Senate Bill 159 Signed Into Law!

Senate Bill 159, "Assessment Offset for Donations Promoting Occupational Health and Safety," was signed into law on March 21, 2005, and went into effect March 2, 2005. The bill was sponsored by Sen. Ed Mayne (D), and supported in the House by Rep. Roger Barrus (R). Dennis Lloyd, Senior Vice President, Workers' Compensation Fund, was instrumental in coordinating and developing community support.

SB 159 allows self-insured employers and workers' compensation insurance carriers to voluntarily contribute to the Rocky Mountain Center. Donations are capped at an amount equal to 0.1% of their workers' compensation premium. In return, donors will receive a dollar-for-dollar tax credit for the contribution against their premium tax assessment.

The necessity for SB 159 arose when funding support was reduced, severely hampering the Center's ability to train health and safety professionals and continue current research projects. As one of only 16 NIH-funded Education and Research Centers in the country, RMCOEH is required to demonstrate stable state funding. The five years of support provided by SB 159 largely meets this stipulation.

The funding provided by SB 159 will help enable critical programs to continue. RMCOEH provides graduate training in occupational medicine, industrial hygiene, ergonomics and safety, and hazardous materials control. These graduates have a "multiplying effect"; for example, three graduates in one clinic provide health care to over 4,900 companies.

In the past two years, RMCOEH has provided support and consultation services to over 230 Utah companies. Continuing education short courses provided by the Center are attended by over 2,500 safety and health professionals each year. The Center's research projects provide the University of Utah an excess of $1 million annually in federal grants. These programs and services protect workers from occupational illness and injury, help keep Utah's workers' compensation insurance costs low, and stimulate the growth of jobs in Utah's knowledge economy. Additional information and photos are available at rocky.utah.edu.

Thanks to everyone who did so much to support SB 159, resulting in the bill being passed and signed! Your efforts in contacting representatives and senators, attending House and Senate committee meetings, preparing and obtaining letters of support, assembling needed documentation, and in multiple other ways were instrumental in gaining the strong support needed to have the bill become law.

Sincerely,

Royce Moser Jr., MD, MPH
Deputy Center Director

Governor Jon Huntsman, Jr. signing Senate Bill 159 into law on Monday, March 21, 2005.

Inside this issue:

- 3rd Annual Regional National Occupational Research Agenda (NORA) Young/New Investigators Symposium
- RMCOEH Graduate Spotlight
- RMCOEH Honored by Utah Medical
- Current RMCOEH Faculty Projects
- Median Nerve Paraesthesias in a Population
Featured Keynote Speakers

John Howard, MD, MPH, JD, LLM

Dr. John Howard, NIOSH Director, opened the 3rd Annual NORA Young/New Investigators Symposium on Thursday morning, April 21 with an exciting lecture entitled “The NIOSH Nanotechnology Initiative: Ensuring a safe and healthful workforce in a changing environment.” The presentation addressed current NIOSH research to evaluate work-related health risks posed by nanomaterials. Dr. Howard is the Director of the National Institute for Occupational Safety and Health (NIOSH), the federal agency responsible for research, education, and training for the prevention of work-related injury and illness. NIOSH is part of the Centers for Disease Control and Prevention (CDC) in the Department of Health and Human Services.

Michael Morgan, ScD, CIH

Michael Morgan, ScD, CIH presented as the 2nd Annual Paul S. Richards Visiting Lecturer with a talk titled “Biomarkers of Inhalation Exposure—Don’t Hold Your Breath (Please)!” Ben Gurlach, WCF, remarked that “Dr. Morgan was very enthusiastic about his continuing, cutting edge research on human breath biomarkers. His presentation provided a glimpse of the future, introducing the possibility of non-invasive medical monitoring of volatile compounds and/or biomarkers for a variety of occupational chemical exposures.”

A Professor of Environmental and Occupational Health Sciences and Adjunct Professor of Civil and Environmental Engineering at the University of Washington, Dr. Morgan has spent thirty years teaching environmental health science and studying the human responses to inhalation of air contaminants, including combustion products and volatile solvents.

Dr. Morgan is a member and past chairman of the ACGIH Biological Exposure Indices Committee, and is presently Editor in Chief of the Journal of Occupational and Environmental Hygiene.

Presentations by RMCOEH Graduates at the NORA Symposium 2005

Brad Husberg - Occupational Health Nurse, 1990
Experiences with an Occupational Health Multidisciplinary Approach Training, the Workplace, and in Research

Richard Sesek - Ergonomics and Safety, 1999
The Utah Lifting Index: An Exploration of Low Back Pain Predictive Models

Kathy Sitzman - Occupational Health Nurse, 2001
Exposure to Blood Among Home Healthcare Nurses

Eric Wood - Occupational Medicine, 2003
Attitudes, Knowledge, and Preparedness on Use of Respiratory Protection Among Physicians in Training

Andrew Merryweather - Ergonomics and Safety, 2005
Utah Ergo. Analyser Posture Classification Tool vs Peak-Motous @ Motion Analysis in 2D Wrist Flexion/Extension and Ulnar/Radial Deviation

Bill Reinhart - Ergonomics and Safety, 2005
An Industry and University Collaborative Safety Effort

Matt Reading - Ergonomics and Safety, 2005
Two Indicators of Underrepresentation of Maximum Grip Strength

Dan Nye - Industrial Hygiene, 2005
Comparison of Indoor and Outdoor PM 2.5 Measurements at a Utah Elementary School

Kurt Church - Industrial Hygiene, 2005
An Investigation of Noise Levels in an Adventure Equipment Facility: Identification of Primary Problem Sources With Recommended Abatement Procedures

Hannah Edwards - Occupational Medicine, 2005
Family History as a Risk Factor for Carpal Tunnel Syndrome in an Occupational Cohort

Kathy Chang - Occupational Medicine, 2005
Utility of Paresthesias in Different Combinations of Digits to Predict Carpal Tunnel Syndrome and Nerve Conduction Abnormality
RMCOEH Graduate Spotlight

J. Michael Taylor, MSPH, CIH graduated from the Industrial Hygiene program at the University of Utah in 1982. Mike has worked for Radian Corporation as an industrial hygienist, Unisys Corporation as Principal Industrial Hygienist, and currently works for the Church of Jesus Christ of Latter-day Saints as Manager of Health and Environmental Issues.

An active member of AIHA, Mike has held several offices. He currently serves as secretary of the National AIHA Local Section Council, is a member and secretary for the AIHA Practice, Standards, and Guidelines Committee, is a member of the AIHA Joint Ethics and Education Committee, and is on the Board of Directors of the Utah Section. Mike sits on the advisory boards for the Rocky Mountain Center, the High Plains Intermountain Center for Agricultural Health and Safety, and the Industrial Hygiene undergraduate program at Utah State University.

Mike says that his current job has been his favorite because he enjoys being involved in many different aspects of industrial hygiene and environmental science. A memorable experience was the work he did in Russia after the fall of the Soviet Union. Through meetings with scientists and ministers of health, Mike worked to improve health and safety conditions for missionaries and expatriates. Concerns included air pollution, radiation, water filters, and proximity to medical facilities.

Throughout his career, Mike has witnessed the changing nature of the industrial hygiene profession. When Mike entered the field, the realm of an industrial hygienist focused on health hazards associated with heavy industry. Now industrial hygienists are also concerned with occupational hygiene and environmental health issues including such areas as indoor air quality and mold.

RMCOEH Honored by The Utah Medical Association

The Rocky Mountain Center for Occupational and Environmental Health received the Environmental Health Award from the Utah Medical Association in recognition of its "service to the community on environmental and public health issues." Director Kurt T. Hegmann, MD, MPH said the center was recognized for its research on radon, lead, and air pollution; education of more than 300 graduate students in industrial hygiene, ergonomics and safety, occupational health nursing, and medicine; and continuing education programs that train more than 2,600 participants annually.

Current RMCOEH Faculty Projects

Donald S. Bloswick, PhD, PE, CPE
Ergonomics and Safety Program Director
- Evaluation of musculoskeletal risk factors in sewing, meat processing and light assembly work
- Evaluation and abatement of musculoskeletal risk factors in material transport and bar-holing in natural gas distribution operations
- Evaluation of vibration hazards in above-ground mining operations

Kurt Hegmann, MD, MPH, FACOEM
RMCOEH Director
- Upper Limb Musculoskeletal Disorders: Quantifying Risk Factors
- Low Back Pain: Quantifying Risk Factors
- Thyroid Cohort for Effects of Nuclear Weapons Testing

Edward Holmes, MD, MPH
Occupational Medicine Program Director
- Upper Limb Musculoskeletal Disorders: Quantifying Risk Factors
- Low Back Pain: Quantifying Risk Factors

Rodney R. Larson, PhD, CIH
Industrial Hygiene Program Director
- Bioavailability Study on Ores that Contain Beryllium
- Vibration Study for Kennecott Mines
- Research and Development of Respiratory Protection Technical Information Modules for Integration into Customizable Interactive Training Software

Royce Moser, Jr, MD, MPH, FACOEM
RMCOEH Deputy Director
- Bioterrorism

Richard Sosiek, PhD, CSP, MPH
Ergonomics and Safety Research Assistant Professor
- Evaluation of musculoskeletal risk factors in sewing, meat processing and light assembly work
- Vibrotactile testing as a screening tool for CTS
- The health effects of "dry machining" (low or no cutting fluid machining)

Eric Wood, MD, MPH
Associate Occupational Medicine Residency Program Director
- Respiratory Protection Among Physicians in Training
- Upper Limb Musculoskeletal Disorders: Quantifying Risk Factors
- Low Back Pain: Quantifying Risk Factors

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Habla Español?

Do You Have Five Years of Safety Experience in Construction or General Industry? Do You Want to Become an Authorized OSHA Trainer?
The Mountain West OSHA Training and Outreach Center at the University of Utah is looking for 10 experienced bilingual (Spanish) safety and health practitioners in Utah to become authorized OSHA 10- and 30-hour trainers.

Fee waivers will be given for attending the necessary OSHA training courses.

For more information, contact Luz Dominguez 801-581-4055; Luz.Dominguez@hsc.utah.edu
Median Nerve Paraesthesias in a Population

MS Thiese, KT Hegmann, JG Wertsch, AG Garg, RK Kendall, EH Holnes, EW Wood, DB Blisswick, JK Kapelshus, RS Seeck

Median nerve abnormalities are not well studied on a population basis. Our cohort baseline data were collected in two states via questionnaires, interviews, physical examinations, and bilateral nerve conduction studies (NCS). The mean age of the 851 participants is 41.5±11.2 years and mean Body Mass Index (BMI) is 28.4±6.7 kg/m². Paraesthesias were present in 36.9% of right hands and 29.0% had abnormal right hand NCS. Adjusted analyses for right/left hands showed increasing age [Odds Ratio (OR)=1.04, 95% Confidence Interval (CI)=1.03, 1.06; OR=1.08, CI=1.05, 1.10 respectively], BMI (OR=1.11, CI=1.08, 1.14; OR=1.09 CI=1.06, 1.13), diabetes (OR=2.57, CI=1.16, 5.71; OR=3.12, CI=1.40, 6.97), and exacerbation of numbness and/or tingling (NT) in the hands at night (OR=2.86, CI=1.80, 4.53; OR=2.21, CI=1.20, 4.08) to be significantly associated with an abnormal NCS. Female gender (OR=1.58, CI=1.06, 2.37) was associated with abnormal right hand NCS. Exacerbation of NT when holding an object (OR=3.88, CI=1.97, 7.64) was associated with abnormal left hand NCS. These results show a relatively high prevalence of paraesthesias in a large population. Individuals who have numbness and/or tingling in the hands are likely to have abnormal nerve conduction in the upper distal extremities. Increased age is also associated with abnormal nerve conduction. We continue to analyze our data for job physical risk factors.

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<tr>
<th></th>
<th>Right Hand</th>
<th>Left Hand</th>
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<tbody>
<tr>
<td><strong>Univariate Odds Ratios for Abnormal NCS Findings</strong></td>
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<tr>
<td>Female vs. Male</td>
<td>1.23</td>
<td>1.40</td>
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<tr>
<td>Obese vs. Not Obese</td>
<td>3.33*</td>
<td>3.78*</td>
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<tr>
<td><strong>Tobacco Use:</strong></td>
<td></td>
<td></td>
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<tr>
<td>Some vs. None</td>
<td>0.89</td>
<td>0.76</td>
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<tr>
<td><strong>Diabetes</strong></td>
<td>3.69*</td>
<td>5.20*</td>
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<tr>
<td>Increased Tingling and/or Numbness at Night</td>
<td>3.23*</td>
<td>4.07*</td>
</tr>
<tr>
<td>Increased Tingling and/or Numbness While Holding an Object</td>
<td>2.58*</td>
<td>4.74*</td>
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| **Adjusted Odds Ratios of Abnormal NCS Findings** |   |   |
| Age (per year)         | 1.04**     | 1.08**    |
| BMI (per unit kg/m²)   | 1.11**     | 1.09**    |
| Female Gender          | 1.58**     | 1.58**    |
| Tobacco Use            | 1.16       | 1.47      |
| Past vs. Never         | 1.36       | 0.75      |
| Current vs. Never      | 2.57**     | 3.12**    |
| Increased Tingling and/or Numbness at Night | 2.86**       | 2.21**    |
| Increased Tingling and/or Numbness While Holding an Object | 1.62       | 3.88**    |

1 Odds Ratio  95% Confidence Interval  *Denotes a p-value of <0.0001  **Denotes a p-value of <0.05