

SS K1: Ergonomics

K1-1

DEVELOPMENT OF EFFECTIVE ERGONOMIC INTERVENTIONS

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The National Institute for Occupational Safety and Health (NIOSH) has conducted numerous ergonomic interventions to address exposure to occupational risk factors. Over the years, the Institute has developed expertise in how to conduct effective ergonomic interventions in the workplace. Initial identification of risk factors and subsequent injuries or illnesses is the first step in addressing the exposures. The quantification of symptoms or injuries and the development of incidence and prevalence rates help determine the magnitude of the problems within the workplace. The identification of occupational risk factors by occupation or job task, through instruments such as the ISO/TS 20646-1 "Ergonomic procedures for the improvement of local muscular workloads" and the NIOSH Revised Lifting Equation and the development of specific workplace risk exposure matrices help target where and for whom an intervention should be attempted. The quantification of risk exposure, such as number of pounds lifted per hour or number of hand movements per minute, is a critical component that can be used in evaluating the effectiveness of the interventions in reducing exposure to these risk factors. The development of alternative intervention strategies can be aided by the utilization of participatory ergonomics principles within the workplace to solicit ideas from those who know the work best. After a slate of viable alternatives is available, cost-effectiveness analysis can identify which one yields the best return on investment. Once the intervention has been implemented and fully accepted in the workplace, one can evaluate the effectiveness of the interventions by tracking reductions in injury incidence and severity, and worker symptoms. A cost-benefit analysis of the intervention can be performed to determine the associated effects on injury, absenteeism, productivity and quality. This paradigm for developing effective ergonomic interventions will be discussed in detail.

Keywords: interventions, ergonomics, effectiveness.

IOHA 2005

Pilanesberg National Park, North West Province, South Africa
19 - 23 September 2005

Promoting Occupational Hygiene in Africa and Globally



Conference Programme at a Glance

Sunday 18 September 2005	
Kwa Maritane Bush Lodge	
10.00 - 17.00	Registration
Reception and Welcome to International and Local Delegates	
19.00 - 21.00	Welcome by IOHA Immediate Past President - <i>Ton Spee</i>
	Welcome by SAIOH President - <i>Deon van Vuuren</i>
	Welcome by MVS President - <i>Harry Smit</i>
	Precautions to be taken in the Pilanesberg National Park - Game Ranger
	Buffet meal and drinks at the Kwa Maritane Bush Lodge or "Place of the Rock". You are now in the Pilanesberg National Park; an area rich in wildlife and hosting around 365 species of birds. Virtually all the animal species of Southern Africa can be found in the park, including: lions, elephants, white and black rhinos, buffaloes, leopards, zebras, hyenas, giraffes, hippos and crocodiles - Welcome.

IOHA

6th International Scientific Conference

19 – 23 SEPTEMBER 2005
Pilanesberg, South Africa

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GLOBALLY

ABSTRACTS

Published by the International Occupational Hygiene Association (IOHA),
5/6 Melbourne Business Court, Millennium Way, Pride Park, Derby DE24 8LZ, UK

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