PROGRAM FRIE FOREDRAG
ÅRSMØDET 2024

kl. 9.20 – 9.35	**App-baseret stresshåndteringssupplement** Line Mølhede Mortensen, Marianne Kyndi
kl. 9.35 – 9.50	**Occupational dust exposure and risk of interstitial lung diseases** Inge Brosbøl Iversen, Jesper Medom Vestergaard, Johan Ohlander, Susan Peters, Ioannis Basinas, Elisabeth Bendstrup, Jens Peter Ellekilde Bonde, Vivi Schlünssen, Jakob Hjort Bønløkke, Finn Rasmussen, Zara Ann Stokholm, Michael Brun Andersen, Hans Kromhout, Henrik Albert Kolstad
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Kl. 10.50 – 11.05	**Substantial decrease of PFAS with anion exchange resin treatment – A clinical cross-over trial** Janne Julie Møller, Ann Christine Lyngberg, Paula Edeusa Christina Hammer, Esben Meulengracht Flachs, Ole Steen Mortensen, Tina Kold Jensen, Gesche Jürgens, Axel Andersson, Anne Merete Boas Soja, Morten Lindhardt
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Kl. 11.35 – 12.00	**Arbejdsmedicins rolle i miljøsagen omkring Nordic Waste** Signe Hjuler Boudigaard, Ane Marie Thulstrup

App-baseret stresshåndteringssupplement

Line Mølhede Mortensen, psykolog, Regionshospitalet Gødstrup
Marianne Kyndi, Cheflæge, Regionshospitalet Gødstrup

Formål:
Vores app-baserede løsning tilsigter at levere vores almene og vanlige rådgivning om stresshåndtering og tilbage til arbejdet (TTA) til stresspatienter (og pårørende). Løsningen er tænkt, som et supplement til den information, som leveres mundtligt og skriftligt til patienten i forbindelse med udredningssamtalen og er i et format, der imødekommer kognitive vanskeligheder i forbindelse med stress.

Hovedpunkter og konklusioner:
Rådgivning leveres i en app og er primært videobaseret, og i mindre grad tekstbaseret. Videoerne er kortfattede (< 3 min) og handlingsanvisende. Fx gives rådgivning om energiforvaltning, søvn, pauser, mindfulness mv. Når relevant, kan der tilvælges rådgivning i forhold til mere specifikke temaer, fx vold og trusler. Undervejs linkes til patientvejledninger på vores hjemmeside, fx vejledning til pårørende og mindfulnesslydfiler.
Fordele:
Patienten kan se indholdet, når det er hensigtsmæssigt for patient og kan gense indholdet ved behov.
Patienten kan anvende indholdet i samarbejde med arbejdsplads ved planlægning af TTA; og i samarbejdet med pårørende.
Der er stort potentiale for bedre indlæring og bedre overførsel til patienternes hverdag.
De den almene TTA-information kan tilgås pr. app, giver det mulighed for at samtaletiden i højere grad kan fokusere på specifikke forhold og vejledning knyttet til patientens arbejdssituation.

Kort perspektivering:
Det forudsættes, at patienten er udredt hos os, og dermed er diagnostisk afklaret. Adgang til app gives først EFTER udredning.
Der er et vist potentiale i at udvalgte videoer kan gøres frit tilgængelige på vores hjemmeside til brug for andre stresspatienter, praktiserende læger, jobcentre mv.

Occupational dust exposure and risk of interstitial lung diseases

Inge Brosbøl Iversen, Jesper Medom Vestergaard, Johan Ohlander, Susan Peters, Ioannis Basinas, Elisabeth Bendstrup, Jens Peter Ellekilde Bonde, Vivi Schlünssen, Jakob Hjort Bønløkke, Finn Rasmussen, Zara Ann Stokholm, Michael Brun Andersen, Hans Kromhout, Henrik Albert Kolstad

Background: Interstitial lung diseases (ILDs) are a group of diseases characterized by inflammation or fibrosis of the lung tissue. Respirable crystalline silica, asbestos and organic dust are known causes of ILD. The aim of this study was to examine exposure-response relations between ILDs and occupational exposure to crystalline silica, asbestos and organic dust in the Danish general working population.
Methods: We conducted three cohort studies within the DOC*X cohort which contains annual information on occupation for the total Danish workforce since 1976. Workers were assigned annual individual exposure levels using job exposure matrices for respirable crystalline silica (study I), asbestos (study II) and generic organic dust, endotoxin and wood dust (study III). Cases of ILD were identified in the Danish National Patient Register. We performed analyses of exposure-response relations for cumulative exposure and other exposure metrics and adjusted for potential confounders.

Results: Study I: Increasing cumulative silica exposure was associated with increasing risk of idiopathic interstitial pneumonias, pulmonary sarcoidosis and silicosis with incidence rate ratios (IRRs) per 50 µg/m^3-years of 1.03 (95% confidence interval (CI): 1.02-1.03), 1.06 (95% CI 1.04-1.07) and 1.20 (95% CI 1.17-1.23), respectively. Study II: Increasing cumulative asbestos exposure was associated with increasing risk of asbestosis with an IRR per 1 f/ml-years of 1.18 (95% CI 1.15-1.22). Study III: Risk of hypersensitivity pneumonitis, other ILDs and all ILDs increased with increasing cumulative exposure to generic organic dust and endotoxins with IRRs for all ILDs of 1.05 (95% CI 1.03-1.07) per 10 unit-years and 1.16 (95% CI 1.08-1.25) per 5000 EU/m^3-years, respectively. No increased risks of any outcome were found for cumulative wood dust exposure.

Conclusion: Exposure to crystalline silica and organic dust are associated with ILDs other than silicosis and hypersensitivity pneumonitis, to which they have traditionally been linked. Exposure-response relations between asbestos and asbestosis can be observed in a general working population and not only in high-exposed occupations and industries.

A 5-year follow-up study of employment status among patients with work-related shoulder disorder, carpal tunnel syndrome or dermatitis

Kyndi M[1], Pedersen CL[1], Biering K[1], Rønnov M[1], Aagaard TH[1], Kempel MK[1], Dalbøge A[2], Vestergaard JM[1,2], Willert MV[1,2]
[1]Department of Occupational Medicine, Danish Ramazzini Centre, University Research Clinic, Gødstrup Hospital, Denmark, [2]Department of Occupational Medicine, Danish Ramazzini Centre, Aarhus University Hospital, Aarhus, Denmark.

Objective: Two studies are presented in this abstract. Both studies examine long-term employment status among patients referred to Danish departments of occupational medicine in the period 2000-2013 due to shoulder disorder, carpal tunnel syndrome (CTS) or dermatitis.
Methods: Data from the Danish Occupational Medicine Cohort was used. Included were around 4,000 shoulder disorder, 1,700 CTS and 3,000 dermatitis patients, 18-67 years of age. All patients were referred to a department of occupational medicine in Denmark from 2000-2013 due to suspected work-related disease. Register data was extracted 5 years prior to and after study inclusion. Included was information on potential risk factors for negative labor market attachment.

Results: Preliminary results showed high labor market attachment around 80-90% for all three groups of patients from 2-5 years prior to study inclusion. In the follow-up period, work participation decreased permanently for all three patient groups. A significantly higher decrease in work participation was notices among patients with CTS as compared to patients with dermatitis, who discovered only a small reduction. Trajectory analyses among patients with shoulder disease separated the patients in four distinct groups discovering different employment status during the 10-year period. Differences in socio-demographic factors were noticed for the 4 trajectory groups.

Conclusion: A large reduction in employment status at 5-years of follow-up was seen for patients with CTS and shoulder disease.

Fra klinik til forskning: akrylatholdige negle- og øjenvippeprodukter

Caroline L. Pedersen, Anne Bregnhøj, Kent Nielsen, Zara Stokholm, Paula Hammer, Tanja Carøe, Mette S. Mohr, Marianne Kyndi.

Introduktion

3 yngre kvindelige patienter blev henvist til Arbejdsmedicin Gødstrup pga. mistanke om erhvervsbetinget håndeksem. Alle arbejdede som negle- og/eller vippetekniker. Produktgennemgang viste indhold af forskellige akrylater. Alle 3 blev udredt med lappetest, der påviste akrylatallergi, efterfølgende ophørte de med deres virksomheder.

Akrylater er potente allergener, der i stigende grad anvendes i skønheds- og hudplejebranchen. Der findes ikke regulerede uddannelsesprogrammer eller fastsatte krav til viden om kemisk arbejdsmiljø eller håndtering for at arbejde med akrylater – i modsætning til f.eks. epoxy. Jævnfør avisartikel i Politiken 2022 udstedte arbejdstilsynet i 2020-2022, påbud ved 48 ud af 65 tilsynsbesøg på neglesaloner og andre klinikker, der foretog neglebehandling.

Projektet

Kortlægge branchespecifik viden, herunder viden og praksis relateret til håndtering af akrylater og andre allergifremkaldende produkter ved negle- og øjenvippebehandlinger. Identificere og dokumentere forekomst af hud- og luftvejslidelser blandt de ansatte. Undersøge barrierer for implementering af forebyggelsestiltag. Evaluere omfanget og kvaliteten af undervisningen i kemihåndtering på de eksisterende uddannelsestilbud, herunder med følgegruppen udvikle en gylden standard for uddannelsesindholdet.

Design

1. Landsdækkende spørgeskemaundersøgelse til alle aktive virksomheder under branchekoden 960220 Skønheds- og hudpleje. Udsendes igen efter 1 år.
2. 25-35 strukturerede virksomhedsbesøg. Viden, praksis og produkter kortlægges gennem observation, interview, gennemgang af produkter og støvmåling. Efterfølgende udsendes feedback, med opfølgning efter 3 måneder og 1 år.
3. Undersøgelse af uddannelseskvaliteten på kemiområdet, identifikation af udbydere via virksomhedsbesøg og spørgeskema. Rekvirering af uddannelsesmateriale omhandlende kemihåndtering. Materialet sammenholdes med den gyldne standard.

Exposure to airborne polychlorinated biphenyls and risk of uterine leiomyomata, endometriosis, and PCOS: a register-based Danish cohort study

Sandra S Tøttenborg[1,2], Laura Deen[1], Lauren A Wise[4], Amelia K Wesselink[4], Henriette Svarre Nielsen[5], Kajsa Ugelvig Petersen[1], Marie Frederiksen[3], Harald W Meyer[1], Karin S Hougaard[3], Jens Peter E Bonde[2]

[1]Department of Occupational and Environmental Medicine, Bispebjerg and Frederiksberg Hospital, Copenhagen University Hospital, Denmark

[2]Department of Public Health, The Faculty of Health Sciences, University of Copenhagen, Denmark

[3]National Research Centre for the Working Environment, Denmark

[4]Department of Epidemiology, School of Public Health, Boston University, United States

[5]Department of Obstetrics and Gynaecology, Copenhagen University Hospital Hvidovre, Denmark

BACKGROUND AND AIM:

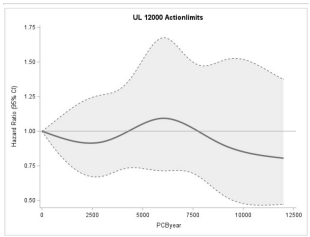
Polychlorinated biphenyls (PCBs) are some of the most widespread persistent organic pollutants in the environment due to their extensive use in electrical equipment and building materials from the late 1920s to the 1970s and their continuous release from waste and building materials from that period. The industrially produced PCBs are known to possess endocrine properties and to increase cellular levels of reactive oxygen species. They may therefore play a role in the development of hormone-related gynecological conditions including uterine leiomyomata (UL), endometriosis, and polycystic ovarian syndrome (PCOS). Several studies have shown adverse associations between higher-chlorinated PCB congeners and these gynecological conditions, but so far, our knowledge about risk related to lower-chlorinated PCBs which dominate indoor air and constitute the primary exposure for individuals who work or live in PCB-contaminated buildings is scarce. We examined the extent to which female residents of PCB contaminated homes had a higher incidence of hormone-related gynecologic disorders, including UL, endometriosis, and PCOS.

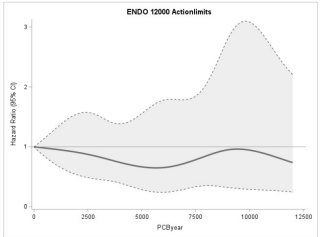
METHOD:

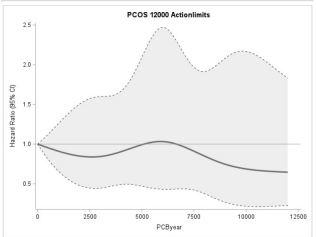
We studied females from the Health Effects of PCBs in Indoor Air (HESPAIR) cohort comprising residents of two partially PCB contaminated residential dwellings in the Greater Copenhagen area during 1970-2018. We used the Danish National Patient Register to identify the clinical diagnoses of UL, endometriosis, and PCOS. By combining register-based relocation history with measurement-based contamination status, we quantified annual, cumulative PCB exposure. We then fit multivariable Cox regression models with time-varying exposure and restricted cubic splines to estimate associations between PCB exposure and incident UL, endometriosis, and PCOS. To ensure incident cases, we excluded individuals with preexisting UL, endometriosis, PCOS, menopause, hysterectomy, oophorectomy, fibroid operation, and those above 50 years of age. All models were adjusted for ethnicity, parity, socioeconomic status, and calendar time in decades.

RESULTS:

Among the included 21,581 women, we observed 671 cases of UL, 201 cases of endometriosis, and 195 cases of PCOS. A total of 4,646 (21%) women were exposed to PCBs.







CONCLUSIONS:

We did not observe an increased risk of UL, endometriosis, and PCOS in women exposed to PCBs.

Substantial decrease of PFAS with anion exchange resin treatment – A clinical cross-over trial

Janne Julie Møller, Ann Christine Lyngberg, Paula Edeusa Christina Hammer, Esben Meulengracht Flachs, Ole Steen Mortensen, Tina Kold Jensen, Gesche Jürgens, Axel Andersson, Anne Merete Boas Soja, Morten Lindhardt

Background
Per- and polyfluoroalkyl substances (PFAS) are heat and stain resisting chemicals. They are persistent, bioaccumulating and spread ubiquitously. Many hotspots where humans are exposed to high levels of PFAS have been reported. A few small observational studies in humans suggest that treatment with an Anion Exchange Resin (AER) decreases serum PFAS. This first clinical controlled crossover study aimed to assess whether AER decreases perfluorooctanesulfonic acid (PFOS) in highly exposed adults.

Methods
An open label 1:1 randomized treatment sequence crossover study with allocation to oral AER (cholestyramine 4 g three times daily) or observation for 12 weeks was conducted among citizens from a PFAS hotspot. Main inclusion criteria was serum PFOS > 21 ng/mL. Primary endpoint was change in serum PFOS levels between treatment and observational period.

Results
In total, 45 participants were included with a mean age of 50 years (SD 13). Serum PFOS baseline median was 191 ng/mL (IQR: 129–229) and decreased with a mean of 115 ng/mL (95 % CI: 89–140) on treatment, and 4.3 ng/mL in observation period corresponding to a decrease of 60 % (95 % CI: 53–67; $p < 0.0001$). PFHxS, PFOA, PFNA and PFDA decreased during treatment between 15 and 44 %. No serious adverse events were reported.

Conclusions
Oral treatment with AER significantly lowered serum PFOS concentrations suggesting a possible treatment for enhancing elimination of PFOS in highly exposed adults.

Exploring exposure to multiple psychosocial work factors: prospective associations with depression and sickness absence

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Author(s): Jonas Christian Lunen 1,2, Reiner Rugulies 1,4, Jeppe K. Sørensen 1, Lars L. Andersen 3, Thomas Clausen 1 (1 Department of Psychosocial Work Environment, National Research Centre for the Working Environment, Copenhagen, Denmark. 2 Department of Occupational Health and Social Medicine, Holbæk Hospital, Holbæk, Denmark. 3 Department of Musculoskeletal Disorders, National Research Centre for the Working Environment, Copenhagen, Denmark. 4 Section of Epidemiology, Department of Public Health, University of Copenhagen, Copenhagen, Denmark)

Background and aim:
Most studies on the psychosocial working environment have focused on evaluating the isolated effect of individual psychosocial work factors or looked at effects through a lens of theories such as job strain or effort–reward imbalance. However, to fathom the intricate nature of workers' experience of occupational strain, there is a need to investigate the combined and cumulative effects of multiple exposures to psychosocial work factors on workers' health. The aim of this study is to do that.
Methods:
In this prospective cohort study, we created an additive index (range 0–4) on number of baseline exposures to quantitative demands, emotional demands, role conflicts, and workplace bullying. Via logistic regression and Cox regression, we estimated the association between the additive index of psychosocial work factors and depressive disorder and long-term sickness absence (LTSA). We assessed the onset of depressive disorder using the Major Depression Inventory at 6-month follow-up and the onset of LTSA using a national register during 12-month follow-up.
Results:
For onset of depressive disorder, high exposure to any one [odds ratio (OR) 2.98], two (OR 3.14), three (OR 6.44) and all four (OR 9.62) adverse psychosocial work factors predicted a statistically significant increased risk. For onset of LTSA, high exposure to any one [hazard ratio (HR) 1.13], two (HR 1.67), three (HR 2.31) and all four (HR 4.04) psychosocial work factors predicted an increased risk. The two latter associations were statistically significant. Trend tests indicated an exposure–response relationship for both outcomes.
Conclusion:
Workers reporting exposure to multiple adverse psychosocial work factors had a higher risk of developing depressive disorder and LTSA.

Borgerundersøgelsen i Grindsted – en borgerrettet udredning af mulige sundhedsmæssige konsekvenser af forureningen i Grindsted

Sofie Bünemann Dalsgaard[1], Jesper Bælum[1], Nanna Jørgensen[1], Kim Oren Gradel[2], Bente Mertz Nørgård[2], Jesper Rasmussen[3], Lars Rauff Skadhauge[1].

[1] Arbejds- og Miljømedicinsk Afdeling, Grindsted Sygehus, Syddansk Universitetshospital. [2]Center for Klinisk Epidemiologi, Odense Universitetshospital.
[3] Arbejds- og Miljømedicinsk Klinik, Odense Universitetshospital.

Baggrund: Tidligere virksomheder i Grindsted herunder Grindstedværket forårsagede for mange år siden forurening i byen. På baggrund af bekymring for sygdom og sundhed blandt borgerne i Grindsted bevilgede Region Syddanmark i maj 2022 midler til *Borgerundersøgelsen* som led i at belyse de sundhedsmæssige konsekvenser af forureningen i Grindsted.

Formål: Formålet med *Borgerundersøgelsen* var at give borgere i Grindsted, mulighed for at fremkomme med de sygdomme eller symptomer, de mistænkte skyldtes forureningen i Grindsted. Formålet var endvidere at sammenligne eksponeringsforhold og forekomst af symptomer og sygdom blandt borgere med mistanke om relation til forureningen med borgere uden denne mistanke.

Materiale/metode: Alle borgere over 18 år med aktuel adresse i en afstand op til 5 km fra Grindsted bygrænse blev i februar 2023 inviteret til at besvare et indledende spørgeskema via e-Boks eller brev (n=10.439). Tidligere Grindstedborgere blev via omtale i medierne orienteret om muligheden for at tilmelde sig undersøgelsen via Billund Kommunes hjemmeside (n=39). Respondenter med aktuelle symptomer eller sygdom mistænkt relateret til forureningen blev inviteret til at besvare et supplerende spørgeskema og deltage i en lægeundersøgelse. Her blev sygehistorie samt nuværende og tidligere miljø- og arbejdsforhold uddybet og der blev udført en objektiv lægeundersøgelse inkl. en grov neurologisk undersøgelse. Enreferencegruppematchet på køn og alder, udvalgt afrespondenter,som ikke mistænkte at deres eventuelle symptomer eller sygdomme var relateret til forureningen i Grindsted, blev inviteret til at besvare samme spørgeskema og deltage i en lægeundersøgelse.

Resultater: I alt 3.679 borgere (35%) besvarede spørgeskemaet. I alt 203 personer, som havde angivet symptomer eller sygdom med mistanke om relation til forureningen (cases) og 202 referenter deltog i lægekonsultationen. Blandt cases var der en højere forekomst af bekymringer samt symptomer og sygelighed sammenlignet med referencegruppen. Inden for de enkelte sygdomsgrupper havde cases væsentligt dårligere selvoplevet helbred og flere sygdomme end referenterne, specielt fra luftveje og neurologiske sygdomme.

Der var ikke signifikante forskelle på antallet af år med adresse i Grindsted eller antallet af år med brug af vandboring. Der var heller signifikant forskel mellem cases og referenter i uddannelsesniveau, rygning og alkoholforbrug. Signifikant flere cases end referenter havde været udsat for støv, røg, gasser eller dampe på arbejdet.

Arbejdsmedicins rolle i miljøsagen omkring Nordic Waste

Signe Hjuler Boudigaard og Ane Marie Thulstrup
Arbejdsmedicin, Aarhus

Nordic Waste har været en del i Pressen på mistanke om en miljøkatastrofe.

Arbejdsmedicin, Aarhus Universitetshospital, har i samarbejde med Arbejdstilsynet, Styrelsen for Patientsikkerhed, Region Midtjylland og Randers Kommune haft et tæt samarbejde omkring de sundhedsmæssige risici der kan være forbundet med den truende miljøkatastrofe. Vi gennemgår arbejdsgangen og beskrivelse fra et virksomhedsbesøg.
Sidst nogle overvejelser omkring styrkelse af samarbejdet med andre organisationer.
Vidensdeling på tværs af de arbejdsmedicinske afdelinger er relevant, da vi må formode, at andre arbejdsmedicinske afdelinger kan komme i kontakt med patienter/borgere, der har haft berøringsflade med Nordic Waste.