

## Lectures—invited papers

# Prevention C: the BACKSAFE<sup>®</sup> and SITTINGSAFE<sup>®</sup> programmes

S. DONKIN DC

*Future Industrial Technologies, Lincoln, Nebraska, USA*

### Introduction

The BACKSAFE<sup>®</sup> and the SITTINGSAFE<sup>®</sup> office worker programmes are behavioural safety training workshops which reduce workers' compensation costs. They are designed to have long-lasting effects on employees to reduce costly injuries both on and off the job. These programmes are presently being used by many public and private entities of all sizes.

The members of the present author's group design job-specific workshops which are aimed at training employees how to perform their jobs in a biomechanically correct way. They customize programmes for all job descriptions including hotels, janitorial, trades, groundskeepers, law enforcement, material handling and office workers. The aim is to break workers' bad habits and replace them with healthier ones which they will apply on a daily basis.

Additionally, in the SITTINGSAFE<sup>®</sup> programmes, employees learn how to set up any workstation in an ergonomically correct way, whether at home or on the job, for their own specific needs. The SITTINGSAFE<sup>®</sup> supervisor programme can train a company to perform individual workstation assessments.

The present author's group have developed their training techniques to ensure that the worker 'learns' safe working techniques. By 'learning', they mean that the workers acquire a basic knowledge of anatomy, biomechanics (ergonomics for the office worker) and stretching exercises, and are motivated to apply proper techniques to their jobs on a daily basis.

The key to the programme is the kinetic learning module (obstacle course). The group teaches your employees how to do their jobs correctly in their work environment by having them perform their job tasks under the supervision of facilitators, the vast majority of whom are chiropractors. The facilitators coach them how

to do these tasks more safely. The BACKSAFE<sup>®</sup> obstacle course is customized only after the group has conducted a thorough job site evaluation and employee interview. The group also experience the typical physical routines of the employees. The members become familiar with equipment and furniture, for example, so as to be able to specifically understand the job tasks, and the demands and physical stresses on the workers' bodies.

In order to ensure the long-term benefits of BACKSAFE<sup>®</sup> and SITTINGSAFE<sup>®</sup>, there are three phases: implementing, maintaining and reinforcing the programme.

### Implementation

The BACKSAFE<sup>®</sup> and SITTINGSAFE<sup>®</sup> workshops are 90-120-min, job-specific workshops. A maximum of 20 and a minimum of 12 employees are trained at a time. The goal of the training is to teach the employees how to perform their jobs in a biomechanically correct way.

#### *Job site analysis/pre-assessment*

The employees' various job descriptions are studied and evaluated to determine specific daily routines and areas of repetitive movements resulting in physical stresses on the body.

#### *Design and customization of the workshops*

Based on the above analysis, the 90-min training is customized and adapted to the specific needs of the employees in attendance.

#### *Introduction and employee buy-in*

The facilitator introduces the programme's goals to the attendees. The end result of this 10-min section is to ensure the employees' interest in participating.

*Correspondence: Scott Donkin DC, Future Industrial Technologies, Lincoln, NE, USA.*

### Theory module

Via one of the group's job-specific videos, the attendees learn about their bodies and the correct ways to use them. They also learn how to adapt their physical environment for their advantage.

### BACKSAFE<sup>®</sup>/SITTINGSAFE<sup>®</sup> stretching routine

Each employee is taught how to perform a non-strenuous stretching routine before each shift to prepare the body for physical stress and to relieve accumulated stress.

### Obstacle course participation

This is the main focus of the programme, and it is where bad habits are broken and replaced with healthier ones by actually performing the job tasks in a correct manner.

### Question and answer

#### Course critique form

Each employee grades the programme and the instructor. This is sent to the Quality Control Department of Future Industrial Technologies, Lincoln, NE, USA. The group ensure that all workshops are delivered as promised.

### BACKSAFE<sup>®</sup>/SITTINGSAFE<sup>®</sup> facilitators

Over 1200 certified doctors currently provide expert instruction in any city in the USA or abroad. The training performed in San Francisco, CA, USA, will be the same training performed in cities throughout the world.

### Maintenance

The training should be performed at least on an annual basis to keep the programme fresh in the employees' minds and to ensure long-term compliance.

A 3-year contract with a sliding scale discount is offered.

### Reinforcement

The following are methods used to reinforce the programme on a regular basis to ensure routine compliance.

#### BACKSAFE<sup>®</sup>/SITTINGSAFE<sup>®</sup> supervisor training

This 4-h module ensures that supervisory personnel can reinforce the BACKSAFE<sup>®</sup> 'code of conduct' learned by

the employees in basic BACKSAFE<sup>®</sup> training. This training ensures that the supervisors can differentiate between proper body movements and improper ones. They are taught how to acknowledge compliance with the BACKSAFE<sup>®</sup> 'code of conduct' and how to smoothly intervene (safety coaching) to help someone in need of biomechanical coaching support. The supervisors will become extensions of the doctors to support the training precepts and to keep the programme alive.

Supervisor training also includes instruction on how to facilitate 10-min safety meetings using BACKSAFE<sup>®</sup> training planners.

For SITTINGSAFE<sup>®</sup> supervisor training, the following should be added.

During the office worker training, supervisors learn how to fit employees into a workstation and make the proper individual adjustments. Hands-on training for low- and high-technology ergonomic solutions is given as the personal workstation consultations are performed.

#### BACKSAFE<sup>®</sup> safety meeting training and planners

The supervisor learns how to reinforce the BACKSAFE<sup>®</sup> training with 24, 10-min safety meetings. The supervisor receives a curriculum book detailing meeting agendas and practical exercises. The 10-min meetings are designed to be short yet interactive and engaging.

#### Optional: BACKSAFE<sup>®</sup> incentive programme

The supervisor training module (described above) trains supervisors how to reward observed proper biomechanics with a BACKSAFE<sup>®</sup> customized entry slip into a weekly or monthly raffle. The purpose of this is to keep the programme fresh and to make it fun while maintaining healthy work habits.

### Ergonomic assessment

An ergonomic assessment is crucial to speed the recovery of difficult or severe cases of upper-extremity cumulative trauma disorders. For employees who are injured and under treatment with a healthcare specialist, no treatment plan can be complete without a comprehensive ergonomic assessment. It should correct the mechanical factors which are causing the repetitive strain trauma to the patient. The assessment inspects many factors, such as sitting and writing habits, keying technique, head and neck positioning, and other risk factors for cumulative trauma. After permission from management, the problem

areas are corrected with minimal cost. Finally, the injured employee is instructed in the proper biomechanics to use while working. Treatment plans which follow these progressions have the greatest chance for rapid and complete success. If requested, the present author can send a sample copy of a typical evaluation.

### **Job analysis**

The method of job analysis is an on-site observation and interview with the employer and employee to determine the usual and customary job activities for the employee.

The information reported is standardized to meet the requirements for the RU91 job analysis for the State of California, USA. This includes information on:

- job description;
- educational requirements;
- machines, tools, equipment, work aids and other special materials used;
- environmental conditions working near hazardous equipment and machinery;
- description of job tasks (wir-worker is required); and
- physical demands (lifting).