

# Contents of INDUSTRIAL HEALTH

Volume 53, 2015

## No. 1

### Editorial

Promoting international collaboration through the International Commission on Occupational Health

Kazutaka KOGI.....1

### Review Article

Measuring allostatic load in the workforce: a systematic review

Daniel MAUSS, Jian LI, Burkhard SCHMIDT, Peter ANGERER and Marc N. JARCZOK.....5

### Original Article

Design of digital filters for frequency weightings (A and C) required for risk assessments of workers exposed to noise

Andrew N. RIMELL, Neil J. MANSFIELD and Gurmail S. PADDAN .....21

Evaluation of oxaliplatin exposure of healthcare workers during heated intraperitoneal perioperative chemotherapy (HIPEC)

Antoine F. VILLA, Souleiman EL BALKHI, Radia ABOURA, Herve SAGEOT, Helene HASNI-PICHARD, Marc POCARD, Dominique ELIAS, Nathalie JOLY, Didier PAYEN, François BLOT, Joel POUPON and Robert GARNIER.....28

Serum miRNA profiling identifies miR-150/30a as potential biomarker for workers with damaged nerve fibers from carbon disulfide

Li GUO, Chen LUO, Jingjing FAN, Zhiguo HOU, Xiaoming JI, Feng CHEN, Baoli ZHU and Chunhui NI.....38

Self-reported risk factors related to the most frequent musculoskeletal complaints among Czech dentists

Lenka HODACOVA, Zdenka SUSTOVA, Eva CERMAKOVA, Martin KAPITAN and Jindra SMEJKALOVA.....48

Proposal of a new risk assessment method for the handling of powders and nanomaterials

Laurent GRIDELET, Philippe DELBECQ, Laurent HERVÉ, Pierre BOISSOLLE, Dominique FLEURY, Sophie KOWAL and Guillaume FAYET .....56

Towards a more comprehensive definition of shift work tolerance

Ingvild SAKSVIK-LEHOULLIER, Stale PALLESEN, Bjorn BJORVATN, Nils MAGERØY and Simon FOLKARD.....69

Characterization of ambient particles size in workplace of manufacturing physical fitness equipments

Chih-Chung LIN, Mei-Ru CHEN, Sheng-Lang CHANG, Wei-Heng LIAO and Hsiu-Ling CHEN .....78

### Field Report

Utility of action checklists as a consensus building tool

Yeon-Ha KIM, Etsuko YOSHIKAWA, Toru YOSHIKAWA, Kazutaka KOGI and Moon-Hee JUNG .....85

Ocular irritation from product of pesticide degradation among workers in a seed warehouse Takehisa MATSUKAWA, Kazuhito YOKOYAMA and Hiroaki ITOH .....	95
---	----

## Country Report

Prevalence of subjective symptoms among hospital pharmacists and association with drug compounding practices Ryoichi INABA, Atsushi HIOKI, Yoshihiro KONDO, Hiroki NAKAMURA and Mitsuhiro NAKAMURA ....	100
---	-----

## No. 2

### Editorial

New concept for occupational health development: 3 phases Seong-Kyu KANG .....	109
---	-----

### Original Articles

Cross-national and longitudinal investigation of a short measure of workaholism Johanna RANTANEN, Taru FELDT, Jari J HAKANEN, Katja KOKKO, Mari HUHTALA, Lea PULKKINEN and Wilmar SCHAUFELI .....	113
Breathing simulator of workers for respirator performance test Hisashi YUASA, Mikio KUMITA, Takeshi HONDA, Kazushi KIMURA, Kosuke NOZAKI, Hitoshi EMI and Yoshio OTANI .....	124
Effects of work stress and home stress on autonomic nervous function in Japanese male workers Eri MAEDA, Toyoto IWATA and Katsuyuki MURATA .....	132
Multifactor leadership styles and new exposure to workplace bullying: a six-month prospective study Kanami TSUNO and Norito KAWAKAMI <sup>2</sup> .....	139
Impact of work-life imbalance on job satisfaction and quality of life among hospital nurses in Japan Sachiko MAKABE, Junko TAKAGAI, Yoshihiro ASANUMA, Kazuo OHTOMO and Yutaka KIMURA .....	152
Take it or leave: a five-year prospective study of workplace bullying and indicators of expulsion in working life Mats GLAMBEK, Anders SKOGSTAD and Ståle EINARSEN .....	160

### Short Communications

Association between outdoor ozone and compensated acute respiratory diseases among workers in Quebec (Canada) Ariane ADAM-POUPART, France LABRÈCHE, Marc-Antoine BUSQUE, Allan BRAND, Patrice DUGUAY, Michel FOURNIER, Joseph ZAYED and Audrey SMARGIASSI .....	171
Accelerations relevant to blunt trauma: theory and data Timothy P. HUTCHINSON .....	176

### Case Report

Case of accelerated silicosis in a sandblaster Beáta HUTYROVÁ, Petra SMOLKOVÁ, Marie NAKLÁDALOVÁ, Tomáš TICHÝ and Vítězslav KOLEK .....	178
---	-----

## Field Report

Determinants of the accuracy of occupational hygiene expert judgment

Mohammad Javad Zare SAKHVIDI, Hamideh MIHANPOOR, Mehrdad MOSTAGHACI, AmirHooshang MEHRPARVAR and Abolfazl BARKHORDARI.....184

## No. 3

### Editorial

Risk assessment of hazardous substances revisited

Heihachiro ARITO .....195

### Review Article

Effects of vehicle-ride exposure on cervical pathology: a meta-analysis

Roger KOLLOCK, Kenneth GAMES, Alan E. WILSON and JoEllen M. SEFTON .....197

### Original Articles

Ergonomic task reduction prevents bone osteopenia in a rat model of upper extremity overuse

Mary F BARBE, Nisha X JAIN, Vicky S MASSICOTTE, Steven N POPOFF and Ann E BARR-GILLESPIE .....206

2,5-hexanedione induced apoptosis in mesenchymal stem cells from rat bone marrow via mitochondria-dependent caspase-3 pathway

Ruolin CHEN, Shuang LIU, Fengyuan PIAO, Zhemin WANG, Yuan QI, Shuangyue LI, Dongmei ZHANG and Jingshun SHEN.....222

A consideration of the operation of automatic production machines

Toshiro HOSHI and Noboru SUGIMOTO .....236

Effect of higher frequency components and duration of vibration on bone tissue alterations in the rat-tail model

Srikara V. PEELUKHANA, Shilpi GOENKA, Brian KIM, Jay KIM, Amit BHATTACHARYA, Keith F. STRINGER and Rupak K. BANERJEE .....245

Relationships (I) of International Classification of High-resolution Computed Tomography for Occupational and Environmental Respiratory Diseases with the ILO International Classification of Radiographs of Pneumoconioses for parenchymal abnormalities

Taro TAMURA, Narufumi SUGANUMA, Kurt G. HERING, Tapio VEHMAS, Harumi ITOH, Masanori AKIRA, Yoshihiro TAKASHIMA, Harukazu HIRANO and Yukinori KUSAKA .....260

Relationships (II) of International Classification of High-resolution Computed Tomography for Occupational and Environmental Respiratory Diseases with ventilatory functions indices for parenchymal abnormalities

Taro TAMURA, Narufumi SUGANUMA, Kurt G. HERING, Tapio VEHMUS, Harumi ITOH, Masanori AKIRA, Yoshihiro TAKASHIMA, Harukazu HIRANO and Yukinori KUSAKA .....271

Shift schedules, work factors, and mental health among onshore and offshore workers in the Norwegian petroleum industry

Mona BERTHELSEN, Ståle PALLESEN, Bjørn BJORVATN and Stein KNARDAHL .....280

Occupational fatigue and other health and safety issues for young Australian workers: an exploratory mixed methods study Jessica Louise PATERSON, Larissa CLARKSON, Sophia RAINBIRD, Hayley ETHEERTON and Verna BLEWETT.....	293
---	-----

## Country Report

Regulatory system reform of occupational health and safety in China Fenghong WU and Yan CHI.....	300
---	-----

## No. 4

### Editorial

Eliminating occupational cancer Jukka TAKALA.....	307
--	-----

### Original Articles

The direct and indirect effects of initial job status on midlife psychological distress in Japan: evidence from a mediation analysis Takashi OSHIO and Seiichi INAGAKI.....	311
---	-----

Assessment of work intensification by managers and psychological distressed and non-distressed employees: a multilevel comparison Simon Grandjean BAMBERGER, Anelia LARSEN, Anker Lund VINDING, Peter NIELSEN, Kirsten FONAGER, René Nesgaard NIELSEN, Pia RYOM and Øyvind OMLAND.....	322
--	-----

Stakeholders' perception of the possible implications of "green jobs" for health and safety at work in Italy Antonio VALENTI, Giuliana BURESTI, Bruna Maria RONDINONE, Benedetta PERSECHINO, Fabio BOCCUNI, Grazia FORTUNA and Sergio IAVICOLI.....	332
--	-----

Can a self-administered questionnaire identify workers with chronic or recurring low back pain? Karina Satiko TAKEKAWA, Josiane Sotrate GONÇALVES, Cristiane Shinohara MORIGUCHI <sup>1</sup> , Helenice Jane Cote Gil COURY, and Tatiana de Oliveira SATO.....	340
---	-----

(Continued on back cover)

(Continued from front cover)

Flow characteristics of an inclined air-curtain range hood in a draft Jia-Kun CHEN.....	346
--	-----

Menstrual characteristics and night work among nurses Bente E. MOEN, Valborg BASTE, Tone MORKEN, Kjersti ALSAKER, Ståle PALLESEN and Bjørn BJORVATN.....	354
--	-----

Relationship between morningness-eveningness typology and cumulative fatigue or depression among Japanese male workers Mami FURUSAWA, Yasushi OKUBO, Reiko KURODA, Tadashi UMEKAGE, Shoji NAGASHIMA and Yasushi SUWAZONO.....	361
--	-----

Assessment of psychosocial risk factors for the development of non-specific chronic disabling low back pain in Japanese workers—findings from the Japan Epidemiological Research of Occupation-related Back Pain (JOB) study Ko MATSUDAIRA, Mika KAWAGUCHI, Tatsuya ISOMURA, Kyoko INUZUKA, Tadashi KOGA, Kota MIYOSHI and Hiroaki KONISHI .....	368
--	-----

## Country Report

Assessment of barriers to establish OSH: a country report Hadi ARASTOO, Azimov Pulod HAKIMOVICH and Soraya ESFANDIARPOUR.....	378
--	-----

## Letter to the Editor

Musculoskeletal disorders in the teaching profession: an emerging workplace hazard with significant repercussions for developing countries Patience N. ERICK and Derek R. SMITH .....	385
--	-----

## No. 5

### Editorial

Occupational safety and health in the service of people Harri VAINIO .....	389
---	-----

### Review Articles

A systematic review of diagnostic performance of quantitative tests to assess musculoskeletal disorders in hand-arm vibration syndrome MH MAHBUB, Youichi KUROZAWA, Tatsuya ISHITAKE, Yukinori KUME, Kazuhisa MIYASHITA, Hisataka SAKAKIBARA, Shuji SATO, Norikuni TOIBANA and Noriaki HARADA.....	391
---	-----

### Original Article

The extent and influence of Asbestos Safety Awareness training among managers who had previously commissioned an asbestos survey in their workplace buildings Jane HICKEY, Jean SAUNDERS and Peter DAVERN .....	398
Effects of box handle position and carrying range on bi-manual carrying capacity for females Swei-Pi WU, Yi Wen LOIU and Te Hong CHIEN .....	410
A work-life perspective on sleep and fatigue—looking beyond shift workers Natalie SKINNER and Jill DORRIAN.....	417
Workflow interruptions, social stressors from supervisor(s) and attention failure in surgery personnel Diana PEREIRA, Patrick MÜLLER and Achim ELFERING.....	427

(Continued on back cover)

(Continued from front cover)

What do firefighters desire from the next generation of personal protective equipment? Outcomes from an international survey Joo-Young LEE, Joonhee PARK, Huiju PARK, Aitor COCA, Jung-Hyun KIM, Nigel A.S. TAYLOR, Su-Young SON and Yutaka TOCHIHARA.....	434
--	-----

Association of active and passive smoking with occupational injury in manual workers: a cross-sectional study of the 2011 Korean working conditions survey Hwan-Cheol KIM, Dirga Kumar LAMICHHANE, Dal-Young JUNG, Hyoung-Ryoul KIM, Eun-Hee CHOI, Sung-Soo OH, Hee-Tae KANG, Kyung-Yong RHEE and Sei-Jin CHANG.....	445
Isomer pattern and elimination of dioxins in workers exposed at a municipal waste incineration plant Kenya YAMAMOTO, Mitsuhiro KUDO, Heihachiro ARITO, Yasutaka OGAWA and Tsutomu TAKATA.....	454
A cross-sectional analysis of dioxins and health effects in municipal and private waste incinerator workers in Japan Kenya YAMAMOTO, Mitsuhiro KUDO, Heihachiro ARITO, Yasutaka OGAWA and Tsutomu TAKATA.....	465
<b>Field Report</b>	
Low job control is associated with higher diastolic blood pressure in men with mildly elevated blood pressure: the Rosai Karoshi study Tomomi HATTORI and Masanori MUNAKATA.....	480
<b>No. 6</b>	
<b>SPECIAL ISSUE: WORKSHOP ON INDUSTRIAL SAFETY AND HEALTH (WISH 2014)</b>	
<b>Editorial</b>	
Workshop on industrial safety and health (WISH 2014) Mizuki YAMAGUMA.....	489
<b>Original Articles</b>	
Optimal multi-floor plant layout based on the mathematical programming and particle swarm optimization Chang Jun LEE.....	491
Global harmonization of safety regulations for the use of industrial robots-permission of collaborative operation and a related study by JNIOOSH Tsuyoshi SAITO, Toshiro HOSHI, Hiroyasu IKEDA and Kohei OKABE.....	498
Analysis of thermal characteristics of electrical wiring for load groups in cattle barns Doo Hyun KIM, Sang-Ok YOO, Sung Chul KIM and Dong Kyu HWANG.....	505
Performance evaluation of newly developed portable aerosol sizers used for nanomaterial aerosol measurements Maromu YAMADA, Mitsutoshi TAKAYA and Isamu OGURA.....	511
<b>Country Report</b>	
Analysis of labour accidents in tunnel construction and introduction of prevention measures Naotaka KIKKAWA, Kazuya ITOH, Tomohito HORI, Yasuo TOYOSAWA and Rolando P. ORENSE.....	517

## REGULAR ISSUE

### Review Article

Human response to vibration stress in Japanese workers: lessons from our 35-year studies

A narrative review

Tsunetaka MATOBA .....522

### Original Articles

Does the hair influence heat extraction from the head during head cooling under heat stress?

Sora SHIN, Joonhee PARK and Joo-Young LEE .....533

Job stress as a risk factor for absences among manual workers: a 12-month follow-up study

Yong-Seok HEO, Jong-Han LEEM, Shin-Goo PARK, Dal-Young JUNG and Hwan-Cheol KIM .....542

Assessing real-time performances of N95 respirators for health care workers by simulated workplace protection factors

Hyunwook KIM, Jung-Eun BAEK, Hye-Kyung SEO, Jong-Eun LEE, Jun-Pyo MYONG,  
Seung-Joo LEE and Jin-Ho LEE .....553

### Case Report

Asthma caused by potassium aluminium tetrafluoride: a case series

Andrea LAŠTOVKOVÁ, Pavlina KLUSÁČKOVÁ, Zdenka FENCLOVÁ, Vincent BONNETERRE and  
Daniela PELCLOVÁ .....562

**Author Index to Volume 53 (2015)** .....569

**Subject Index to Volume 53 (2015)** .....573

**Acknowledgements** .....577