה
כุงו בנה התיאמי אצ עמום למשטח הת tts וכה עק כ קדיזים גמזים רג - לאומי

ובכלבטים.
The study examined the effectiveness of a remote intervention program based on biofeedback in a group of computer users suffering from work-related musculoskeletal disorders (WRMSD). The research aimed to determine the effectiveness of a remote intervention program compared to a group receiving on-site biofeedback. Both groups received ergonomic interventions to adjust the workplace environment. The study found no significant differences between the two groups in dependent variables, including body posture, pain-related symptoms, muscle tension, and psychological factors. The results suggest that a remote intervention program based on biofeedback is effective for computer users suffering from WRMSD.
הייתדות של מחקר זה היאباحثונות עקרוניים שעיקרן בשיקום המקהוז, אשר בא ליידי ביטוי בחקירות מקוונות בין משתתפים המחקר לחוקרת, באמצעות האינטרנט. מודל זה מושפע ממקרה קשה עם מתן תמיכה ביצירת מחקרים קולקטיבים, אשר יוביל ל ViewBagה התוצאות הקולקטיביות של המחקר של בישוף פינס-מל-פינס.
Moshe Shiloh – teaching assistant

Improvement in pain and function after one year in patients with chronic lower back pain: a randomized controlled study

Ben Ami Nov ¹, Hodi Gad ²³, Mirsky ¹, Shapiro ¹, Bierman ³, Gafni ⁴, Perlitz ⁵

Introduction: Lower back pain is the main cause of disability in the world. Although it is known that in chronic back pain the psychological factors are the most significant, the physiotherapy treatment focuses mainly on the physical aspect and the skeletal system - muscle, but not on the mental aspect. The World Health Organization (WHO) stated that the best treatment for back problems is physical activity, but maintaining the physical activity is challenging. The proposed study examined, in a controlled way, a behavioral model of support for patients suffering from back pain, through the increase in motivation and ability for daily physical activity.

Methods: The conducted study was a controlled community study. The patients who came to the physiotherapy due to chronic lower back pain, or who experienced at least another back attack, were randomly assigned to one of two groups:

1. Intervention group: physiotherapy focusing on teaching the patient in stages for daily physical activity.
2. Control group: conventional physiotherapy.

Participants: The study included 665 men and women aged 27-67 who suffered from chronic lower back pain, or back pain in the twenties, were referred to physiotherapy in the Kavita Health Services in the Sharon region. The study included 51 physiotherapists and one researcher.

Intervention: The intervention focused on strengthening the patient to cope actively with the chronic back pain he suffers from.

Outcome measures:
- Pain scale – Numerical Pain Scale.
- Disability – Roland Morris Disability Questionnaire.
- Quality of life – SF-12.
- Physical fitness – Baecke, BMI.
- Smoking level, medications for pain and inflammation, and visits to medical centers and doctors.

Method of follow-up: conducted via telephone survey of the questionnaires following three and six months in a blinded manner.

Results: The recruitment was carried out from February 6511 to July 6516. No significant differences were found between the intervention group and the control group in all measures before the intervention. After five months and after a year, patients in the intervention group were found to suffer less pain and less pain due to back problems and function better significantly compared to patients in the control group. Patients in the intervention group were significantly more active in terms of sports compared to patients in the control group. Significant differences were found between the stages of change at the beginning of the intervention and the stages of change at the end of the intervention. In addition, the economic burden due to medical visits, physiotherapy visits and medication was lower by 6% in the intervention group compared to the control group.

Conclusions: This work indicates the superiority of the stages method in treating chronic back pain, compared to the conventional method, both in the patient's satisfaction and in the economic aspect in the range of one year from the intervention. For the first time it was proved that we can change the behavior of a public system (change in positions and methods of treatment of 11 physiotherapists) and the behavior of the patients (change in the lifestyle of the examined) at a lower cost and achieve better results than the traditional treatment.
Moshav Shelishi – הרצאה מס’ 3

The combined impact of chronic diseases and mental exhaustion on the development of depression symptoms among workers in Israel: A longitudinal study.

1. Background and Objectives: Over half of workers aged 75 and older suffer from chronic diseases. The presence of chronic diseases significantly increases their risk of developing depression over time. Mental exhaustion is composed of symptoms of emotional distress, physical fatigue, and mental weariness. It is the result of the depletion of energy resources due to continuous exposure to stressors at work and in daily life.

Based on the Theory of Resource Conservation (Hobfoll, 1989), this study aimed to investigate the hypothesis that there is an interaction between the presence of chronic diseases and mental exhaustion in influencing the development of depression symptoms.

Method: The study's participants were 1421 workers, both men and women, aged 18-25 who volunteered for periodic surveys and were monitored for an average of 15 months. 15% of the participants reported at least one chronic disease.

Results: Mental exhaustion was found to precede the prevalence of depression symptoms among healthy workers. In addition, the presence of symptoms of mental exhaustion among workers with chronic diseases accelerated the development of depression symptoms within a relatively short period. Mental exhaustion was also found to be associated with the aggravation of previous depression symptoms among workers with chronic diseases, excluding cancer, without relation to the presence of additional chronic diseases (co-morbidity) and potential contaminants.

Conclusions: Among workers, men and women, the combination of mental exhaustion with the presence of at least one chronic disease predicts the development of depression symptoms over time. Healthy workers should be aware of this risk among their employees, monitor them, and take appropriate tertiary intervention.
The role of predictors of seizure recurrence in assignment of young men to professions with associated exposure to seizure- risk- factors

TAVOR M 1,2, NEUFELD MY 3, CHODICK G 2,4, ZACK O 5, MOSHE S 1,2

1The Occupational Department, Maccabee Healthcare Services, Holon, Israel, 2 School of Public Health, Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel, 3 EEG and Epilepsy Unit, Department of Neurology, Tel Aviv Medical Center, Sackler Faculty of Medicine, Tel Aviv University, Israel. 4 Medical Division, Maccabee Healthcare Services, Tel-Aviv, Israel, 5 Israel Defense Force, Medical Corps

Background: The association between stress and seizure frequency has been reported. The aim of the study was to assess the risk of seizures as a function of disease severity and occupational stress in new military recruits in the IDF, and to examine the effect of new classification criteria (used between the late-nineties and early two-thousands) in comparison to previous criteria (used during the mid-eighties to mid-nineties).

Methods: The medical records of over 145,000 18-year old men, recruited to the IDF between the late-nineties and early two-thousands, were used to assemble a cohort, which was followed for a period of 36 months. The severity of the disease was determined according to 5 categories comparing Epilepsy severity criteria used till late 90’s versus Epilepsy severity criteria used from late 90’s.

Recruits were subdivided according to the following occupational categories: Combat Units (CU), Maintenance Units (MU) and Administrative Units (AU).

Results: The annual incidence rate for a first seizure was 26/100,000. The rates in CU and MU were lower than AU (0.41 and 0.81 vs. 1 respectively, p<0.01). Similar findings were found in other disease categories. In comparison to the aforementioned previous follow-up, annual incidence for recurrent seizures was higher in all categories (4.7% and 8.8% compared to 1% and 2.7% for categories 2 and 3 respectively).

Conclusions: The low rate for a first seizure and the lower overall seizure rate in CU compared to MU and AU may be explained by the recruiting of a healthy population, higher motivation than before, and meticulous adherence to diagnostic criteria. The higher recurrence rate in our research as compared to the previous follow up may be attributable to the modification of disease categories (the exclusion of EEG and the shortening of the relapse-free periods).
פוסטרים:
ריצ'ה
Returning to Work After Myocardial Infarction - Do We Adhere to the Guidelines?

YASKY S 1, EYAL A 1, SLUZKY O 2 3, ILIA R 2, KOBAL S 2

1Clalit Health Services, Department of Occupational Medicine, Beer Sheva, Israel. 2Soroka Medical Center, Department of Cardiology, Beer Sheva, Israel. 3Cardionegev Rehabilitation Center, Beer Sheva, Israel.

Background: Ischemic heart disease is common in the working age population, causing significant economic damage. Recommendations on reintegration of post acute myocardial infarction (AMI) patients to work have been published. Cardiac rehabilitation has been proved useful. We aimed to study if the recommended guidelines are realized in clinical practice and how cardiac rehabilitation impacts on post AMI patients on labor reintegration.

Methods: Thirty post AMI workers of the Negev area participated in a cardiac rehabilitation program. Demographic, clinical and work characteristics were collected by phone. The data was compared to a matched-control group who did not participate in any rehabilitation program. Type of work was defined as white collar (office work) and blue collar (non-office work).

Result: Age (50 ± 9 years), male gender (80%), normal LVF (30%) and type of work (73% involved in blue collar labors) were similar between the two groups. Of the patients participating in cardiac rehabilitation, 90% of them returned to work at the same job after a convalescent period of 64 ± 45 days. In contrast, 73% of the patients in the matched-control group returned to their previous employment after a longer convalescent period of 93 ± 41 days.

Conclusions: The majority of the Israeli post AMI patients do not return to work at the time interval recommended by the Israeli scientific committee. Patients involved in a Cardiac Rehabilitation program return to work more frequently and in a shorter convalescent period than a control, a non rehabilitated group.
Repositioning Tasks for Turning Passive Patients in Bed: Ergonomic Advantage

WEINER C ¹, ALPEROVITCH-NAJENSON D ¹, RIBAK J ¹, KALICHMAN L ²

¹The Department of Environmental and Occupational Health, School of Public Health, Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel
²Department of Physical Therapy, Recanati School for Community Health Professions, Faculty of Health Sciences at Ben-Gurion University of the Negev, Beer-Sheva, Israel.

Clinical experience and research demonstrated that repositioning patients in bed is one of the highest risk activities to health workers, causing occupational injuries.

Aim: To evaluate the force needed to move patients in bed, comparing traditional cotton sheet, sliding sheet and carrier.

Methods: The patient was presented by a healthy woman (61 years old, 65.00 Kg, 1.62 meter height) asked to lie supine without any movement. 11 participants (7 women, 4 men), age 22-31 years, were asked to move the patient in the bed: 1. To the side, 2. To the top by one nurse, 3. To the top by two nurses. The Baseline @ Hydraulic Push/Pull dynamometer was used to evaluate the forces.

Results: A significant preference (lower forces required) (P≤0.01) was found for the sliding sheet regarding all three tasks. The carrier was found superior to the traditional sheet when moving the patient to the bed-side (P≤ 0.001) and to the head of the bed, by one person (p<0.008) but not by two caregivers (p<0.920). The force required was about as twice for the traditional sheet compared with the sliding sheet (19-31 versus 11-17 kg accordingly).

Conclusions: The forces required to move a patient with a traditional cotton sheet, most common used in hospitals and nursing homes, are very high. A sliding sheet might reduce these forces by half. It is unclear yet if the use of sliding sheath will lower the risks of injury at the lower back or the upper quadrant.
Patients' expectations on social work services in occupational medicine clinics at Maccabi Healthcare Services organization

MOSHE S 1,2, CINAMON T 3, ZACK O 1,2, CHODICK G 2,3, TAL M 1

1Maccabi Healthcare Services, Occupational Medicine Department, Holon, Israel. 2The Public Health School, Environmental and Occupational medicine department, Sackler Faculty of Medicine, Tel Aviv University, Tel-Aviv Israel. 3Maccabi Healthcare Services, Central Headquarter, Tel-Aviv, Israel

Background: The occupational medicine service at Maccabi Healthcare Services was established in 1995. Today, there are a total of 9 occupational medicine clinics (OMCs) in Maccabi which consist of doctors, nurses, and administrative staff. In 1998, it was decided to include a part-time social worker (SW) at each major clinic that would help the patients to deal with the psychosocial aspects of work, including rehabilitation issues.

Aim: To explore patients' expectations regarding the SW service and to determine their satisfaction level with the care provided by the SW in the framework of the occupational clinic.

Method: A cross-sectional study consisting Maccabi members of working age that visited OMCs between September 2011 and July 2012 for the purpose of fitness-for-work evaluation, and later were referred to a SW. These members filled out an expectation and satisfaction questionnaire after meeting with the SW.

Results: A total of 203 forms were filled out and returned. Most of the patients (85%) were interested in receiving information on benefits. Some (69.9%) were interested in receiving help managing emotional stress. Some (68%) were interested in receiving help solving dilemmas concerning future occupation. A smaller number of patients (39.2%) were interested in receiving help managing a family members' distress due to the loss of work ability. A very high percentage of the patients (97%) were satisfied with the SW session, length of the session and the care given. A high percentage of the patients (88%) were satisfied with the amount of information on benefits received. A correlation was found between the patients' expectations and their satisfaction with the amount of information they received, the help they had received in solving dilemmas concerning future occupation, in managing their workplace difficulties and in managing emotional stress due to loss of working ability (p<0.01). We found a high correlation between the general satisfaction level and the length of the session (p<0.001). The patients expressed their deep appreciation for this service.

Conclusions: This is one of the first studies of its kind in the scientific literature addressing social work services in a public OMC. The study shows the positive advantage of the SW service and a high patient satisfaction level concerning the SW service in addressing patient questions, similar to studies done in a hospital framework in various units. The satisfaction level was high even though the patients' health status was relatively poor, in contradiction to
other studies which found a direct connection between health status and high satisfaction level. It is suggested to create a brochure describing the scope of the SW service in the framework of the OMC, and to expand the SW service beyond Maccabi onto other health service organizations.
Predictors of Return to Work with Upper Limb Disorders –
A retrospective analysis

MOSHE S.¹, IZHAKI R.², CHODICK G.³, YAGEV Y.¹, SLODOWNIK D.⁴, FINESTONE A.⁵, JUVEN Y.¹

¹Maccabi Healthcare Services, Occupational Medicine Departments, Israel
²Maccabi HealthCare Services, Occupational Therapy Department, Holon, Israel
³Maccabi Healthcare Services, Central Headquarter, Tel-Aviv
⁴Department of Dermatology, Sourasky Medical Center, Tel Aviv, Israel
⁵Orthopedics Department, Assaf HaRofeh Medical Center, Zerrifin, Israel

Objective: Return to work (RTW) is a key goal in proper management of Upper limb disorders (ULD). Impairments stem from diverse medical etiologies, and numerous variables can affect RTW. The abundance of factors, their complex interactions and the diversity in human behavior makes it difficult to pinpoint those at risk to not RTW, and to intervene efficiently. The aim of this study was to weigh various clinical, functional and occupational parameters that influence RTW with ULD and identify significant predictors.

Methods: A retrospective analysis of 52 workers with ULD referred to an occupational clinic and further examined by occupational therapist. Functional assessment included objective and subjective (DASH score) parameters. Quantifying work requirements was based on definitions of the Dictionary of Occupational Titles web site. RTW status was based on a follow-up telephone questionnaire.

Results: The RTW rate was 42%. The DASH score for the RTW group was 27 compare with 56 for those who didn't RTW (p<0.001). No other significant predictors were found.

Conclusions: Physicians and rehabilitation staff should regard a high DASH score as a warning sign when assessing RTW prospects. It is advisable to focus on workers with large discrepancy between high DASH and low objective disability and concentrate efforts adequately.
הרשימה מקבלי מונחי הקרה
לרגל היגהון 30 שנה＆מסלול ליומדים מוסמך בגיהנאות בתי ספר

ד"ר אשר פרד
פרופ' שרואר ממלמד
פרופ' פול פרד
פרופ' יוסי ריבק