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Your OSH preferred partners

VIDEO DISPLAY TERMINALS

THE BATTLE FOR COMFORT



VIDEO DISPLAY TERMINALS



Over the last forty years the basic office workstation has been revolutionized by the video display terminal (VDT). In fact, computers equipped with VDTs have replaced the typewriter, calculator, filing cabinet and many other mainstays of the traditional office.

Today, between office and home, many people spend eight or more hours a day working at a computer. Their workstations are covered with phones, computers, keyboards, monitors, reports and files. These elements may pose problems of stress from all the clutter and physical fatigue brought on by sitting at the VDT for long periods of time. You can overcome these problems by applying the principles of ergonomics — or fitting the work area to your body. Use these principles to help create a comfortable workstation.

Applying Ergonomics to Your Workstation

CHAIR

- If available, use a five-legged swivel chair. It is best for balance, weight distribution and body mobility.
- If possible, adjust the height of your chair for your individual comfort. The correct height puts no pressure on your legs from the edge of the seat, allowing the thighs to help support your body weight.
- Keep your feet flat on the floor. Your knees and hips should be at the same level.
- Use a curved seat, if available, to avoid pressure on the backs of your knees.
- The front edge of the seat should be five inches from the back of your knees.



FOOTREST

- A footrest can help compensate for a non-adjustable chair by raising the level of your feet.
- Raising your feet and knees takes strain off your legs and back

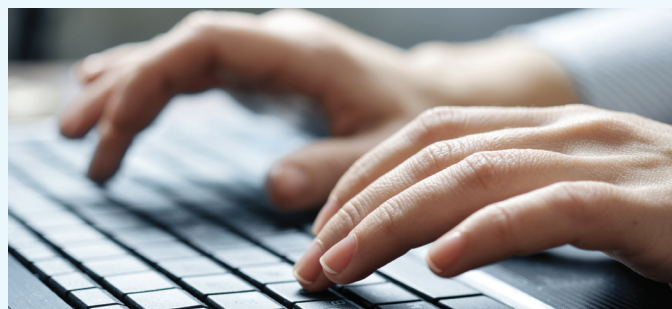


POSTURE

- Keep your spine and head upright.
- Sit back in the chair to prevent back strain.
- Use a back rest that fits in the small of your back if your chair doesn't provide good support.
- Use a handset attachment, headset or speaker phone to avoid neck and shoulder discomfort when using a telephone.

Working With Your Keyboard

Carpal tunnel syndrome (CTS) is one type of cumulative trauma disorder that is caused by putting too much pressure on the median nerve that runs through the wrist. CTS develops over a period of months and years, and can seriously affect hand and arm movement. Fortunately, there are many steps you can take to prevent CTS:



- Keep your body in a relaxed, neutral position whenever possible.
- Keep your monitor and keyboard directly in front of you.
- Maintain horizontal hand, wrist and forearm positions.
- Elevate your keyboard if necessary to keep wrists and hands in a neutral position.
- Bend your elbows at about a 90 degree angle.
- Use a pad in front of your keyboard and mouse to rest your wrists and arms.
- Rest briefly from time to time.



Reducing Eyestrain

Your eyes are much more complex than the most advanced cameras, and they endure more stress and strain than any other part of your body. While a camera relies on a motor for turning and focusing, your eye relies on your muscles to do that work. If the muscles that support your eyes are constantly flexed without periods of relaxation, regardless of whether or not you wear corrective lenses, eyestrain results. Symptoms of eyestrain can include frontal headaches or blurred vision.

REPOSITION

Here are some ways you can reposition your VDT workstation to reduce eyestrain:

- Adjust your computer screen so that it is 18 to 24 inches from your eyes.
- Make sure the top of the monitor is slightly below eye level — lower if you wear bifocals or trifocals.
- Close curtains to reduce glare and keep the monitor away from windows and between rows of overhead lights.
- To avoid glare, tilt the screen down slightly, or use an anti-glare screen.
- If you use a copy stand, position it to be the same height and distance as the screen.
- Take regular “vision breaks.”



Eye Exercises



Eye exercises are a simple and effective way to reduce strain and can be performed by anyone. They may be done for about a minute every half hour.

PALMING

Form shallow cups with the palms of your hands. Place them lightly over closed eyes — lower part of palms on cheeks and fingers on forehead.

CHANGE FOCUS

Look across the room or out a window at an object at least 20 feet away for a few seconds. Give your eyes something different to focus on.

DEEP WINK

Close eyelids very tightly for five to seven seconds, then open them very wide.

VDT Relaxation Exercises

Proper arrangement of the workstation and eye exercises are only part of the battle plan for workstation comfort. Try some of the following exercises to help reduce additional muscle stress and fatigue. You can do them right at your desk.

BREATHING

- Breathe deeply.
- Inhale slowly through your nose.
- Hold for two seconds.
- Exhale through your mouth.
- Repeat cycle.

HEAD AND NECK

- Bend your head down toward your chest.
- Lean toward one side, then the other.
- Repeat three times.

SHOULDERS

Exercise 1:

- Fold your arms at shoulder height.
- Push your elbows back and hold the position for a few seconds.
- Repeat cycle.

Exercise 2:

- Roll your shoulders forward five times using a wide, circular motion.
- Repeat this process, rolling shoulders backward. This exercise is excellent for relieving tense shoulders.



WRISTS, HANDS AND FINGERS

Exercise 1:

- Extend your hands in front of you.
- Raise and lower them at the wrist to stretch forearm muscles.

Exercise 2:

- Make a tight fist and hold for a few seconds.
- Spread your fingers apart as widely as possible and hold for five seconds.
- Repeat cycle



LOWER BACK

- From a sitting position, slowly bend your upper body down toward your knees.
- Hold for a few seconds.
- Sit up and relax.



LEGS

Exercise 1:

- Grasp one shin and slowly pull your knee toward your chest.
- Hold for five seconds, then do your other leg.
- Repeat cycle.

Exercise 2:

- While standing or seated or with your feet on footrest, raise your heels up, resting on the balls of your feet, so the calf muscles are flexed.
- Hold for a few seconds, then rest and repeat.

Source info from: Coastal Safety & Environmental Handbook

NEWS HEADLINE

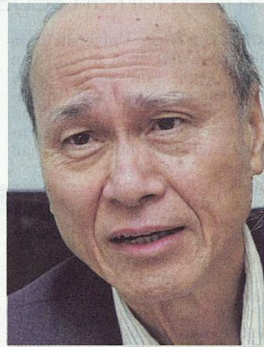
Tubuh sistem tadbir urus risiko nano

KUALA LUMPUR 2 Nov. - Kerajaan digesa mewujudkan satu sistem tadbir urus risiko yang berkaitan teknologi nano demi kepentingan keselamatan dan kesihatan pekerja dalam bidang tersebut.

Pengerusi Institut Keselamatan dan Kesihatan Pekerjaan Negara (NIOSH), Tan Sri Lee Lam Thye berkata, Dasar Etika dan Keselamatan Nano Negara perlu diperkenalkan bagi menjaga kepentingan keselamatan dan kesihatan pekerjaan teknologi nano.

“Dasar baharu itu dapat memastikan bahawa kerangka peraturan keselamatan dan kesihatan pekerjaan teknologi nano, meningkatkan pemahaman dalam kalangan pekerja dan pengurusan tentang bahaya bahan nano serta membangunkan prosedur mengukur tahap pelepasan dan pendedahan bahan-bahan nano di tempat kerja.

“Dasar tersebut membantu menilai keberkesanan kawalan yang dilakukan di tempat kerja bagi mencegah pendedahan kepada kesan bahaya bahan nano dan memberikan maklumat serta panduan kepada organisasi berasaskan



LEE LAM THYE

teknologi nano mengenai risiko dan bahayanya,” katanya dalam satu kenyataan di sini hari ini.

Teknologi nano yang diiktiraf sebagai suatu penemuan paling maju pada abad ini memberikan manfaat kepada manusia, khususnya dalam bidang perubatan, elektronik, kawalan alam sekitar dan bioteknologi.

Teknologi itu juga membantu

mengenal pasti bahan tercemar melalui penggunaannya sebagai sensor elektronik dan sekali gus membangunkan teknologi pemulihan terhadap segmen alam sekitar.

Menurut Lam Thye, pengguna mungkin tidak sedar bahawa mereka berhubungan secara langsung dengan produk komersial nano material selain daripada produk kosmetik, yang mana akan memberi kesan kepada kesihatan manusia dan alam sekitar.

“Adalah penting bagi semua pihak yang terlibat melakukan kajian terperinci dan mengambil langkah seperti menyebarkan maklumat kepada orang ramai mengenai risiko dan keselamatan berkaitan teknologi nano dan bahan nano.

Katanya, dianggarkan 400,000 pekerja dalam industri teknologi nano di seluruh dunia pada 2010 dan dijangka akan meningkat kepada enam juta pekerja pada 2020.

“Mereka yang mungkin berisiko adalah pekerja industri, penyedidik dan pengguna produk yang dihasilkan,” katanya.

2 JARI PUTUS TERSEPIT

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6 NEGARA!

KOSMO! KHAMIS 13 NOVEMBER 2014

Lelaki tahan sakit setengah jam tangan masuk mesin
2 jari putus tersepit

Oleh SYALMIZI HAMID
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SEBERANG PERAI - Seorang pekerja warga Myanmar putus dua jari apabila pergelangan tangan kanannya tersangkut pada sebuah mesin memproses rumput dalam kejadian di satu kawasan lapang di Permatang Tinggi, Bukit Mertajam di sini kelmarin.

Difahamkan dalam kejadian kira-kira pukul 3.30 petang itu, mangsa yang hanya dikenali sebagai Kellai, 59, dipercayai terleka memasukkan rumput segar ke dalam mesin memotong untuk dijadikan makanan lembu sehingga tidak sedar tangannya turut termasuk ke dalam mesin tersebut.

Dia yang panik selepas tangannya tidak boleh ditarik keluar menjerit meminta bantuan rakan sekerjanya yang berada di lokasi kejadian.

Malangnya, selepas mesin memproses rumput itu ditutup, rakan mangsa yang berusaha sedaya upaya menarik keluar tangan mangsa tetap gagal menyelamatkan tangan mangsa.

Rakan mangsa kemudian terpaksa meminta bantuan Pasukan Bomba dan Penyelamat Bukit Mertajam.

Ketua Balai Bomba dan Penyelamat Bukit Mertajam, Wan Roslan Wan Yahya berkata, pihaknya terpaksa menggunakan suntikan ubat pelali bagi mengurangkan kesakitan dialami lelaki terbabit sementara menunggu anggota bomba menarik keluar tangan mangsa yang tersepit.

“Anggota kami tiba sepuluh minit selepas me-



ANGGOTA bomba sedang membuka mesin memproses rumput bagi mengeluarkan tangan Kellai yang tersepit dalam kejadian di Permatang Pauh, Bukit Mertajam semalam.

nerima panggilan dan usaha mengeluarkan tangan mangsa dilakukan serta-merta bagi mengelak pendarahan yang teruk.

“Tangan yang tersepit itu berjaya dikeluarkan kira-kira lima minit selepas itu dengan pasukan kami membuka mesin memproses rumput itu sebelum bantuan awal diberikan oleh anggota paramedik,” katanya.

Mangsa terpaksa menahan sakit selama kira-kira setengah jam sebelum tangannya dapat ditarik keluar.

Langsung terlekat di tiang

Kota Belud Seorang juruelektrik yang sedang menyelenggara kabel milik Sabah Electricity Sdn Bhd (SESB), maut apabila terkena renjatan dalam kejadian di Kampung Lebak Moyoh, di sini, kelmarin.

Dalam kejadian jam 4.30 petang, mangsa, Moksin Roslan, 32, tergantung di tiang elektrik berkenaan selain tidak sedarkan diri sebelum diturunkan rakan lain.

Mangsa kemudian di-sahkan meninggal dunia selepas satu jam dirawat di wad kecemasan Hospital Kota Belud akibat kecede-

raan dalaman. Difahamkan, sebelum kejadian, mangsa bersama beberapa rakan menyelenggara kabel elektrik di kawasan itu.

Sebaik selesai menjalankan tugas, mangsa yang hendak turun tersentuh bahagian penyambungan wayar tidak berbalut menyebabkan terkena renjatan.

Kejadian itu merakamkan mangsa seperti melekat pada tiang elektrik sebelum diturunkan.

Pemangku Ketua Polis Daerah Kota Belud Super-

intendan Mohd Zaidi Abdullah berkata, siasatan awal mendapati, mangsa adalah pekerja sub kontraktor di bawah seliaan SESB dan baru selesai menjalankan tugas menyelenggara.

“Ketika hendak turun, mangsa dipercayai tersentuh bahagian wayar tidak berbalut sehingga terkena renjatan elektrik.

“Mangsa kemudian di-kejarkan ke hospital untuk rawatan kecemasan, namun disahkan meninggal dunia ketika sedang men-

dapatkan rawatan,” katanya.

FAKTA
Mangsa pekerja sub kontraktor di bawah seliaan SESB



MANGSA yang tidak sedarkan diri diberi bantuan kecemasan

KEADAHAN mangsa yang melekat pada tiang elektrik dalam kejadian di Kampung Lebak Moyoh.

Ajal dihempap bumbung



ANGGOTA bomba cuba mengeluarkan mangsa yang ditimpap bumbung konkrit.

Georgetown: Malang nasib seorang pekerja apabila maut dihempap bumbung konkrit yang runtuh di sebuah kilang membuat peralatan komputer di Zon Perindustrian Bebas, Bayan Baru, di sini, petang semalam. Dalam kejadian jam 6.45 petang itu, Wan Ahmad Nadzari Wan Mokhtar, 48, maut di tempat kejadian akibat parah di kepala dan anggota badan.

Difahamkan, mangsa yang bekerja syif malam, sedang berjalan menuju mesin perakam waktu selepas meletakkan motosikalnya di tempat parkir.

Bagaimanapun, bumbung konkrit kilang berkenaan tiba-tiba runtuh menyebabkan mangsa terperangkap di bawah runtuhan.

Sepasukan anggota Jabatan Bomba dan Penyelamat Malaysia (JBPM) dipanggil, namun selepas kerja menyelamat dilakukan, mangsa ditemui di bawah runtuhan tetapi sudah tidak bernyawa.

Timbalan Pengarah JBPM negeri Mohamad Shoki Hamzah berkata, pihaknya menerima panggilan jam 6.58 petang dan anggotanya mengeluarkan mayat

mangsa jam 7.28 malam.

"Tiada mangsa lain terbabit dan kami masih menyiasat punca kejadian," katanya.

Sementara itu, seorang pekerja yang mahu dikenali sebagai Shamsul, 20-an, berkata dia terdengar dentuman kuat lalu bergegas ke tempat kejadian.

"Ketika itu hujan reynei dan sejurus mendengar bunyi kuat, saya serta beberapa pekerja lain yang berada dalam kilang, berlari keluar.

"Kami terkejut melihat mangsa berada di bawah runtuhan sebelum menghubungi bomba dan ambulans," katanya.

Sementara itu, adik ipar mangsa, Rozimah Mohamad, 40, berkata dia mendapat tahu mengenai kejadian selepas dimaklumkan anak saudaranya menerusi panggilan telefon.

"Ketika kejadian, dia dikatakan berada betul-betul di bawah bumbung yang runtuh itu. Wan Ahmad Nadzari mempunyai empat anak dan sudah 10 tahun bekerja di kilang ini," katanya.

Mayat mangsa dihantar ke Hospital Pulau Pinang untuk dibedah siasat.

AJAL DIHEMPAP BUMBUNG

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Elevating the levels of safety

High code of ethics and constant reviews at LRT construction sites

THE construction industry in the Klang Valley is booming with hundreds of development projects sprouting up all over Kuala Lumpur and its outskirts. In fact, it has been reported that at any given time, there are about 200 cranes operating around the city centre itself. While this may be seen as a good sign for the country's economy, the public is wondering how safe the construction sites are for the people who work there as well as the man on the street.

Construction work exposes workers to a wide range of dangers and health problems and the public are also concerned about ongoing projects near their homes. The sight of scaffoldings and cranes near main roads and housing estates tend to make motorists and residents jittery.

Recent mishaps at several construction sites in the Klang Valley have raised questions on the level of safety at such sites.

Realising the importance of safety at construction sites, public transport asset owner Prasarana Malaysia Berhad (Prasarana) practices a high code of ethics to ensure accidents and mishaps are largely prevented at its construction sites.

"It is no secret in the construction industry — everyone focuses on getting the job done as fast as possible and at the lowest possible cost. A slight delay can affect productivity and cost."

"And a delayed project does not reflect well on the company's progress report," said Prasarana Safety, Health & Environment Department (PRIME) head Mazlan Ahmad.

"Hence, in many construction sites, there may be instances where contractors and supervisors overlook the safety precautions in order to speed up the job."

"This results in risky and unhealthy operations, almost always culminating in accidents and fatalities," Mazlan said.

Prasarana, under its Project Development Division, was tasked to handle two key infrastructure projects — the LRT Line Extension Project for both the Ampang and Kelana Jaya lines and the new Bus Rapid Transit — Sunway Line.

These projects are expected to have a positive impact on the standard of public transportation services in the Klang Valley.

To ensure that safety is a top priority at their construction sites, Mazlan explained that Prasarana ensures both managers and workers inculcate the safety culture to mitigate on-site hazards.

"All our project management company managers, engineers, contractors and workers have to comply with existing laws and guidelines on health, safety and environment established by the Occupational Safety and Health Department (OSHA) as well as the Department of Environment (DOE)," said Mazlan.

He further explained that the standard operating procedure (SOP)



at Prasarana construction sites includes the dos and don'ts when carrying out high-risk activities such as lifting, working at high elevations and in confined spaces. He added that they also have to comply with the additional rules and guidelines issued by the local authorities.

"We are accountable for 4,000 workers and we are proud to say that all of them are registered with the Construction Industry Development Board (CIDB)," he said.

Under CIDB Malaysia Act 1994 (Act 520), workers at construction sites must have Industrial Personnel Registration Cards or "Green Cards" to prove that they are registered with the CIDB.

"Even our contractors must be certified by DOSH and CIDB and they are required to have their own project safety and health plan that must be followed at all times," Mazlan said.

He added that the safety plan includes management of traffic in areas surrounding their construction sites.

"The company also ensures that workers go through a safety induction course at the start of the project."

Contractors are tasked to carry out toolbox talks every week to acquaint them with their tasks.

"Toolbox talks are informal group discussions that focus on safety issues and promote safety culture."

"The contractors will basically teach them the right method to do a specific task and also take note of their physical outlook. Our safety personnel will conduct weekly random checks to see if everything is in order."

"We are very strict with repeat offenders and will not hesitate to penalise workers who do not follow procedures," he added.

"On our part, we have joint high

We are very strict with repeat offenders and will not hesitate to penalise workers who do not follow procedures.

— MAZLAN AHMAD

level safety meetings with the project management consultants, engineers and contractors to constantly drill in the fact that safety is a priority," he said.

Mazlan also reiterated the need for stringent laws when dealing with temporary works at construction sites.

"We are currently implementing stricter rules in cases of temporary works. Contractors now must ensure that the level of competency for the usage of scaffolding is higher."

The second Penang Bridge incident was a bitter lesson for the industry.

"Furthermore, we are looking at DOSH to review and increase the fines imposed on negligent employers."

"Currently, the department imposes a maximum fine of RM50,000 on errant employers who do not comply with the safety rules and regulations."

"We fully support any efforts by the relevant authorities, chiefly the DOSH to impose stringent fines for offenders since this will be a credible deterrence that will result in greater compliance to safety requirements," Mazlan said.



1 (From left) Mincosulat Sdn Bhd Health and environment personnel Shahadi Shahril, Prasarana Malaysia Bhd Kelana Jaya Line Extension Project (LEP) Safety, Health and Environment Department officers Ruzilawati Ishih Associate and Al-Farzie Sarif making their periodic rounds to monitor safety at construction sites.

2 The standard operating procedure at Prasarana construction sites includes the dos and don'ts when carrying out high-risk activities such as lifting, working at high elevations and in confined spaces.

ELEVATING THE LEVELS OF SAFETY

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BERI KURSUS KHAS

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Beri kursus khas

Kuala Lumpur: Pekerjaan berisiko tinggi seperti pencuci bangunan perlu menghadiri kursus khas mengenai aspek keselamatan bagi mengelakkan sebarang kejadian tidak diingini.

Pengerusi Institut Keselamatan dan Kesihatan Pekerjaan Negara (NIOOSH) Tan Sri Lee Lam Thye berkata, mereka perlu diberi pendedahan lebih terperinci daripada pakar dilantik agensi itu mengenai teknik mencegah kemalangan di tempat kerja.

"Saya berpendapat mereka perlu diberi pendedahan mengenai beberapa perkara penting seperti penggunaan alat perlindungan seperti tali dan sebagainya.

"Kebanyakan pekerja khususnya dari negara luar tidak mempunyai kepakaran dan untuk itu kursus sedemikian sangat diperlukan," katanya.

Lee berkata, majikan perlu bersikap lebih bertanggungjawab dengan menghantar pekerjaannya menimba pengetahuan mengenai bidang kerjanya itu.

Katanya, majikan juga perlu menyediakan peralangan insurans sewajarnya kepada setiap pekerja.

"Pekerja mempunyai hak menuntut perlindungan keselamatan daripada majikan, oleh itu, saya berharap segala perkara asas yang diperlukan dipatuhi majikan untuk kita bersama-sama mengurangkan kes kemalangan di tempat kerja bagi tahun ini," katanya.

Sebanyak 33,060 kes kemalangan di tempat kerja di negara ini dicatatkan pada 2013 dan ia menurun lebih 50 peratus dalam tempoh 10 tahun lalu iaitu 63,423 kes.

Lee berkata, penurunan statistik itu disifatkan perkembangan baik, namun ia masih menunjukkan angka tinggi.

Menurutnya, pembedayaan aspek keselamatan sangat diperlukan dalam kehidupan seharian dan ia perlu dititikberatkan khususnya kepada setiap majikan, pekerja dan orang ramai.

ASSOCIATION BETWEEN RESPIRABLE HEXAVALENT CHROMIUM (CR-VI) COMPOUNDS WITH URINARY β 2-MICROGLOBULIN LEVEL OF WELDERS IN AN AUTOMOTIVE COMPONENTS MANUFACTURING PLANT

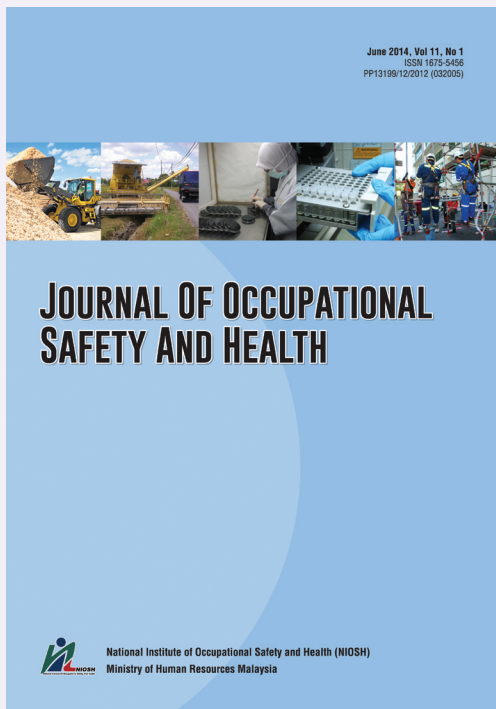
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Abstract

The main objective of this study is to determine the association between respirable hexavalent chromium compounds with urinary β 2-microglobulin levels among welders in an automotive components manufacturing plant. 49 welders and 39 workers involved in stamping process were selected as the exposed and the comparative group. β 2- microglobulin is a protein renal tubular dysfunction marker that can indicate renal dysfunction caused by heavy metal. Air samples of worker's breathing zone were collected using personal air sampling pump and filter papers. Filter papers were then diluted and analysed with Atomic Absorption Spectrophotometry (AAS). Workers' urine samples were collected at the end of 8-hour work shift and analysed with β 2-microglobulin ELISA Kit (IBL-Hamburg) and a microtiter reader. Meanwhile, creatinine levels were analysed with creatinine test strips and Reflotron®. A mean concentration of respirable hexavalent chromium compounds in air for the exposed group was $0.135 \pm 0.043 \mu\text{g}/\text{m}^3$ while for the non-exposed group was $0.124 \pm 0.029 \mu\text{g}/\text{m}^3$. The mean level of urinary β 2-microglobulin per creatinine for the exposed group was $84.996 \pm 39.246 \mu\text{g}/\text{g}$ while that of the comparative group was $61.365 \pm 21.609 \mu\text{g}/\text{g}$. The concentrations of respirable hexavalent chromium compounds were higher in the exposed group compared to the comparative group ($Z=-2.444$, $p=0.015$). β 2-microglobulin level was also higher in the exposed group compared to the non-exposed group ($t=3.821$, $p<0.001$). However, there was no significant correlation between respirable hexavalent chromium compounds with urinary β 2-microglobulin levels ($r=0.080$, $p=0.457$) among the respondents. A multiple stepwise regression analysis showed that the most influence variable or confounding factor to β 2-microglobulin level was the education year ($\beta = -0.020$, $p=0.010$). All respondents were exposed to concentrations of chromium below regulated limit. Years of education seemed to be a secondary factor that influenced β 2-microglobulin level.

Keywords : *Respirable hexavalent chromium compounds, urinary β 2-microglobulin, welders, automotive components.*

For Full Paper, please find:

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