Take a break

Break reminder software helps prevent strain in the work place, but it could do a better job, argues Jan Mulligan

An estimated 1.3 million employees in the UK are suffering from "an illness they believed was caused or made worse by their current or past work", according to the Heath and Safety Executive.

Just over two thirds have musculoskeletal disorders (MSDs), stress, depression or anxiety.

Computer users who regularly work for hours on end without taking a break can end up suffering from eyestrain, headaches and aches and pains in their bodies.

Break reminder software, which monitors how someone uses a computer and provides prompts that encourage them to take a break, is on the market and plays a vital part in preventing and managing some of these problems.

The technology could, however, do a better job. So far it just covers the tried and tested physical aspects of the causes of MSDs.

Suppose it could provide a more realistic insight of an individual's state of well-being by including psychological factors, such as stress? Would users accept such systems in the workplace, and would they benefit?

As an ergonomist, I encourage clients to become more aware of their postures and I am keen to point out that the best position is your next position.

This is because the body is not designed to remain still for long. Despite this advice, and the vast array of workplace legislation in place, I find that computer users regularly work for hours on end without taking a break.

Studies have demonstrated the beneficial impact that work breaks have on individual well-being, as well as on productivity.

Work-based computer users, however, need support from their organisations in order to get the best from such MSD prevention programs.

Taking regular, short breaks from computer use throughout the day, when combined with gentle stretching exercises, have been shown to help prevent, reduce and manage MSDs, but it is not as simple as it sounds.

Most office workers view a break as the deliberate act of stopping work and moving away from the desk, but tension will continue unless the individual makes a concerted effort to relax the eyes and body muscles.

Micro-breaks, which may last anywhere from 30 seconds to five minutes, are long enough to allow for gentle stretching exercises, while being short enough not to disturb an individual's concentration.

So, if active micro breaks are good for us, why do we not take them? On a very basic level, we forget.

Break reminder applications encourage the user to take short breaks from computer use by providing visual and/or audio reminders.

Typically, prompts are triggered either by counting activities, such as keystrokes, mouse clicks and the distance travelled by a mouse, or by simply monitoring the time taken from the last break. Some systems use a combination of both.

Modern reminders are proactive. During the break they can display example stretching exercises and actively encourage the individual to perform them.

"We've successfully reduced the problems our users have experienced through these solutions," says Steve Birch in facilities management at law firm White & Case.

"Having tried out a reminder, I found the number of breaks I should be taking very surprising. I would often be so engrossed in work that I did not consciously realise the length of time I was spending on my PC, so I found the software very helpful."

In search of better posture

The technology is becoming more sophisticated. PostureMinder, a utility which monitors the user based on time, uses a webcam to detect how someone is sitting and encourages them to adopt a better posture. It also monitors a worker's intake of drinks; providing prompts that help prevent dehydration (a 2% drop in hydration can lead to a 20% drop in concentration).

None of the current systems take into account the user's psychological state and stress levels – yet we know that these factors can contribute to MSD symptoms.

Emotion and feeling are displayed through facial expressions, hand gestures, posture, voice characteristics, and other physical manifestations.

The ability to detect these cues and provide remedial action prompts could help relieve frustration and anxiety

BREAK REMINDER SOFTWARE PACKAGES									
PRODUCT	**DEVELOPER**	**UK SUPPLIER(S)**	**DOWNLOAD**	**DISC**	**PLATFORM**	**SAMPLE EXERCISES AVAILABLE**	**MONITORING METHOD**		
							ACTIVITY	**TIME**	**POSTURE**
Mousotron www.blacksunsoftware.com	Blacksun Software	Blacksun Software	Free	No	Windows	No	Yes	No	No
PostureMinder www.postureminder.co.uk	Postureminder	Postureminder	£24.99 HE, £54.99 PE	£29.99 HE, £59.98 PE, £176.25 CL	Windows	Yes	No	Yes	Yes
RSIBreak www.rsibreak.org	Tom Albers and Bram Schoenmakers	n/a	Free	No	Linux only	No			
RSIGuard www.keytools.com	Remedy Interactive	Keytools	No	£69.95	Windows; MAC OS	Yes	Yes	Yes	No
SoundBreak www.iost.co.nz/software/soundbreak	Leon Mathews	n/a	Free	No	Windows	No	No	Yes	No
StretchBreak Pro www.paratec.com	Para Technologies	Hela of Sweden	£39.99	No	Windows; MAC OS	Yes	No	Yes	No
WorkPace www.wellworking.co.uk/store/software/workpace.html	Wellnomics	Wellworking	£57.75 plus 30-day trial	No	Windows	Yes	Yes	Yes	No
WorkRave www.intenct.info	IntenCT	n/a	Free	No	Windows; GNU/Linux	Yes	Yes	Yes	No
HE = Home Edition PE = Professional Edition CL = Corporate Licence									

Stretch breaks are vital in avoiding discomfort at work

before they have a chance to build, thus reducing the risk of stress-related health issues occurring.

This is technically possible, but should it be incorporated into persuasive technologies such as break reminder systems? Will users accept such systems and respond positively to them?

Recent findings

A recent study, conducted by Rachel Benedyk of University College London and myself, considered user attitudes towards persuasive break reminder technology and explored the potential for systems that addressed both physical and psychological issues.

Study participants were asked to consider their attitude to systems like this and what conditions and situations might lead them to welcome such intervention.

Our analysis suggests that users who experience symptoms do not necessarily welcome intervention.

A combination of knowledge, understanding, control and trust is required. Employers and technology developers may gain greater insight into the needs and wishes of users by involving them in the consultation process. The full results of our study will be published later this year.

Research shows that persuasive technologies, such as break reminders, are able to motivate, stimulate and even convince computer users to avoid bad habits and adopt good ones. They have the potential to play a key part in the prevention and reduction of MSDs and stress-related ill-health and yet the reported numbers of MSDs and stress-related ill-health remain high.

As break reminder systems develop further, they must not only consider the user's stress level, but address the worker's attitude to persuasive technology itself. They may also go on to incorporate environmental factors in the workplace that cause stress, such as heat, light and noise.

As the fight against MSDs continues it is important that we use technology to our advantage and build our armoury accordingly, but target it appropriately.

Above all, users need to be consulted. After all, there is no point in making an all-singing, all-dancing reminder if no one will use it. ■

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